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- Современные технологии управления организацией;
- Актуальные вопросы политики и права;
- Современные науки и образование;
- Информационные и коммуникативные технологии;
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DEFENSE WALLS AND GATES OF OASES AND CITIES

Annotation: *In this state, the defensive walls and gates of oases and cities, their origin, architecture and location, as well as their functions are described.*

Key words: *Great Chinese wall, Saddi Chini, Genghis Khan wall, Kanpiraka wall, city walls and gate.*

Humanity has started living on earth and takes various measures to spend its life peacefully and without danger. One such measure was the construction of defensive walls. At first, people surrounded their huts with high walls, and later they began to surround entire villages and cities with defensive walls. By certain times, we can witness that huge oases and vast borders of the country were surrounded by high, strong walls. As an example, we can mention the Great Wall of China, which was built in the 4th-3rd centuries BC...

This wall, called Saddi Chiniy in Eastern historical sources, has been surprising humanity with its history, size and strength for two thousand years. The length of this wall, built by three hundred thousand soldiers and more than two million prisoners of war and various criminals over 10 years, is about six thousand kilometers. This wall, which is up to 10 meters high in some places, is made of granite stones, raw bricks and baked clay. Strong towers were built at every 60-100 meters along the wall, and fortifications were built in the parts passing through the mountain.

Because the Great Wall of China was extremely thick, troops, cavalry, and chariots could easily travel over it. According to Chinese historical sources, this wall was built with great difficulty, thousands of people died due to the severity of the conditions, various diseases and hunger. Those who left the bodies of the dead under the wall and continued to work on them. Therefore, it is not wrong to say that this wall served as a grave for thousands of people. At this point, the question arises as to what purpose the mighty Great Wall of China was built. Undoubtedly, it was built to protect the Chinese from the militant Huns. In addition, it is known that the Great Wall of China served to restrain the Chinese in the territory of their country.

of the world, we can see that the Chinese Wall is not the only one, that such walls were built in Asia, Europe and Africa. According to historical sources, a defense wall named Genghis Khan's wall was also built in the territory of present Mongolia. Mongolia This defense wall, which started in the territories of

the Soviet Union, continued on the borders of China and the current Russia, and its total length is 600 kilometers.

It is clear that defensive walls similar to the Great Wall of China were built in the regions of Central Asia in antiquity and the early Middle Ages. The oldest of such walls is the wall of Antiochus I-Soter, built in the III century BC in the Marv oasis of the present Republic of Turkmenistan. of Alexander the Great It is known that Antiochus Soter, who was born from the beautiful Apamas, the daughter of the brave commander Seleucus and the Sogdian leader Spitamenny, took the throne after his father's death and built some structures in Central Asia. This wall is mainly made of straw and is 250 km long. and included the cultural and agricultural lands of the Marv oasis.



Bukhara is a defense oasis

According to historical and archeological data, the rulers of the ancient Bukhara oasis surrounded prosperous cities and villages, irrigated and fertile lands of this oasis with a high defensive wall. This wall protected the inhabitants of the oasis and their land from the attacks of nomadic herding tribes and inappropriate interference in their political life. This defensive wall surrounding the Bukhara oasis is popularly called the Kanpirak wall, and according to the historian Muhammad Narshahi, it was completed between 782 and 830 AD. Archaeological research has shown that there was a defensive wall around the Bukhara oasis in the IV-V centuries AD. The wall in front of Narshakhi was built after that. [1]

Another defense wall, which surrounded the Zarafshan Valley and Jizzakh oases in ancient times, was popularly called "Kanpir Wall". Starting from Bulung'ur district of Samarkand region and covering the territories of Gallaorol, Jizzakh, Bakhmal districts of Jizzakh region, the thickness of this defense wall reached 15-20 meters in some places. The Kanpir wall was irrigated from the canals of

the Zarafshan river, enclosed cultivated agricultural and horticultural lands, cities and villages, and protected these places from the attacks of wild animals.



Remains of an old woman and an old woman's wall

There is no doubt that the defensive walls, whose names we mentioned above, were important in the life of our ancestors. For this reason, our ancestors built strong fortresses, castles, cities, and fortifications along the defense walls and near them. At the entrances of the villages, gates were built and the gates were strictly guarded. Trenches were dug on the outside of the walls to prevent cavalry and infantry from invading the oasis. These trenches are filled with water. Suspension bridges are built in front of the gates built on the highways. Bridges were lowered during the day and raised at night or in times of danger. Along the walls, in the interior of the country, special observation and communication towers have been built every 10-15 km. Guards were on guard in the watchtowers day and night.

If the danger of the enemy was felt, the guards immediately lit a fire and reported to the next tower. Thus, this message was immediately conveyed to the capital, the ruler. In recent times, due to the change in the borders of the

countries, the increase in political, economic and military power, the importance of these defensive walls, which surrounded huge oases and borders, has decreased, they have become the property of history.

Even today, the remains of ancient defensive walls can be found here and there in the endless fields of our republic. These walls, which were of great importance in preserving the peace of our ancestors, are witnesses of the memory left over from the days of modern times.

The city, built in the 4th century BC, had thick defensive walls and gates, and a complex defense structure in front of the gate. It usually has a rectangular structure. This structure, which is usually rectangular in shape, consists of several roundabouts, and its complex construction did not allow the enemy to enter the city. The enemy who entered through the roundabout was hit by archers standing on the wall.

Such a complex defense structure in front of the gate existed in almost all the ancient cities of Khorezm (Qal'alikkir, Kuy-kirilgan kala, Yonboshkala, Ayozkala, Qatkala and Khakoza).

This architectural style was also used in the Dilberjin fortresses in Kanka, Turkmenistan, in the Tashkent region. It can be understood that the pre-gate defense structure is more often installed in the cities of Khorezm due to the fact that this country is located on the border with the settlers. Another feature of the defense of the ancient cities of Khorezm is the passage inside the defensive walls.

The width of the corridor was not less than 2.5 meters, it helped to quickly reach the weak point of the defense and strengthen the defense [2]. The reason why the cities of Khorezm are protected by high walls with internal corridors is that these cities are located in the border regions of the country.

In addition to the walls, the defense structures of the cities included towers raised along the level of those walls, watchtowers built on the outer corners of the city walls, and gates that played an important role in the life of medieval cities until the 19th century. These walls and gates, in addition to protecting the inhabitants of the city from the attack of external forces, also played the role of a kind of "threshold" of the city.

As they say, "The country begins at the threshold", cities also started from those gates and walls in the past. The city walls and gates were built in Hashar style with the participation of architects, engineers, master craftsmen and the people at the expense and order of the rulers.

Near the gates of the city are the customs houses, guards and palaces, i.e. the country's administration, the military and the judiciary. Markets, hotels, communal-household and commercial buildings (baths, swimming pools, caravanserais) located in front of the gates are added to them.

One of the most ancient cities of the Zarafshan oasis is the ancient city of Samarkand, which had its arch, city, strong walls and 4 gates. In addition, there was a rabad part of the city and an outer defensive wall surrounding it, which

had 12 gates. The name of this ancient long wall was called "Doomsday Wall" or "Cross Wall". The gates of the town of Afrosiyob are located on a hill, and people went to it by stairs and carts by special ramps. The length of the outer wall of the city of Samarkand (Doomsday Wall) was 12 farsakhs, i.e. 84 km (1 farsakh equals 7-8 km). On the top of the wall, there are towers, and on the wall itself, special turrets are built for warriors. All 12 gates are made of wood, two layers. Iron gates are installed at the beginning and end of the Afrosiab arch. The rabad part of the city of Afrosiyab corresponds to the present Samarkand of the Timurid period.

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RAQAMLI IQTISODIYOTNI KORXONALAR FAOLIYATIGA TA'SIRI

***Annotatsiya:** ushbu maqolada, raqamli iqtisodiyotni rivojlanishi hamda korxonalar faoliyatiga ta'sir darajasi, raqamli iqtisodiyotni rivojlantirishda xorijiy tajribalar o'rni haqida ma'lumotlar keltirilgan.*

***Kalit so'zlar:** raqamli iqtisodiyot, Xalqaro telekommunikatsiya ittifoqi, yetakchi mamlakatlar, AKT bozori, YaIM.*

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IMPACT OF THE DIGITAL ECONOMY ON THE ACTIVITIES OF ENTERPRISES

***Annotation:** this article provides information on the development of the digital economy and the degree of impact on the activities of enterprises, the role of foreign experiences in the development of the digital economy.*

***Keywords:** Digital Economy, International Telecommunication Union, leading countries, ICT market, GDP.*

Bugungi kunda "raqamli" yetakchi mamlakatlar – Norvegiya, Shvetsiya va Shvetsariyadir. 10 ta yetakchilik guruhi AQSh, Buyuk Britaniya, Daniya, Finlyandiya, Singapur, Janubiy Koreya va Gonkongni o'z ichiga oladi. Shu bilan birgalikda, Xitoy, Hindiston, Malayziya va Filippin bilan bir qatorda jahon raqamli iqtisodlar reytingida 39-o'rinni egalladi.

Raqamli va an'anaviy xizmatlar bozori o'sib bormoqda va juda tezlikda rivojlanmoqda, ammo ushbu bozor hajmini o'lchash munozarali muammo bo'lib qolmoqda. OECD ning 2017-yildagi ma'lumotlariga ko'ra, rivojlangan mamlakatlar AKT bozorining hajmi YaIMning 3% dan 6% gachani tashkil etadi: Shvetsiyada – 6,8%, Buyuk Britaniyada – 6,5%, Germaniyada – 5,2%. Raqamli sektorning umumiy hajmi global yalpi ichki mahsulotning 6% ini, ish bilan bandlikning 4% ini tashkil etishi mumkin. Bu taxminlar raqamli

kompaniyalar ishchilari soni, tovar aylanmasining ulushi, shuningdek, an'anaviy kompaniyalarning raqamli bo'limlarida AKT bilan bog'liq ish o'rinlari sonining dinamikasiga asoslanadi.

Xalqaro telekommunikatsiya ittifoqi (International Telecommunication Union, ITU)ning 2018-yildagi ma'lumotlariga ko'ra, AKT sohasida eng rivojlangan davlatlarga Koreya Respublikasi, Yaponiya, Niderlandiya, Shvetsariya, Shvetsiya, Buyuk Britaniya, Daniya, Xitoy (Gonkong bilan birgalikda), Norvegiya va Islandiya davlatlari kiradi. AKT rivojlanish indeksiga ko'ra mamlakatlar reytingida Janubiy Koreya 8-o'rinni, Germaniya 13-o'rinni, AQSh 14-o'rinni, Rossiya esa 44-o'rinni egallaydi.

Bugungi kunda dunyoning 15 dan ortiq mamlakatlari milliy raqamlashtirish dasturlarini amalga oshirib bormoqdalar: Daniya, Norvegiya, Buyuk Britaniya, Kanada, Germaniya, Saudiya Arabistoni, Hindiston, Rossiya, Xitoy, Janubiy Koreya, Malayziya, Singapur, Avstraliya, Yangi Zelandiya va Qozog'iston.

Xitoy, o'zining "Internet Plus" dasturida raqamli sanoatni an'anaviy tarmoqlar bilan birlashtirishni ko'zda tutadi. Singapur esa, "Aqlli iqtisodiyot" ni shakllantirmoqda, Kanada Torontoda drayveri AKTga asoslangan "AKT markazi"ni yaratmoqda. Janubiy Koreya "Kreativ iqtisodiyot" dasturida inson kapitalini rivojlantirishni, tadbirkorlik va AKT yutuqlarini targ'ib qilishni, Daniya esa Davlat sektorini raqamlashtirishga asosiy e'tiborini qaratgan.

Tahlillar raqamli tarmoqlar butun dunyo iqtisodiyotiga qaraganda ko'proq ish o'rinlarining o'sishiga xizmat qilayotganligini ko'rsatmoqda. Masalan, 2013-2018 yillar davomida Kanadada ushbu sohadagi xodimlarning yillik o'sishi umumiy o'sishga (umumiy o'sish 1,4 foiz) nisbatan juda yuqori bo'lgan, ya'ni 2,8 foizni tashkil etgan. AQSh, Buyuk Britaniya va Germaniya kabi mamlakatlarda raqamli iqtisodiyot bo'yicha hukumatning tashabbuslari va tahlillari ushbu sohada o'sib borayotgan talabni qondirish uchun yangi iste'dodlar zarurligini ta'kidlashmoqda. Dunyo va Yevropaning raqamli rivojlangan davlatlaridan biri bu Buyuk Britaniyadir. Buyuk Britaniya hukumati mamlakat iqtisodiyotini rivojlantirish uchun strategik ahamiyatga ega deb hisoblagan bir qator eng istiqbolli texnologiyalarni aniqlash va ushbu sohada yetakchi bo'lish niyatida ekanligini, ayniqsa, 5G kommunikatsiyalari va blokcheynni rivojlantirishni ta'kidlab kelishmoqda.

Raqamlashtirish Internetning tarqalishi hamda mavjudligini rag'batlantiradi. 1990-yillarda Internet endigina rivojlana boshlagan bo'lsa, OECD mamlakatlari bugungi kunda aholisining 86 foizdan ko'prog'i Internetga ega, 77 foizi esa har kuni Internetdan foydalanishadi. Jahon bankining ma'lumotlariga ko'ra, bugungi vaqtda Internet tarmog'idan dunyo aholisining yarmidan ko'pi foydalanadi, ammo rivojlanishi past bo'lgan mamlakatlarda Internetdan foydalanish hali ham past darajada qolmoqda va aholining atigi 15 foizini tashkil qiladi. Internetning keng tarqalishiga eng katta to'siq bu obuna to'lovlarining yuqoriligidir.

Bundan keyin global jarayonlar va davlatlarning raqobatbardoshlik darajasi yangi zamonaviy raqamli texnologiyalar paydo bo'lishiga moslashuvchanligi va

tezkorligi bilan ham belgilanadi. Yangi texnologiyalar bozor ishtirokchilari uchun imkoniyatlarni kengaytiradi, shuningdek, bir qator to'siqlarni ham keltirib chiqaradi. Raqamli iqtisodiyotning raqobat muhitiga va mehnat bozoriga ta'siri eng katta e'tiborni talab qiladi, chunki raqamli iqtisodiyot ish jarayonlarini avtomatlashtirishga olib keladi, bu esa yuqori va past malakali ish joylariga talabning oshishiga, o'rtacha malakaga ega bo'lgan ishchilar sonining esa aksincha kamayishiga olib keladi.

Firmalar xarajatlarni minimallashtirish va innovatsion mahsulotlarni yetkazib berish uchun outsorsingga suyanar ekan, kiber chidamlilik va uchinchi tomon outsorsingi bo'yicha tekshiruv kuchaymoqda, tartibga soluvchilar hamda innovatorlarni umumiy e'tibor bilan bir oqimga birlashtirish uchun turli konferensiyalar o'tkazilmoqda. Hozirgi vaqtda innovatsion startaplarni mahsulotlarni taklif qilish va tartibga solish o'rtasida shaffoflikni yaratishda ishtirok etishga undaydigan bir qator sandbox loyihalari mavjuddir.

Barcha rivojlanayotgan texnologiyalar hamda raqamlashtirishning asosini tashkil etuvchi asosiy qurilish bloklari infratuzilma va ma'lumotlardir. Firmalar o'zlarining ma'lumotlar bazalarini saqlash va tahlil qilish bo'yicha tajribaga ega bo'lishlarini hamda tegishli boshqaruv hamda nazoratni o'rnatishlarini ta'minlashlari kerakdir. Ular xizmatlarni chegaralar orqali yanada samaraliroq yetkazib berish bilan birgalikda, maxfiy mijozlar va bozor ma'lumotlarini himoya qilishlari kerak. Bu tartibga soluvchilar tomonidan munozarada davom etayotgan huquqiy muammolarni keltirib chiqaradi.

Rivojlangan davlatlarda eksport-import operatsiyalarini amalga oshirishda onlayn platformalarda savdo maydonchalari tashkil qilingan. Ushbu savdo maydonchalari orqali bugungi kunda turli savdo operatsiyalari, kontragent shartnomalari blokcheyn modeli asosida amalga oshirilib borilmoqda.

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METHODS OF TEACHING THE RUSSIAN LANGUAGE TO FOREIGN STUDENTS

Abstract

The role of education at the present stage of Uzbekistan's development is determined by increased attention to the training of qualified specialists in any field of professional activity, increased attention to the humanization of society, the tasks of the state's transition to a democratic and legal society, implemented mainly by the most important factor in the humanization of socio-economic relations, the formation of new life attitudes of the individual - university. This article will discuss the relevance of which is the need for fundamental changes not only in the content of education, but also in the educational process itself, understood as a kind of combination of training foreign students (normatively consistent activity of society) and learning (individual significant activity of an individual subject, in which the experience of their life is realized).

Keywords: *quality, modernization, development personality-oriented learning, methods, techniques, abilities, inclinations, interests, value orientations.*

A developing society needs modernly educated, moral, enterprising people who can independently make responsible decisions in a choice situation, predicting their possible consequences, capable of cooperation, are distinguished by mobility, dynamism, constructiveness, and have a developed sense of responsibility for the fate of the country. At the present stage of society's development, the university faces the task of comprehensive development of the student's personality [1]. At the same time, education should ensure the spiritual and intellectual development of students. New types and kinds of educational institutions provide significant opportunities in the work of teachers. A modern university, where modern approaches to teaching are implemented, aims not only to teach students with different abilities, but also to develop a creative environment in lessons aimed at a personally oriented model of teaching, affirming the value of the student's personality. The principle of respect for the personality of the pupil and taking into account his spiritual potential in the content of education is realized by introducing him to world culture, considered

in the aspect of social experience. In this case, the essence of the educational process, i.e. the process of training, education and development, is the purposeful transformation of social experience into personal experience, introducing students to the entire wealth of human culture.

Currently, more and more leading teachers and psychologists adhere to this point of view. Among the large number of innovations used in the education system, special attention is paid to such technologies, where the teacher does not act as a source of educational information, but is the organizer and coordinator of the creative educational process, directs the students' activities in the right direction, while taking into account the individual abilities of each student. Among such technologies, the most famous is the technology of personality-oriented learning. This technology is one of the first in importance and the expectations associated with it for improving the quality of education [2].

Research in the field of technology of personality-oriented learning was carried out by such scientists as G.G. Kravtsova, T.A. Matis, Yu.A. Poluyanov, V.V. Rubtsova, G.A. Tsukerman, I.S. Yakimanskaya [3].

All researchers emphasize the need for an individual approach to teaching students, the importance of a unified educational strategy for universities as the main condition for successful work with students.

One of the main means of improving the quality of education in the context of modernization is the development of modern pedagogical technologies. The content of personality-oriented learning, methods, techniques are aimed at revealing and using the subject experience of each student, based on the identification of his individual abilities as a subject of knowledge and subject activity [4].

The educational process of personality-oriented learning provides each student, based on his abilities, inclinations, interests, value orientations and subject experience, the opportunity to realize himself in knowledge, educational activity, behavior. The content of education, its means and methods must be selected and organized so that the student can show selectivity to the subject material, its type and forms.

The criteria base of personality-oriented learning takes into account not only the level of achieved knowledge, skills and abilities, but also the formation of a certain intellect (its properties, qualities, nature of manifestations). Education as a set of knowledge, skills, individual abilities, is a means of developing spiritual and intellectual qualities.

In modern pedagogical science, the educational environment is becoming more humane, and there is a transition from an information model of learning to an activity-based and personal one. This model of learning requires new forms of organizing the educational process and pedagogical technologies.

In recent years, the educational space has been rapidly conquered by personality-oriented developmental learning. Developmental learning is that which corresponds to the individuality of the student, his potential for acquiring

knowledge. The popularity of the personality-oriented approach in learning is due to a number of objective circumstances [5]:

Firstly, the dynamic development of Russian society requires the formation of not so much the typical as the brightly individual in a person, allowing the student to become and remain himself in a rapidly changing society.

Secondly, modern students are pragmatic in their thoughts and actions, mobile and liberated, and this requires teachers to use new approaches and methods in interaction with students.

Thirdly, the modern university is in need of humanization of relations between students. The ideas and principles, psychological and pedagogical foundations of personality-oriented learning, the model of which was created by Doctor of Psychological Sciences I.S. Yakimanskaya, are the most attractive for solving the problems of developing the personality of the foreign student, revealing their individuality through learning. I.S. Yakimanskaya is a Doctor of Psychology, Professor, a full member of the International Pedagogical Academy and the New York Academy of Sciences, Head of the Department of "Designing Personality-Oriented Education in Secondary School" at the Institute of Pedagogical Innovations of the Russian Academy of Education.

According to the concept of personality-oriented learning, each student is an individual, an active subject of the educational space, with their own characteristics, values, attitude to the world around them, and subjective experience. In the context of a personality-oriented approach, each student appears to the teacher as a unique phenomenon. The teacher helps each student realize their potential, achieve their educational goals, and develop personal meanings of learning.

The model of personality-oriented learning meets the principles of conformity to nature, cultural conformity, individual-personal approach, and also implements the principles of humanitarian education, which promotes the development of imaginative perception and creative thinking, the formation of an emotional-personal attitude to learning.

The model of personality-oriented education is based on a scientific psychological and pedagogical concept, therefore, during its implementation, psychological and pedagogical support, participation, assistance and support of a psychologist are necessary. The interaction of a psychologist and a teacher in mastering the personality-oriented technology of teaching contributes to the implementation of one of the Priority Directions for the Development of Educational Systems of the Russian Federation - the introduction of new developmental technologies of teaching. The most important principles of a personality-oriented lesson:

Using the student's subjective experience

Updating existing experience and knowledge is an important condition that facilitates understanding and the introduction of new knowledge. Understanding in general is closely related to the personal experience of the subject and is

carried out on the basis of past experience, knowledge, rules and other knowledge (about one's capabilities, factors of understanding, etc.). Understanding is the main component of the learning process. Variability of tasks, providing the foreign student with freedom of choice in their implementation and solving problems, using the most significant methods for him to work through the educational material.

Accumulation of knowledge, skills and abilities not as an end in itself (the final result), but an important means of realizing students' creativity.

Providing personally significant emotional contact between the teacher and foreign students in the lesson based on cooperation, co-creation, motivation to achieve success through the analysis of not only the result, but also the process of achieving it.

When implementing these principles, the information base of the lesson becomes truly developmental.

The main thing that a teacher works on in a personality-oriented educational space is the organization of an "event community" with the student, helping him to master the position of the subject of his own life activity. It is important that the student is able to overcome the passive position in the educational process and discover himself as a bearer of an active transformative principle.

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DAROMAD VA XARAJATLARNING TO'G'RI TOIFALANISHINI TA'MINLASHDA AUDITORLARNING O'RNI

Annotatsiya: Ushbu maqola "Daromad va xarajatlarning to'g'ri toifalanishini ta'minlashda auditorlarning o'rni" mavzusiga bag'ishlangan bo'lib, auditorlarning moliyaviy hisobotlar sifatini oshirishdagi ahamiyatini tahlil qiladi. Maqola kirish qismida daromad va xarajatlarning to'g'ri toifalanishining moliyaviy hisobotlar uchun ahamiyatini ta'kidlaydi. Metodologiya bo'limida turli ilmiy va amaliy manbalar orqali auditorlarning roli o'rganiladi. Natijalar qismida auditorlarning tahlil, standartlarga muvofiqlik, tavsiya va o'qitishdagi o'rni yorqin misollar bilan keltiriladi. Muhohaza bo'limida auditorlarning tashkilot ichidagi nazorat va ishonchni oshirishdagi roli ko'rsatiladi. Ushbu maqola auditorlar tomonidan daromad va xarajatlarni to'g'ri toifalash jarayonida ularning bilim va tajribalarining qanday ahamiyatga ega ekanini ta'kidlaydi hamda bu jarayonning tashkilotlar va moliya bozoridagi barqarorlikka ta'sirini ko'rsatadi.

Kalit so'zlar: auditorlar, daromad, xarajat, to'g'ri toifalanish, moliyaviy hisobot, tahlil, standartlarga muvofiqlik, ichki nazorat, tavsiyalar, moliyaviy ko'rsatkichlar, ishtirok, hisobotlar, barqarorlik, amaliyot, xalqaro moliyaviy hisobot standartlari.

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THE ROLE OF AUDITORS IN ENSURING THE CORRECT CLASSIFICATION OF INCOME AND EXPENSES

Abstract: This article is devoted to the topic "The role of auditors in ensuring the correct classification of income and expenses" and analyzes the importance of auditors in improving the quality of financial statements. In the introduction, the article emphasizes the importance of the correct classification of income and expenses for financial statements. The methodology section explores the role of auditors through various scientific and practical sources. In the results section, the role of auditors in analysis, compliance with standards, recommendation and training is presented with vivid examples. The reflection section highlights the role of auditors in enhancing control and assurance within an organization. This article highlights the importance of auditors' knowledge and experience in

the process of correctly classifying income and expenses and shows the impact of this process on the stability of organizations and financial markets.

Key words: *auditors, income, cost, correct classification, financial reporting, analysis, compliance with standards, internal control, recommendations, financial indicators, participation, reports, sustainability, practice, international standards of financial reporting.*

Kirish. Daromadlar va xarajatlarning tasnifi moliyaviy hisobotlarni tayyorlashda muhim rol o'ynaydi, bu tashkilotning moliyaviy hisobotining umumiy shaffofligi, ishonchliligi va to'g'riligiga ta'sir qiladi. Moliyaviy operatsiyalarni to'g'ri tasniflash ichki boshqaruvga ham, auditorlar, investorlar va tartibga soluvchilar kabi tashqi manfaatdor tomonlarga ham tashkilot faoliyati, moliyaviy sog'lig'i va kelajak istiqbollari baholash imkonini beradi.

Har bir insonning hayotida daromadlar va xarajatlar jihatlariga ega bo'lishi maqsadga muvofiqdir. Bu mavzuga oid bo'lgan maqolalar, insonlarga shaxsiy moliyaviy muomalalar bo'yicha erkinlik beradi va moliyaviy muhitda o'ziga ishonch yaratadi. Bu maqola esa daromadlar va xarajatlar hisobi asosida boshqarish, tahlil qilish, va strategiyalarni rivojlantirish bo'yicha muhim masalalarni taqdim etadi.

Daromadlar va xarajatlar hisobi, shuningdek, kompaniyalarning moliyaviy tahlil va strategiyalarni belgilashda muhim bir qismni tashkil etadi. Bu jarayon, kompaniyalar uchun moliyaviy oqibatlarni, moliyaviy natijalarni aniqlash, investitsiyalar va iste'mol qilishlarni belgilash, strategiyalarni belgilash, va kredit darajalarini qabul qilishda juda muhim ahamiyatga ega.

Daromadlar va xarajatlar hisobi asosida kompaniyalar, daromadlar va xarajatlarni aniqlab chiqish, shuningdek, qanday qilib daromadlarni kengaytirish va xarajatlarni kamaytirishni iloji boricha qo'llab-quvvatlashni o'rganishlari kerak. Bu maqolada, daromadlar va xarajatlar hisobini boshqarishning eng muhim usullari va qo'llaniladigan modellarini ko'rib chiqamiz.

Bundan tashqari ushbu faktor bir kompaniyaning moliyaviy natijalarini, xarajatlarni va daromadlarni aniqlash va qayta ishlashni o'z ichiga oladi. Bu hisoblashning ilmiy qismini tushunish, kompaniyalarga daromadlar va xarajatlarni qanday rivojlantirish, moliyaviy natijalarni yaxshilash va strategiyalarni belgilashda yordam beradi.

Hisob, istiqbolga qaraganda strategik rejalarni belgilashga yordam beradi. Shuningdek, bu hisoblash, kompaniyalar uchun yarashgan strategiyalarni belgilash va uning amalga oshirilishini nazorat qilishda yordam beradi.

Auditorlar, ayniqsa, tashqi audit jarayonida daromadlar va xarajatlarning to'g'ri tasniflanishini ta'minlashda hal qiluvchi rol o'ynaydi. Ularning asosiy mas'uliyati moliyaviy hisobotlarning xalqaro moliyaviy hisobot standartlari yoki umumiy qabul qilingan buxgalteriya tamoyillari kabi amaldagi buxgalteriya standartlariga muvofiqligini baholashdir. Ular daromadlar va xarajatlarning

tegishli toifalarda, masalan, ularning xususiyatiga ko'ra, operatsion, investitsiya yoki moliyaviy faoliyatlar bo'yicha hisobot berilishini ta'minlaydi.

Auditorlar buxgalteriya hisobi tamoyillariga muvofiqligini ta'minlash uchun daromadlar va xarajatlar tasniflarini diqqat bilan ko'rib chiqadilar. Noto'g'ri tasniflash foyda marjasi, aktivlar qiymati yoki likvidlikning noto'g'ri ko'rsatilishiga olib kelishi mumkin. Masalan, kapital xarajatlarni operatsion xarajatlar sifatida tasniflash kompaniyaning qisqa muddatda rentabelligini buzishi mumkin. Turli sohalarda daromadlar va xarajatlarni tasniflash uchun maxsus ko'rsatmalar bo'lishi mumkin. Auditorlar qonun talablariga rioya etilishini ta'minlab, ularga rioya qilinishiga ishonch hosil qiladi. Masalan, asosiy faoliyatdan olingan daromadlar aktivlarni sotish yoki bir martalik daromadlarni o'z ichiga olishi mumkin bo'lgan operatsion bo'lmagan daromadlardan ajratilishi kerak.

Daromadlar va xarajatlarni noto'g'ri tasniflash ba'zan moliyaviy natijalarni manipulyatsiya qilishga qaratilgan qasddan urinish bo'lishi mumkin, bu moliyaviy hisobotdagi firibgarlikning bir shakli. Auditorlar bunday qoidabuzarliklarni aniqlash va moliyaviy hisobotlar kompaniya faoliyatining to'g'ri va adolatli ko'rinishini ta'minlash uchun o'qitiladi.

Daromadlar va xarajatlarni to'g'ri tasniflash moliyaviy hisobotlarning sifati va foydaliligiga sezilarli ta'sir ko'rsatadi. Buxgalteriya balansi, daromadlar to'g'risidagi hisobot va pul oqimi to'g'risidagi hisobotni o'z ichiga olgan ushbu hujjatlar tashkilot ichida ham, undan tashqarida ham qaror qabul qilish uchun muhim vositalardir.

Daromadlar to'g'risidagi hisobot kompaniyaning rentabelligini aks ettiradi. Daromad yoki xarajatlarni noto'g'ri tasniflash daromadlarni ko'paytirishi yoki kamaytirishi mumkin, bu esa kompaniya faoliyatining noto'g'ri talqin qilinishiga olib keladi. To'g'ri tasniflash haqiqiy rentabellikni aniqlashga yordam beradi. To'g'ri tasniflash pul oqimi to'g'risidagi hisobotda korxona ichidagi naqd pulning kirib kelishi va chiqishini to'g'ri aks ettirishni ta'minlaydi. Bu likvidlikni tushunish va pul mablag'larini to'g'ri boshqarishni ta'minlash, kompaniyaga o'z majburiyatlarini bajarishga yordam berish va kelajakdagi o'sishni rejalashtirish uchun juda muhimdir.

Investorlar asosli qarorlar qabul qilish uchun aniq moliyaviy hisobotlarga tayanadilar. Agar daromad va xarajatlar to'g'ri tasniflanmagan bo'lsa, investorlar kompaniyaning moliyaviy sog'lig'i yoki rentabelligini noto'g'ri baholashi mumkin, bu noto'g'ri investitsiyalar yoki yo'qotishlarga olib keladi. Xarajatlar tasnifi to'g'ridan-to'g'ri soliq ta'siriga ega. Masalan, ayrim turdagi xarajatlar soliqqa tortilishi mumkin, boshqalari esa soliqqa tortilmaydi. Noto'g'ri tasniflash soliq bilan bog'liq muammolarga olib kelishi mumkin, jumladan, rioya qilmaslik uchun jarimalar.

Rahbariyat strategik qarorlar qabul qilishda moliyaviy hisobotlarga tayanadi. Daromadlar va xarajatlarni to'g'ri tasniflash xarajatlarni nazorat qilish, narx

strategiyasi va byudjetni taqsimlash haqida tushuncha beradi, bu esa ko'proq asosli qarorlar qabul qilishga olib keladi.

Adabiyotlar tahlili.

Daromad va xarajatlarning to'g'ri toifalanishi hamda auditorlarning bu jarayondagi o'rni haqida bir qancha olimlar va mutaxassislar ilmiy izlanishlar olib borgan. Ularning asarlari auditorlik faoliyati va moliyaviy hisobot standartlari bilan bog'liq masalalarni o'z ichiga oladi.

David F. Hawkins "Financial Reporting and Management Control: A Historical Perspective" nomli ishida auditorlarning moliyaviy hisobotlarning to'g'ri toifalanishi va uning boshqaruv jarayonlaridagi rolini chuqur tahlil qiladi. U auditorlik faoliyatining moliyaviy nazorat va hisobot standartlariga ta'sirini yoritadi. Hawkinsning tadqiqotlari auditorlarning tashkilotlar ichidagi boshqaruv qarorlarini to'g'ri qabul qilish va moliyaviy barqarorlikni ta'minlashdagi rolini o'rganishga bag'ishlangan.

William R. Scott moliyaviy hisobot nazariyasiga bag'ishlangan tadqiqotlar olib borib, daromad va xarajatlarning to'g'ri toifalanishi auditorlik faoliyatida qanday muhim rol o'ynashini tahlil qilgan. U auditorlik va hisobot standartlarining xalqaro moliyaviy bozorlar uchun ahamiyatini yoritadi va moliyaviy xatolarning kamayishiga auditorlarning qo'shadigan hissasini ochib beradi.

Michael C. Jensen va William H. Meckling agentlik nazariyasi orqali auditorlarning tashkilot ichidagi manfaatlar ziddiyatlarini boshqarishda qanday rol o'ynashini o'rganishgan. Ularning izlanishlari daromad va xarajatlarni noto'g'ri toifalash oqibatlarini hamda auditorlar tomonidan bu kamchiliklarning bartaraf etilishi yo'llarini yoritadi. Jensen va Mecklingning izlanishlari auditorlarning iqtisodiy samaradorlikka ta'sirini chuqur o'rganishga asoslangan.

Charles T. Horngrenning ishlari auditorlarning xarajatlarni to'g'ri toifalash va boshqaruv hisobotlarini tayyorlashda qanday yordam berishini tahlil qiladi. Uning ilmiy asarlari auditorlik faoliyatining iqtisodiy nazoratni mustahkamlash va moliyaviy hisobotning shaffofligini oshirishga yo'naltirilganligini ochib beradi.

Ray Ball va Philip Brown moliyaviy hisobot raqamlarining bozordagi ta'sirini o'rganib, auditorlarning hisobotlardagi ma'lumotlarning haqqoniyligini ta'minlashdagi ahamiyatini ochib beradi. Ularning tadqiqotlari auditorlik hisobotlari va bozordagi reaksiyalarni bog'lovchi hal qiluvchi omillarni o'rganadi.

Christopher Nobes va Robert Parker xalqaro auditorlik va moliyaviy hisobot standartlarini solishtirgan holda, turli mamlakatlarda daromad va xarajatlarning to'g'ri toifalanishi va auditorlik rolining qanday farq qilishini ko'rsatadi. Ular auditorlik jarayonlarining xalqaro darajadagi muvofiqligini ta'minlash masalasiga e'tibor qaratgan.

Arens, Elder, Beasley auditorlik xizmatlarining korxonalarning moliyaviy barqarorligi va operatsion samaradorligiga ta'sirini o'rganadilar. Daromad va

xarajatlarni to'g'ri toifalash bo'yicha auditorlarning monitoring vazifalarini yoritib, moliyaviy nazorat va auditing jarayonining ahamiyatini chuqur tahlil qilgan.

Ushbu olimlar va ularning ilmiy ishlari auditorlik faoliyatining moliyaviy hisobotlardagi daromad va xarajatlarni to'g'ri toifalashdagi o'rnini chuqur o'rganish imkonini beradi. Ularning asarlari auditorlik jarayonining korxonalar iqtisodiy faoliyatiga ta'sirini tahlil qilib, moliyaviy xavflarni kamaytirish va ishonchli hisobot tayyorlashda auditorlarning roli qanday hal qiluvchi ekanligini ochib beradi.

Metodologiya. Maqolada turli manbalardan, shu jumladan akademik tadqiqotlar, amaliy ishlar va auditorlik standartlari haqida ma'lumotlar to'plandi. Auditorlik faoliyati, uning doirasi va vazifalari to'g'risida sohalararo tahlil o'tkazildi. Shuningdek, ish joylarida to'g'ri toifalanishni ta'minlash uchun auditorlarning tavsiyalari va amaliyotlariga asoslangan misollar keltirildi.

Daromad jarayonlari auditi boshida ko'rib chiqiladi, chunki ushbu asosiy kontseptsyani o'rganish daromad jarayonlari auditining fundamental ahamiyatiga ega. Bundan tashqari, auditor ijobiy xulosa berishi uchun daromadlar GAAP standartlariga muvofiq bo'lishi kerak. Ishlab chiqarish daromadlari esa, odatdagi kabi mahsulot sotish yoki xizmat ko'rsatishdan iborat. FASB bayonotiga asosan, Moliyaviy Buxgalteriya tushunchalari 6-chi soni "moliyaviy jadval elementlari" daromadlarni belgilaydi: Kompaniya daromadlari yoki boshqa aktivlarning yaxshilanishi (yoki ikkalasining birikmasi) kompaniyaning asosiy yoki markaziy faoliyatini tashkil etuvchi mahsulot etkazib berish yoki ishlab chiqarish, xizmat ko'rsatish yoki boshqa xizmat turlariga bog'liq. Daromadlar mahsulot va xizmatlar almashinuvi qiymati bilan o'lchanadi. Umuman olganda, kompaniya mahsulot yoki ko'rsatilgan xizmatlari uchun naqd pul yoki da'volarni qabul qiladi. Naqd pul da'volari odatda, debitor qarzdorlik sifatida ko'rib chiqiladi. FASB 5-chi Moliyaviy Buxgalteriya tushunchalari "savdo-sotiq bilan bog'liq tashkilotlar moliyaviy hisobotlarini tashkil qilish va baholash" bayonotiga asosan, daromadni tan olish (yozuv) uchun u amalga oshirilishi yoki ishlab chiqilgan bo'lishi kerak deb talab qiladi. Daromad mahsulot yoki xizmat ko'rsatish pulga almashinganida, boshqa aktivlarni to'lashga va'da qilinganida paydo bo'ladi. Odatda kompaniya tomonidan mahsulot etkazib berilganida yoki xizmat ko'rsatilib bo'linganida daromad olish jarayoni tugatilgan hisoblanadi. SEC in SAB №101 daromadni tan olish uchun qo'yidagi mezonlarni belgilaydi:

Ishonarli dalillar mavjudligi

Etkazib berilgan yoki xizmat ko'rsatilganligi

Xaridorga sotuvchining narxi belgilangan yoki aniqlanganligi

Tahlil oqilona taqdim etilganligi

Daromadni tan olish auditorlar uchun audit xavfni tug'dirib kelmoqda va moliyaviy xisobotlar yaxlitligi jarayoniga ta'lluqli savollar tug'ilishi olib keldi. Aslida, firibgarlik sharoitlarida audit standarti firibgarlik ta'sirlar tufayli

daromadni tan olish xato ekanligini faraz qilishi kerak deb ta'kidlaydi. O'g'irliklarni tekshirish bo'yicha dimlomga ega mutaxassislar Assotsiyasi ma'lumotlariga ko'ra, moliyaviy hisobotlarda firibgarlik sodir etishning 8 xil umumiy usullari mavjud:

1. Erta daromadni tan olish;
2. O'tgan hisobot davrida kitobni ochiq tutish;
3. Soxta savdo;
4. Qayd qilingan yozuvlarni qaytarishni ilojsizligi;
5. Foiz bajarilishi uslubidagi firibgarlik;
6. Tomonlar bilan bog'lik operatsiyalar;
7. Debitor qarzdorlik va zahiralarining oshirib ko'rsatilishi; va
8. Mas'uliyat va xarajatlarning kamchiligi.

Auditor daromadning tan olinishi bilan bog'lik firibgarlik xavfi kuzatilganida ho'shyor bo'lishi kerak. Tomonlar kelishuvi mijozlarni mahsulotni qabul qilishi yoki xizmat turini qabul qilishini rag'batlantirish maqsadida kelishuv va sotuv shartlari tartibini o'zgartirishadi. Savdo yuklash sifati marketing amaliyotida etkazib beruvchilar sotuv hajmini oshirish uchun ba'zan distribyutorlarni rag'batlantirish orqali ular tez sotib bo'lishi mumkin bo'lgan hajmdan ham ziyodroq zahirani sotib olishlariga ko'ndiradilar.

Ko'pchilik tashkilotlar uchun daromadni tan olish jarayoni qisqa muddatda sodir bo'ladi (kun, hafta yoki oylar), lekin ba'zi bir sohalarda, masalan qurilish, mudofaa tarmoqlarida daromadni tan olish vaqti ma'lum bir yillar davomida kechishi mumkin. Yuridik shaxslar daromadini tan olish siyosati moliyaviy hisobotlarda aks ettiriladi. Shunday qilib, auditor yuridik shaxslar daromadini tan olish siyosatiga audit jarayoni daromadi sifatida qarashi kerak. Aslida, IT bu diagrammalardan axborotlar oqimini hisob jarayonlaridan farqlash uchun ko'prok ishlatishadi. Operatsiyalarning uch turiga daromad jarayoni yordamida ishlov beriladi:

Naqd pul yoki kredit uchun mahsulot sotish yoki xizmat ko'rsatish

Mijozdan mahsulot yoki ko'rsatilgan xizmat uchun pul tushumi

Buyurtmachi tomonidan mahsulot yoki ko'rsatilgan xizmatning qaytarilishi.

O'rtacha daromadlar va xarajatlar hisobi, kompaniyalar uchun muhimdir, chunki bu, ularning moliyaviy tahlil va strategiyalarini shakllantirish va amalga oshirishda yordam beradi.

Natijalar. Tashkilot moliyaviy hisobotining aniqligi va shaffofligini ta'minlash uchun daromadlar va xarajatlarni to'g'ri tasniflashda auditorlarning roli juda muhimdir. Bu mas'uliyat bir necha asosiy jihatlarda o'z aksini topgan bo'lib, ular ko'rib chiqish va nazorat qilishning asosiy funktsiyalaridan tashqariga chiqadi. Keling, ushbu jihatlarni batafsilroq ko'rib chiqamiz.

1. Tahlil va baholash

Auditorlar daromadlar va xarajatlarning to'g'ri tasniflanishini ta'minlash uchun tashkilotning moliyaviy hisobotlarini batafsil va tizimli tahlil qiladilar. Ushbu jarayon har qanday nomuvofiqlik, noaniqlik yoki noto'g'ri tasniflarni aniqlash

uchun moliyaviy ma'lumotlarni baholashni o'z ichiga oladi. Moliyaviy hisobotning har bir elementini, shu jumladan daromadlarni tan olish, xarajatlarni taqsimlash va xarajatlarni tasniflash orqali auditorlar daromadlar yoki xarajatlar noto'g'ri tasniflangan holatlarni aniqlashlari mumkin. Ushbu noto'g'ri tasniflash noto'g'ri moliyaviy hisobotga olib kelishi mumkin, bu manfaatdor tomonlarning qarorlari va tashkilotning moliyaviy barqarorligiga ta'sir qilishi mumkin.

Misol uchun, juda erta tan olingan daromadlar yoki noto'g'ri davr ostida tasniflangan xarajatlar moliyaviy holatning oshishi yoki deflatsiyasiga olib kelishi mumkin. Auditorlar moliyaviy hisobotlarning tashkilotning haqiqiy moliyaviy natijalarini aks ettiruvchi aniqlik va izchillik tamoyillariga amal qilishini ta'minlashda hal qiluvchi rol o'ynaydi.

2. Standartlarga muvofiqligi

Auditorlar tashkilotlarning Xalqaro moliyaviy hisobot standartlari (IFRS), umume'tirof etilgan buxgalteriya hisobi tamoyillari (GAAP) va boshqa milliy yoki sohaga oid me'yoriy-huquqiy bazalarga muvofiqligini ta'minlaydi. Ushbu standartlar daromadlar va xarajatlarni tasniflash va hisobot berish bo'yicha ko'rsatmalar beradi, moliyaviy hisobotlar bo'yicha izchillik va taqqoslashni ta'minlaydi.

Muvofiqlikni tekshirish orqali auditorlar rioya qilmaslik natijasida yuzaga kelishi mumkin bo'lgan jarimalar, jarimalar yoki obro'ga putur etkazish kabi huquqiy va moliyaviy oqibatlarining oldini olishga yordam beradi. Ular, shuningdek, tashkilotning moliyaviy natijalari aniq va ishonchli aks ettirilishini ta'minlaydi, bu ayniqsa qaror qabul qilishda ushbu ma'lumotlarga tayanadigan investorlar, kreditorlar va nazorat qiluvchi organlar kabi manfaatdor tomonlar uchun juda muhimdir.

Masalan, auditorlar UFRSda talab qilinadigan hisob-kitob tamoyillariga rioya qilgan holda, daromad olingan paytda tan olinishini va xarajatlar yuzaga kelganda hisobga olinishini tekshiradi. Muvofiqlik moliyaviy hisobotlarda noto'g'ri ma'lumotlardan xoli bo'lishini ta'minlaydi va tashkilotning moliyaviy holati to'g'risida to'g'ri va adolatli ko'rinish beradi.

3. Tavsiyalar va ko'rsatmalar

Xatolar yoki noto'g'ri tasniflarni aniqlashdan tashqari, auditorlar daromad va xarajatlar tasnifini qanday yaxshilash bo'yicha amaliy tavsiyalar va ko'rsatmalar beradi. Ushbu maslahat roli tashkilotlarga buxgalteriya hisobi amaliyotini takomillashtirish va moliyaviy hisobotning yanada samarali va shaffof mexanizmlarini qabul qilishda yordam berish uchun muhim ahamiyatga ega.

Misol uchun, agar tashkilot doimiy ravishda operatsion xarajatlarni kapital xarajatlar sifatida noto'g'ri tasniflasa, auditorlar nafaqat xatoni tuzatibgina qolmay, balki kelajakda bunday operatsiyalarni to'g'ri tasniflash bo'yicha tavsiyalar ham beradilar. Ular bunday xatolar xavfini kamaytirish uchun aniqroq ichki siyosatlarini qabul qilishni yoki yaxshiroq buxgalteriya dasturlarini joriy qilishni taklif qilishlari mumkin.

Shu bilan birga, auditorlar tashkilotlarni kutilmagan hodisalarga tayyorlash yoki xarajatlarni optimallashtirish strategiyasini taklif qilishdan ko'ra, birinchi navbatda, muvofiqlik va aniqlikni ta'minlashga e'tibor berishini ta'kidlash muhimdir. Ularning maqsadi moliyaviy hisobotning yaxlitligini oshirishdan iborat bo'lib, tashkilot rahbariyatiga aniq moliyaviy ma'lumotlarga asoslangan holda yaxshi qaror qabul qilish imkonini beradi.

Auditorlar xarajatlarni boshqarishdagi samarasizlikni aniqlashlari mumkin bo'lsa-da, ular moliyaviy nazoratni yaxshilash yoki buxgalteriya standartlariga muvofiqlashtirish bilan bog'liq bo'lmasa, ular odatda xarajatlarni optimallashtirish bo'yicha bevosita maslahat berishdan bosh tortadilar. Buning sababi shundaki, auditorning asosiy vazifasi moliyaviy ma'lumotlarning to'g'riligi va ishonchligiga e'tibor qaratib, ob'ektiv va mustaqil bo'lib qolishdir.

4. Ichki nazoratni baholash

Auditor rolining yana bir muhim jihati bu tashkilotning ichki nazorat tizimlarini baholashdir. Daromadlar va xarajatlarni to'g'ri tasniflashni ta'minlash uchun kuchli ichki nazorat zarur. Auditorlar ushbu nazorat vositalarini noto'g'ri tasniflashning oldini olish va aniqlash uchun mos ravishda ishlab chiqilganligini va amalga oshirilganligini aniqlash uchun baholaydilar.

Masalan, auditorlar xarajatlarni tasdiqlash jarayonlarini ko'rib chiqishlari va ularning ichki siyosat va tashqi qoidalarga muvofiqligini ta'minlash uchun daromadlarni tan olishlari mumkin. Agar kamchiliklar aniqlansa, ular nazoratni kuchaytirish uchun takomillashtirishni tavsiya qilishlari mumkin, bu esa kelajakda noto'g'ri tasniflash ehtimolini kamaytiradi.

5. Firibgarlikni aniqlash va oldini olish

Daromad va xarajatlarni noto'g'ri tasniflash ba'zan moliyaviy natijalarni manipulyatsiya qilish yoki moliyaviy maqsadlarga erishish yoki soliq majburiyatlarini kamaytirish uchun ataylab qilingan harakat bo'lishi mumkin.

Masalan, rentabellikni oshirish uchun operatsion xarajatlarni kapital xarajatlarga o'tkazish yoki soliqlardan qochish uchun daromadlarni tan olishni kechiktirish tashkilotning haqiqiy moliyaviy ko'rsatkichlarini buzishi mumkin. Auditorlar ushbu risklarni tahlil qiladilar va barcha tasniflashlar axloqiy va huquqiy me'yorlarga muvofiqligini ta'minlash orqali moliyaviy hisobotlarning firibgarligining oldini olishga yordam beradi.

6. Shaffoflik va investorlarning ishonchini oshirish

Daromad va xarajatlarni to'g'ri tasniflash moliyaviy hisobotning shaffofligi uchun asos bo'lib, investor ishonchiga bevosita ta'sir qiladi. Auditorlar manfaatdor tomonlarga tashkilotning moliyaviy holati to'g'risida to'g'ri va haqqoniy ma'lumot olishlarini ta'minlashga yordam beradi. Ushbu shaffoflik tashkilot va uning investorlari, kreditorlari va nazorat qiluvchi organlar o'rtasidagi ishonchni saqlash uchun juda muhimdir.

Masalan, daromadlar va xarajatlarning to'g'ri tasniflanishini ta'minlash orqali auditorlar investorlarga tashkilotning rentabelligi, likvidligi va umumiy moliyaviy sog'lig'ini baholashni osonlashtiradi. Bu aniqlik investitsiyalar,

kreditlash yoki strategik hamkorlikni o'z ichiga oladimi, yaxshiroq qaror qabul qilish imkonini beradi.

Daromadlar va xarajatlarni tasniflashda auditorlarning roli ko'p qirrali bo'lib, tahlil, muvofiqlikni tekshirish va tavsiyalar kombinatsiyasini o'z ichiga oladi. Auditorlar nafaqat moliyaviy hisobotning to'g'riligi va shaffofligini ta'minlabgina qolmay, balki tashkilotning moliyaviy nazorat tizimini mustahkamlovchi ko'rsatmalar ham beradilar. Ularning asosiy e'tibori standartlarga rioya qilish va aniq tasniflashga qaratilgan bo'lsa-da, ularning faoliyati moliyaviy noto'g'ri ma'lumotlarning oldini olishga va manfaatdor tomonlarning ishonchini saqlashga yordam beradi. Shunday qilib, auditorlar tashkilotlarning moliyaviy barqarorligi va hisobdorligini ta'minlashda ajralmas rol o'ynaydi.

Auditorlar tashkilotlarning xodimlari bilan doimiy aloqada bo'lib, ularga moliyaviy hisoboti bo'yicha o'qitish va ko'nikmalar berishadi. Bu, o'z navbatida, tashkilot ichidagi to'g'ri toifalanishni yaxshilaydi.

1-jadval: Ushbu jarayonning asosiy jihatlari va uning tashkilotning moliyaviy to'g'riligiga ta'siri ko'rsatilgan

Aspekt	Auditorning roli	Klassifikatsiyaga ta'siri
Ta'lim va ta'lim	Auditorlar xodimlarga moliyaviy hisobot berish va UFRS yoki GAAP kabi buxgalteriya standartlariga rioya qilish bo'yicha ilg'or tajribalarni o'rgatish uchun seminarlar, seminarlar va yakkama-yakka sessiyalar o'tkazadilar.	Bu xodimlarning daromad va xarajatlarni to'g'ri tasniflash qobiliyatini rivojlantiradi, bilim etishmasligi tufayli xatolarni kamaytiradi.
Qobiliyatni rivojlantirish	Amaliy yo'l-yo'riqlar orqali auditorlar moliya guruhining texnik ko'nikmalarini, xususan, daromadlarni tan olish yoki kapital va operatsion xarajatlar kabi nuansli buxgalteriya usullarini tushunishda yaxshilaydi.	Yaxshiroq tasniflash xodimlarning o'xshash toifalarni ajratish, buxgalteriya hisobi tamoyillariga rioya etilishini ta'minlashda malakali bo'lishi natijasida yuzaga keladi.
Teskari aloqa davrlari	Audit davomida auditorlar noto'g'ri tasniflar bo'yicha darhol fikr bildiradilar, xodimlarga xatolarning mohiyatini va ularni tuzatish usullarini tushunishga yordam beradi.	Xodimlar kelajakda noto'g'ri tasniflashdan qochishni o'rganadilar, bu esa ichki moliyaviy nazorat va izchillikni yaxshilashga hissa qo'shadi.
Jarayonlarni standartlashtirish	Auditorlar daromadlar va xarajatlarni tasniflashda bir xillikni ta'minlaydigan	Standartlashtirish sub'ektiv talqinlarni va bo'limlar o'rtasidagi tafovutlarni

	standartlashtirilgan moliyaviy hisobot asoslari va vositalarini tavsiya qiladilar va amalga oshirishga yordam beradilar.	kamaytiradi, izchil va to'g'ri moliyaviy hisobotni ta'minlaydi.
Xatarlarni kamaytirish bo'yicha trening	Auditorlar xodimlarni noto'g'ri tasniflash, shu jumladan firibgarlikni aniqlash va noto'g'ri moliyaviy tuzatishlar bilan bog'liq xavflarni aniqlash va kamaytirishga o'rgatadi.	Xatarlarni proaktiv identifikatsiyalash yanada aniqroq tasniflashga olib keladi va tashkilotni muvofiqlikni buzish yoki moliyaviy qayta hisobotlardan himoya qiladi.
Ichki nazoratni takomillashtirish	Auditorlar moliyaviy hisobot bilan bog'liq ichki nazorat tizimlarini yaxshilash uchun rahbariyat bilan ishlaydi, bu esa xodimlarning operatsiyalarni tasniflash bo'yicha aniq ko'rsatmalarga rioya qilishlarini ta'minlaydi.	Kuchaytirilgan ichki nazorat ilg'or tajribalarga rioya qilishga yordam beradi, tasniflash xatolari ehtimolini kamaytiradi va umumiy moliyaviy yaxlitlikni yaxshilaydi.
Uzluksiz kasbiy rivojlanish	Auditorlar moliyaviy hisobot standartlari va dasturiy ta'minot bo'yicha doimiy o'rganish, sertifikatlar yoki malaka oshirishni tavsiya etishni rag'batlantiradilar.	Bu xodimlarning rivojlanayotgan buxgalteriya qoidalaridan xabardor bo'lishini ta'minlaydi, bu esa vaqt o'tishi bilan daromadlar va xarajatlarni tasniflashning to'g'riligini barqaror yaxshilashga olib keladi.

Daromad va xarajatlarni to'g'ri toifalanishi tashkilotning moliyaviy holatini bevosita ta'sir qiladi. Auditorlarning roli ushbu jarayonni nazorat qilish va to'g'ri yo'naltirishda juda muhimdir. Shu bilan birga, auditorlar tashkilotning ichki nazorat tizimini mustahkamlashga va moliyaviy ko'rsatkichlar bo'yicha ishonch hosil qilishga yordam beradi.

Xulosa.

Mukammal daromad va xarajatlarni to'g'ri toifalash uchun auditorlar o'zlarining ilmiy bilimlari, amaliy tajribasi va ko'rsatmalari bilan muhim rol o'ynaydi. Ularning faoliyati nafaqat tashkilot ichida, balki butun moliya bozorida ishonchni oshirishga xizmat qiladi. Natijada, bu tashkilotning barqaror rivojlanishini ta'minlaydi va keng muhitda moliyaviy barqarorlikni saqlashga yordam beradi.

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QO'ZG'ALUVCHAN CHEGARAGA EGA SIZISH MASALALARINI SONLI YECHISH

Annotatsiya: Ushbu maqolada Bir o'lchamli suspenziyani filtrlash masalasini sonli yechish va qo'zg'aluvchan chegaraga ega sizish masalalarini sonli yechish ko'rib chiqiladi

Kalit so'zlar Bir o'lchamli suspenziya, Filtrlash qatlami Siqiluvchi cho'kma, chiziqlimas masala, matematik model, koordinata o'zgaruvchi qadami.

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NUMERICAL SOLUTION OF LEAKAGE PROBLEMS WITH A DIRECTED BOUNDARY

Abstract: The article considers the numerical solution of a one-dimensional suspension filtration problem and a numerical solution of a moving boundary filtration problem.

Keywords: One-dimensional suspension, Filter layer, Compressible sedimentation, nonlinear problem, mathematical model, coordinate variable step.

Suspenziyani filtrlash masalasi murakkab texnologik jarayon hisoblanadi. Juda ko'p faktrlar bu jarayonga bo'ysunadi. Bu masalada filtrlashda cho'kma hosil bo'lishini qaraymiz, cho'kma qatlami o'sib boruvchi deb hisoblaymiz, uning siqilishi konsolidatsiya teoremasiga bo'ysunadi. Bunday jarayonni hisoblash uchun sonli usullardan foydalanish mumkin.

Jarayonni quyidagicha qabul qilamiz. Tekis filtrlash elementini qaraymiz. Filtrlash qatlami boshlang'ich momentda qandaydir z_0 qalinlikka ega deb olamiz. Vaqt o'tishi davomida bosim farqi o'zgarmas. Cho'kma-suspensiya ko'chish chegarasi $h(t)$ o'sishi bilan cho'kma qatlami ortib boradi. Bu

qaralayotgan bir o'lchamli masalada z cho'kma qatlami suspenziya oqimiga qarshi oshib boradi.

Siqiluvchi cho'kma tenglamasi analogik issiqlik o'tkazuvchanlik va diffuziya tenglamasiga o'xshash bo'ladi. Cho'kma-suspenziya chegarasi qo'zg'aluvchan. Bu Stefan masalasini hisoblashda quyidagi faktorlarni olamiz. p – bosim; p_0 , p_1 , p_2 – mos ravishda boshlang'ich, cho'kma qatlamiga kiruvchi va filtrlash qatlamidan chiquvchi bosimlar; μ – suyuqlik qovushqoqligi; r – cho'kmaning solishtirma qarshiligi; u – cho'kmaning tashqi ta'sir koeffitsienti; G – Cho'kmaning siqilish modeli; b – konsolidatsiya koeffitsiyenti, tashqi bosim

ostida cho'kmaning siqilishi amalga oshiriladi, $b = \frac{G}{\mu \cdot r}$.

U holda filtrlash matematik modelini gidrodinamik bosimga nisbatan quyidagi ko'rinishda yozishimiz mumkin:

$$\frac{\partial p}{\partial t} = b \cdot \frac{\partial^2 p}{\partial z^2}, \quad 0 \leq t \leq T, \quad 0 \leq z \leq h(t), \quad (1)$$

$$p[h(t), t] = p_1, \quad 0 \leq t \leq T, \quad (2)$$

$$p[0, t] = p_2, \quad 0 \leq t \leq T, \quad (3)$$

$$p[z, 0] = p_0, \quad 0 \leq z \leq z_0, \quad (4)$$

$$\left. \frac{\partial p}{\partial z} \right|_{z=h(t)} = l \cdot \frac{dh}{dt}, \quad 0 \leq t \leq T, \quad (5)$$

Bu erga $h(0) = z_0$, $l = \frac{r \cdot \mu}{u}$, $p_0 = p_2 + \frac{z \cdot (p_1 - p_2)}{z_0}$, $0 \leq z \leq z_0$; b , l , p_1 va p_2

o'zgarmas kattaliklar.

Umumiy holda, Aralashmani filtrlashda real fizik shartlart cho'kmaning tuzilish strukturasi, filtrlash siqilishi bosim ta'sir farqidagi bir jinslimas muhit holati va boshqa konsolidasiya kuchlardan bog'liq bo'ladi. Shunday qilib, konsolidasiya koeffitsiyenti o'zgaruvchang bo'ladi va osadka qalinligidagi bosimning tarqalishidan bog'liq bo'ladi. Shuning uchun aralashmani filtrlashda hosil bo'ladigan cho'kmaning analiz qilish uchun konsolidasiya koeffitsiyentini o'zgaruvchi qilib olamiz.

Tekis filtrlanuvchi elementni qaraylik. Filtrlash jarayonida aralashmaning yo'nalashga teskari ravishda filtr qatlami qandaydir z_0 bo'lsin. Vaqt o'tishi davomida filtr qatlami bosimning ta'sir farqidan qat'iy nazar o'zgarmas bo'lsin. Aralashma filtrga tushgandan so'ng uzluksiz $h(t)$ cho'kma qatlami chiziqli bo'lmagan holda o'sib boradi, ya'ni cho'kma – aralashma chegarasi ko'chib boradi. U holda bu soxalarni ikkita soxashga ajratish mumkin: $\Omega_1(0, z_0)$ - filtrlanuvchi qatlam sohasi va $\Omega_2(z_0, h(t))$ - cho'kma sohasi, bu yerda albatta $z = h(t)$ - qo'zg'aluvchan chegara. Bu shartlarda jarayon xuddi Stefan masalasiga mos keladi.

Noma'lum qo'zg'aluvchi chegara $h(t)$ chiziqlimas masalaga keladi. (1) – (5) masalani sonli yechish uchun $Q = \{0 \leq t \leq T, 0 \leq z \leq h(t)\}$ sohaga to'r kiritamiz:

$$z_i = i \cdot f_i, \quad i = \overline{1, M_0 + N}, \quad (6)$$

$$t_j = j \cdot \tau, \quad j = \overline{1, N}, \quad (7)$$

Bu erga f_i – koordinata o'zgaruvchi qadami z bo'yicha; M_0 – tugunlar soni, boshlang'ich z_0 filtrlash qatlamigacha bo'lgan; N – $[0, T]$ kesmadagi vaqt qatlami tugunlar soni; τ – vaqt qadami. Koordinata qadami $f_1 = \dots = f_{M_0} = h$, $h = \frac{z_0}{M_0}$, $f_{M_0+j} = h_j$, $j = \overline{1, N}$, h_j – kattalik cho'kma-suspensiya qo'zg'alish chegarasidagi $[t_{j-1}, t_j]$, $j = \overline{1, N}$ intervalidagi qadam.

(1) – (5) masalaga mos quyidagi sxemani kiritamiz:

$$\frac{p_i^j - p_i^{j-1}}{\tau} = \frac{2 \cdot b}{f_{i+1} + f_i} \cdot \left(\frac{p_{i+1}^j - p_i^j}{f_{i+1}} - \frac{p_i^j - p_{i-1}^j}{f_i} \right), \quad i = \overline{1, M_0 + j - 1}, \quad j = \overline{1, N}, \quad (8)$$

$$p_0^j = p_2, \quad j = \overline{0, N}, \quad (9)$$

$$p_{M_0+j}^j = p_1, \quad j = \overline{0, N}, \quad (10)$$

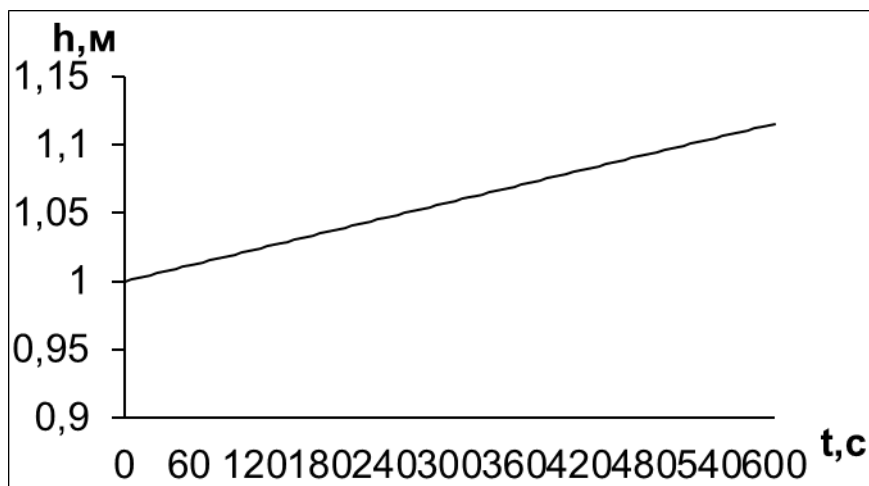
$$p_i^0 = p_0, \quad i = \overline{1, M_0 - 1}, \quad (11)$$

$$\frac{p_{M_0+j}^j - p_{M_0+j-1}^j}{f_{M_0+j}} = l \cdot \frac{f_{M_0+j}}{\tau}, \quad j = \overline{1, N}, \quad (12)$$

Bu erda $p_i^j = p(z_i, t_j)$, $i = \overline{1, M_0 + j - 1}$, $j = \overline{1, N}$;

$$p_0 = p_2 + \frac{z_i \cdot (p_1 - p_2)}{z_0}, \quad i = \overline{0, M_0}.$$

(8) – (12) sonli echish uchun quyidagi parametrlarni qabul qilamiz: $p_1=436$ MPa; $p_2=100$ MPa; $l=19,642 \cdot 10^{10}$ Pa $\cdot$ s $\cdot$ m⁻²; $b=5,31 \cdot 10^{-7}$ m⁻² $\cdot$ s⁻¹; $T=600$ s, $z_0=1$ m. quyidagi rasmda filtrlash hosil bo'ladigan cho'kma qatlamining osjib borishi tasvirlangan.



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THE IMPORTANCE OF RHIZOBACTERIA IN AGRICULTURE.

Abstract: *Diseases of cultivated crops in agriculture are developing from year to year and are developing a special immunity to fungicides, which leads to an increase in the use of fungicides in the fight against diseases. in this article you will learn the importance of fungicides derived from rhizobacteria.*

Key words: *Rhizobacteria, Rhizosphere Monoculture and Soil Ecology*

The need for food security is becoming increasingly urgent as the world's population, currently around 7 billion, is expected to grow to nearly 10 billion or more in the next 50 years [1]. Arable land is becoming a limited resource due to urban developments and industrialization; from now on, the available agricultural land should be used more efficiently using appropriate agricultural methods [2]. Excessive use of synthetic fertilizers and other agrochemicals for higher yields is on the rise. However, this is not a sustainable strategy, as the result of these actions will have a negative impact on the environment. Soil ecology is affected by the improper use of fertilizers, as well as the use of permanent monoculture crops and pesticides (rhizosphere autotoxicity) [3]. In addition, agrochemicals cause eutrophication, which affects water ecosystems in cultivated fields [4].

Therefore, researchers are focusing on wide opportunities for efficient use of agricultural land. Bacteria present in the rhizosphere cooperate with the host plant and have a positive effect on its growth [5]. Plant growth promoters (PGPs) are supplied by beneficial bacteria living in or around plant roots, such as in the rhizosphere, "plant growth and development rhizobacteria" (Bacteria known as PGPR) protect plants from abiotic and biotic diseases and various stressful conditions, as well as improve their physiological capabilities [6]. These beneficial soil microorganisms, however abundant in the rhizosphere, are generally underutilized as bio-inoculants for crop production, especially under abiotic stress [7]. Therefore, today rhizobacteria are of great interest as a component of integrated plant nutrient management systems, while being represented as an environmentally friendly tool for increasing crop productivity among agricultural and environmental research. Rhizobacteria present in the rhizosphere are an effective alternative to agrochemicals. The rhizosphere hosts a wide range of microbes in direct contact with plant roots, and thus the rhizosphere is a hotspot of bacterial diversity. Plant roots release several organic

nutrients such as sugars, amino acids, and plant effluents and send signals that stimulate microbial growth and production, so they harbor 5-10 times more fungi than normal soil. and feeds 10-50 times more bacteria [8].

The term "rhizosphere" was first defined by Lorenz Hiltner in 1904 as the soil region closely associated with plant roots [29]. The term "rhizobacteria" refers to the accumulation of rhizosphere microbes around the plant root surface. Bacteria living in the rhizosphere are the source of the formation of colonies of endophytic bacteria, and the bacteria adapted to live endophytically in the roots of plants are the most common. Endophytic bacteria are located in intracellular and intercellular spaces or in various tissues. Bacteria enter plant tissues, especially through lateral roots or root hair cells. The ability of endophytic bacterium *Enterobacter asburiae* JM22 to hydrolyze cellulose attached to the plant cell wall contributed to its entry into the cells of the umbilical cord. Root endophytes penetrate the lateral root epidermis below the root hair zone and in root cracks. They have the ability to establish intercellular and intracellular populations. The interaction of host plants with endophytes is facilitated by the growth of roots in plants due to the action of bacteria. Shifts at the cellular and molecular levels that occur during plant development can also affect endophytic colonization. Enzymatic mechanisms play an important role in ensuring the penetration of endophytic microorganisms into plants, which can then be transmitted through seeds. The plant root not only provides mechanical support and absorbs plant nutrients, but also contains, accumulates and releases various chemical compounds in the form of root exudates. These root exudates act as chemical attractants for different groups of soil microbial communities. Exudation of a diverse group of chemical compounds regulates soil microbial communities by altering soil physical and chemical properties. In addition, microbial interactions in the rhizosphere influence rooting patterns and enhance the supply of nutrients available to plants. Microbes use root exudates in the rhizosphere as sources of carbon and nitrogen. In return, plants receive organic molecules obtained by microbes for growth and development. Microbial communities can protect up to 15% of the root surface because they also have the metabolic flexibility to adjust the quality and quantity of root exudates for their use. The components of exudates can be called allelochemicals, phytotoxins, phytoalexins, phytohormones and ectoenzymes. Measurements of exudates vary from plant to plant, plant growth cycle, and rooting pattern.

According to the cited literature sources, the demand for agricultural crops is increasing year by year, taking this into account, the role of rhizobacteria, which are present in the soil of each field and are used as biocontrol agents that form an associative symbiosis with plants, is very important.

Microbiological biopreparations allow to reduce the consumption of drugs with various chemical properties and increase the productivity of agricultural crops, while they are used in the biological protection of plants by acquiring high activity in the ecological regeneration of the soil. Rhizobacteria, which have the

ability to synthesize plant phytohormones, including auxins (indole-3-acetic acid), gibberellins and cytokinins, synthesize biopolymers that allow plants to overcome stress factors in unfavorable environmental conditions (salinity and drought).

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O'ZBEKISTONDA KREATIV IQTISODIYOTNI QO'LLASHNING ZAMONAVIY MUAMMOLARI

***Annotatsiya:** Ushbu maqolada O'zbekistonda kreativ iqtisodiyotni qo'llashning zamonaviy muammolari haqida so'z yuritilgan.*

***Kalit so'zlar:** ekzotik, innovatsiya, strategik resurs, xalqaro kapital bozori, moliyaviy tuzilmalar, paradoksal vaziyat, raqobat muhiti, iqtisodiyot.*

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MODERN PROBLEMS OF CREATIVE ECONOMY APPLICATION IN UZBEKISTAN

***Abstract:** This article talks about the modern problems of applying the creative economy in Uzbekistan.*

***Key words:** exotic, innovation, strategic resource, international capital market, financial structures, paradoxical situation, competitive environment, economy.*

Kirish. Jahon iqtisodiyotida innovatsiyalar va innovatsion ishlanmalar hamda kreativlik iqtisodiyotni rivojlantirishning eng xarakterli xususiyatlaridan biriga aylanib bormoqda. Yaqinda bu nom ekzotik, noma'lum va hatto professionallar orasida ham unchalik aniq bo'lmagan nomni eslatardi, ammo endi innovatsiyaning o'zi ham, uning tushunchalari hamda kreativlik dunyo iqtisodiyotiga tezda kirib kelmoqda. Innovatsion jarayonda jiddiy rol o'ynaydigan va innovatsiyalarni korxonalar uchun strategik resursga aylantiradigan xalqaro kapital bozori kengayib bormoqda va unga kreativ jarayonlar bu borada unga yangi mablag'lar unga yordam beradi.

Rivojlangan mamlakatlar tajribasi shuni ko'rsatadiki, innovatsiyalarga ko'pincha odamlarning bevosita salbiy munosabati va pozitsiyasi salbiy ta'sir ko'rsatadi. Biroq, O'zbekistonda paradoksal vaziyat rivojlanmoqda, ya'ni butun jamiyat innovatsion jarayonlarga ijobiy munosabat va qo'llab-quvvatlashni bildirayapti.

Shu ma'noda, Prezidentimiz Shavkat Mirziyoyev tashabbusi bilan islohotlarning yangi bosqichida iqtisodiyotda davlat ishtiroki bosqichma-bosqich kamaytirilayotgani quvonarlidir. Xalqimiz dunyoqarashida innovatsiya muhitini yaratish eng muhim vazifamizdir. Innovatsiya bo'lmas ekan, hech bir sohada raqobat, rivojlanish bo'lmaydi. Prezidentimiz Shavkat Mirziyoyev bu haqida shunday deganlar:

“Bu sohadagi o'zgarishlarni xalqimizga keng targ'ib qilmasak, odamlarda ko'nikma paydo qilmasak, bugungi davr shiddati, fan-texnikaning mislsiz

yutuqlari bilan hamqadam bo‘lolmaymiz. Shuning uchun ushbu faoliyatni zamon talablari darajasida rivojlantirish yangi vazirlik, qolaversa, ushbu markazning asosiy vazifasi bo‘lishi kerak.”[1]

Asosiy qism. Iqtisodiyot professional diagnostika asosida tahlil etilib, strategik harakatlar samaradorligini oshirish bo‘yicha ko‘rilayotgan chora-tadbirlar natijasida 2017 yilda barqaror iqtisodiy o‘rnatilgan sur‘atlari 5,5 foizni tashkil qildi, eksport hajmi qariyb 15 foiz ko‘paydi. Tashqi savdo aylanmasining ijobiy saldosi 854 million AQSh dollariga yetkazildi.[3]

Agar mavjud salohiyat va imkoniyatlardan oqilona foydalanilsa, iqtisodiy ko‘rsatkichlar muttasil oshib boraveradi. Buning uchun iqtisodiyot tarmoqlarini modernizatsiyalash hamda yangilash tadbirlarini yanada jadallashtirish zarur. Davlatimiz rahbari ta’kidlaganidek, mamlakatimiz gaz va elektr energiya sohasidagi kapitalning texnologik eskirganligi hamda modernizatsiyalashtirilmaganligi sababli gaz ishlab chiqarishda tabiiy gazning 23 foizgacha, elektr uzatishlarda esa elektr energiyasining 20 foizgacha isrof bo‘layotgani juda achinarlidir. Bebaho boyliklarimiz behuda yo‘qotilishining oldini olish uchun texnologik qoloq hamda samarasiz ishlab chiqarish jarayonidan voz kechishimiz darkor. Zero, kapital yangilanmas ekan, texnologik rivojlanish ham bo‘lmaydi. Ammo kapital yangi bo‘lgani bilan uning ishlash texnologiyasi eski bo‘lsa, uning ham samarasi sezilmaydi. Buning yana bir salbiy oqibati shuki, malakali kadrlarga bo‘lgan talab ham pasayib boraveradi.

Bugungi kunda kreativ industriya yiliga 2,3 trln dollarga yaqin daromad qabul qiladi. Jahon bo‘ylab eksport 250 mlrd dollarga teng bo‘lib, joriy o‘rnatilgan sur‘atlarini va ushbu sektorning jahon iqtisodiyotidagi ahamiyatini hisobga olsak, bu soha yaqin 10-15 yil ichida jahon yalpi ichki mahsulotining 10 foizini tashkil etishi taxmin qilinmoqda.[2]

Ayniqsa, yoshlar uchun bu iqtisodiyotning eng istiqbolli tarmog‘i ekanligini inobatga olasak, aholisining 60 foizini 30 yoshgacha bo‘lgan bolalar va yoshlar tashkil etuvchi O‘zbekiston uchun muhim ahamiyatga ega natijalardandir.[3]

Ammo O‘zbekiston yalpi ichki mahsulotida kreativ industriyaning ulushiga doir aniq ma’lumotlar yo‘q. Ayni kunga qadar kreativ industriya sohasiga oid 9 563 ta korxona ro‘yxatga olinib, bu tarmoqqa yakka tartibdagi tadbirkorlarni hisobga olmaganda 84 068 nafar xodim jalb etilgan.[5]

Bundan tashqari, sohadagi barcha korxonalarning 83 foizi yoki 7 931 tasi 9 tagacha ishchisi bo‘lgan mikrokorxonalardir, xodimlari soni 49 tagacha bo‘lgan kichik korxonalar soni esa 1 264 tani, 50 dan ortiq ishchilar mehnat qilayotgan korxonalar soni esa 368 tani tashkil etadi.[5]

Respublikada 205 ta IT-markazlari, 100 dan ortiq dizayn markazlari, 60 ta animatsion suratlar markazlari, 30 ta o‘yinlar ishlab chiqish markazlari va 20 dan ortiq san’at galereyalari mavjud.[4]

Shu bilan bir qatorda respublikada yoshlar uchun qulay shart-sharoit yaratib beradigan rag‘batlantiruvchi omillar va huquqiy jihatdan asoslanuvchi muhit mavjud emasligi, shuningdek, O‘zbekistonda kreativ industriya vakillari uchun

amaldagi soliq rejimi asosidagi soliq stavkalarining yuqoriligi, soliq to'lashning murakkab tartiblari, daromadlarni cheklash va soliq imtiyozlarining yo'qligi kabi omillar tufayli noqulayliklar ham mavjuddir.

Kreativ iqtisodiyot butun dunyo bo'ylab 16-29 yoshlilar uchun millionlab ish o'rinlarini yaratadi. Rivojlangan mamlakatlarda ushbu sektorda bandlikning ulushi qisqa muddatlarda sezilarli ko'rsatkichlarga erishishi mumkin.

Rossiya Strategik tashabbuslar agentligining ma'lumotlariga ko'ra, Rossiya Davlat Dumasi kreativ industriyani rivojlantirish to'g'risidagi federal qonunni birinchilardan bo'lib qabul qildi. Bu haqida Agentlik bosh direktori S.Chupsheva joriy yilning 22-may kuni Strategik tashabbuslar agentligi kuzatuv kengashi yig'ilishida Rossiya Federatsiyasi Prezidenti V.Putinga ma'lum qildi.

Bundan tashqari, Rossiyada kreativ iqtisodiyotning 20 ta yo'nalishi bo'yicha talabalarni tayyorlaydigan "Universal universitet" faoliyati yo'lga qo'yilgan.

Kreativ iqtisodiyotning o'sish sur'ati va jahon iqtisodiyotidagi ahamiyati ta'sirida O'zbekistonda ilg'or xorijiy tajribaga asoslangan holda "Kreativ tarmoqlarni rivojlantirish" milliy dasturini ishlab chiqishga undamoqda, dasturda quyidagilar nazarda tutiladi:

- 1) kreativ industriya sohasi vakillari uchun maxsus tashkiliy hududlar, ko'rgazma maydonchalari va studiyalar tashkil etilish. Bu orqali soha vakillari o'z asarlarini namoyish etishlari mumkin bo'ladi;
- 2) ijodiy soha mutaxassislari ishini sezilarli darajada osonlashtiradigan zarur jihozlar, kompyuterlar va dasturiy ta'minotdan foydalanishni ta'minlash orqali ularni qo'llab-quvvatlash;
- 3) intellektual mulk va g'oyalarni nusxa ko'chirishdan himoya qilishning samarali mexanizmlarini ishlab chiqish. Bunga qonunchilik, patentlash mexanizmlari va maxfiylik qoidalarini takomillashtirish kabilar kiradi;
- 4) ijodiy soha vakillarining malakasini oshirish uchun jahonning yetakchi mutaxassislaridan o'quv dasturlari va mahorat saboqlari o'quv seminarlarini tashkil etish;
- 5) kreativ industriyada startap va loyihalarni rivojlantirish uchun Grantlar va kreditlar taqdim etish jamg'armasini tashkil etish;
- 6) mamlakat ichidagi va xorijdagi ijodiy soha vakillari o'rtasida bilim va tajriba almashish uchun tarmoq platformalarini yaratishga ko'maklashish.

Xulosa. Ma'lumki, hozirda iqtisodiyotni yanada erkinlashtirish, ayniqsa, tadbirkorlik harakatiga keng yo'l ochib berishga jiddiy e'tibor qaratilmoqda. Binobarin, iqtisodiyotning liberallashtirilishi bu davlatni nomarkazlashtirish bo'lib, uning iqtisodiy boshqaruvdagi funksiyalarini o'zini o'zi boshqarish tashkilotlariga, xususiylashtirilayotgan sektorlarga o'tib borishini anglatadi. Ushbu jarayonda ikkita muhim strategik vazifani hal qilish zarur. Avvalo, xususiylashtirilayotgan mulk haqiqiy mulkdorlar qo'lga berilishi kerak. Chunki iqtisodiy munosabatlarni tubdan o'zgartirish uchun real shart-sharoitlar yaratishga imkon tug'dirilishi milliy ongning o'sishi va tafakkur taraqqiyotiga olib keladi.

Foydalanilgan adabiyotlar:

<https://jadid-media.uz/kreativ-iqtisodiyot-istiqbol-va-muammolar>

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LOSSES FROM BUILDINGS WATERLOGGING IN SETTLEMENTS OF SYRDARYA PROVINCE

Abstract. *This study examines waterlogging in settlements on saline soils in the Syrdarya province of Uzbekistan. The region's low relief makes areas vulnerable to waterlogging, often caused by irrigated agriculture. The research assesses the risks and damages to the population and infrastructure caused by this problem. Using risk assessment methods and social surveys, the study estimated the monetary damage to the populations of affected towns and cities and compared the cost of repairing roads in flooded saline and non-saline areas. The results show that about 60% of the urban population in Syrdarya Province have to carry out annual repairs to their homes due to waterlogging and salinisation, costing an average of \$322.4 per household per year - almost equivalent to the average monthly salary in Uzbekistan. In addition, salinisation increases road repair costs by \$68,750 per year per kilometre. To mitigate waterlogging, the study recommends the construction and effective management of drainage systems on affected lands and the implementation of cost-effective irrigation techniques.*

Key words: *saline land, settlement, waterlogging*

Introduction

Soil salinisation is a major factor negatively impacting agriculture, construction, and the environment in Uzbekistan. Approximately 2 million hectares, which accounts for 46.6% of the total irrigated area in the republic, are affected by salinisation to varying degrees. The primary cause of salinisation is the rise of the saline groundwater table (SGT) above the critical depth, which is due to high water losses from inefficient irrigation systems and unreasonably high irrigation rates in agriculture (Begmatov, 2020).

Salinity not only negatively impacts agricultural production but also has direct consequences for the population, including loss of business opportunities (both existing and potential) (Australia..., 2006):

- The loss of business, both existing and potential, should be considered
- The costs of rural restructuring when farms become unprofitable should also be taken into account.
- Additionally, increased health problems due to stress in families affected by change should be considered.

The indirect impact of salinisation on people is reflected in the reduced quality of the natural environment. Salinisation of lands and high groundwater table damages roads and bridges. In settlements, footpaths, parks, sewage pipes, residential buildings, and industrial constructions are also damaged. These phenomena result in substantial financial costs.

According to S. Wilson (2003), salinity damage caused by high aquifer salinity and saline water supplies in rural and urban areas can lead to increased repair and maintenance costs. For instance, the annual repair and maintenance cost of a sports stadium in a saline area is \$5,000. Infrastructure life cycle costs can increase due to moisture and/or salinity damage, resulting in the need for earlier replacement. For instance, unpaved roads are typically renewed every 15 years, but in areas with saline soil, this period is shortened by 5 years, incurring additional costs for both the municipality and the community. According to Australian Report (Australia..., 2006), repairing infrastructure affected by salinity costs approximately \$100 million per year in Australia. Negative impacts can be worsened in areas that are waterlogged. Waterlogging in urban areas can be caused by increased rainfall and building settlements in low-lying areas. Poorly developed drainage systems can also be a major cause, as they are often neglected during city construction (Yun-Fang Ning et al., 2017). Waterlogging in areas with saline soils can cause damage to buildings and structures due to the joint effect of water and salt. This damage can include harm to paint, wood, metal structures, and concrete (Aghimien et al, 2018).

Kosimova (2023) points out that during construction of industrial and civil structures on saline soils subject to waterlogging, inadmissible deformations and losses of bearing capacity of the foundation often occur. Accidental subsidence can be caused by leaks from water supply networks, leading to additional moistening of foundation soils and their uneven subsidence. There were cases of uneven suffosion subsidence of the foundation of a residential building, which caused cracks in the walls with an opening of up to 7 cm. The building was divided vertically into four compartments by these cracks, which required expensive repair works.

Negative impacts on infrastructure, particularly on motorways, have also been studied by a number of researchers.

For example, it has been found (Hudaykulov and Kayumov, 2021) that the presence of readily soluble salts in earth bed materials can cause failure of road surfaces, especially bituminous pavements. When the moisture content of the subgrade increases, soluble salts rise into the road surface layer, where they can subsequently crystallise, causing lifting and cracking of bituminous pavement and disruption of its adhesion to underlying layers. The thinner the surface layer, the greater the likelihood and extent of damage. Groundwater and surface water, which is retained in depressions of the relief, are the direct source of salt intake into the soil (Hudaykulov and Kayumov, 2021).

A. Kayumov et al. (2019) investigated the influence of the type of salinity and the amount of salt in soils on the calculated values of the indicators of subgrade soils of motorway subgrade. These researchers found that the presence of easily soluble salts in the earth bed has a negative confluence on the elastic modulus, adhesion force and other structural indicators of the road surface. It was found that in order to ensure the strength characteristics of roads with the content of 2-8% of easily soluble salts in the soil, it is necessary to increase the thickness of the pavement by 7...21 cm

R. Hudaykulov and A. Kayumov (2021), as a result of research conducted in Syrdarya province, established the negative impact of soil salinity on the evenness of the road surface.

All these negative impacts, of course, reduce the service life of road surfaces. The frequency of average road repairs on non-saline soils is 8 years (Radkevich, 2016); on saline soils 2.5 years, the cost of average road repairs is 250,000 USD/km (Kayumov et al., 2021).

Since the deterioration of the quality of buildings and roads has a negative impact on the living conditions of the population, it can be said that waterlogging of territories, especially with saline soils, is one of the types of geo-ecological risk for the population.

In Uzbekistan, the problem of assessing the impact of waterlogging and salinisation of settlements on social life has not been practically studied. Available studies are devoted only to the direct problem of groundwater table rise (Karimov et al., 2019, Mirzakhodjaev et al., 2018).

The purpose of this paper is to provide a monetary assessment of the risks to housing and roads in Syrdarya province associated with land salinity and waterlogging.

2. Methods

2.1 Geological and geographical information on flooded cities of Syrdarya province

The soils of settlements in Syrdarya province are saline to a greater or lesser extent and contain a certain amount of water-soluble salts, which determine the corrosivity of the soil environment in relation to concrete, steel and other building materials.

The amount of highly saline soils in Syrdarya province was in 2020 equal to 9,739 ha; in 2021 - 8,980 ha.

Syrdarya province is located in the lowlands, in the valley of the Syrdarya River (Fig. 1), therefore, there is a constant danger of flooding of settlements.

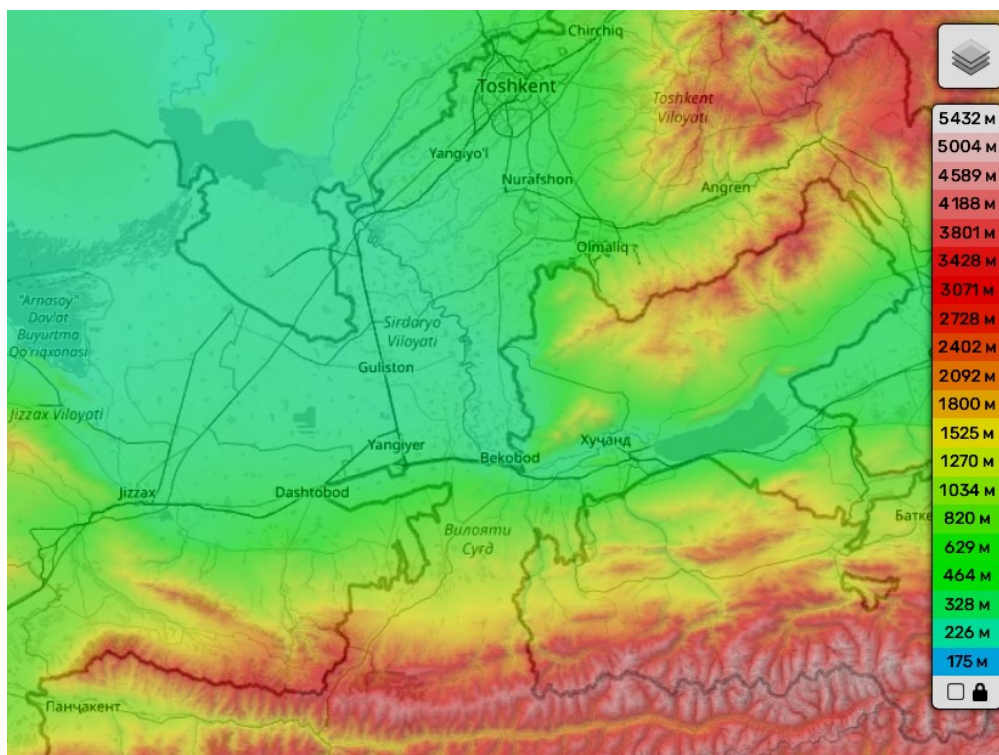


Fig. 1. Topographic map of Syrdarya province

(Source: <https://ru-ru.topographic-map.com/map-s41qf3/Сырдарьинская-область/?center=40.40036%2C68.18316&zoom=8&popup=41.42489%2C65.58581>)

Rising groundwater level due to poorly organised irrigation aggravates the situation and can lead to damage and even destruction of buildings and structures. A number of settlements in Syrdarya province are in the waterlogged zone during the irrigation season.

The waterlogged towns include Gulistan, Syrdarya, Yangier and Shirin (Mirzakhodjaev et al., 2018; Karimov et al., 2019), but in addition to these relatively large settlements, many small settlements are located in the waterlogged zone. Let us give brief geological and geographical information about the mentioned towns.

The town of Gulistan is located in the old irrigated zone of the Hungry Steppe. Groundwater level regime is irrigation and depends on irrigation regime, first of all on canal discharge regime.

During the highest position, the groundwater table is at a depth of 0.5 - 1.0 m in the central part of the city and 1.0 - 1.5 m in its south-eastern and northern parts. The lowest position of the groundwater table is observed at the end of the irrigation season. At the lowest groundwater level, groundwater occurs at depths ranging from 3.0 - 3.5 m in the zone of influence of the Dustlik canal to 2.0 - 3.0 m in the zone of influence of irrigation.

As a rule, groundwater is more mineralised far from the sources of supply and at the lowest positions of the level, and vice versa, less mineralised near filtration sources and during the summer growing season.

Soils of Gulistan in the depth interval from 0.2 to 2-3 m contain water-soluble salts in the amount from 0.2 to 4.4%, in srdenem 0.78% of dry weight. Type of mineralisation of aqueous solution of salts is sulphate-calcium.

The town of Yangiyer is located in the south-eastern part of the Holodnostepsky plateau. Groundwater mineralisation level is 1-2 m depending on the depths of draining collectors and distance from them.

Groundwater mineralisation and soil salinity are unevenly spread over the territory of the city. In areas with close groundwater table saline soils and solonts are developed, groundwater is highly mineralised.

Soils on the territory of Yangiyer town are of different salinity degree, with content of water-soluble salts from 0.565 to 3.180 %, average for the town is 2.140%.

The territory of Syrdarya city is located in the modern valley of the river of the same name, within its second supra-flood terrace.

Within the city territory the depth of groundwater occurrence at the maximum level position is from 0.5 - 1.0 m in the north and east to 1-2 m in the southern half of the city. In the east, south-west and in a small area in the centre of the city territory flooding occurs during the growing season. Groundwater level regime on the territory of Syrdarya is irrigation. The first maximum is observed in the period of leaching irrigation in February-March, the second maximum - in July-August - in the period of vegetation irrigation. The minimum position of groundwater table is observed at the end of autumn-winter period before the beginning of leaching irrigation. Annual amplitude of groundwater level fluctuation is 2.15 - 2.45 m.

Groundwater mineralisation is up to 980 mg/l in the vicinity of irrigation canals and up to 6,850 mg/l with distance from them (Sodikov and Agzamov, 2006).

Soils of Syrdarya territory have different salinity degrees. The content of water-soluble salts ranges from 0.29 to 2.75 per cent, with an average for the city of 1.32 per cent. Type of mineralisation of water-soluble salts solution of soils, as well as groundwater, is sulphate-hydrocarbonate.

According to the composition of salt components, both groundwater and soils of the cities under consideration are sulphate-aggressive to concrete and reinforced concrete structures on Portland cement, and in some areas - to structures on sulphate-resistant cement (Sodikov and Agzamov, 2006).

The length of motorways in Syrdarya province is approximately 900 km. The frequency of average road repairs on non-saline soils is 8 years (Radkevich, 2016); on saline soils 2.5 years, the cost of average road repairs is 250,000 USD/km (Kayumov et al., 2021).

2.2. Research Methods

As stated above, annual waterlogging by mineralised water causes significant damage to the buildings of settlements. The extent of this damage can be indirectly estimated by the average value of the annual costs incurred by residents to maintain their dwellings in an acceptable condition. Such an estimation was made in this study by social survey method (Likhacheva et al., 2017). The survey was conducted from May to October 2023.

Residents of large settlements represent a social community and can serve as a subject of sociological research. Usually, a continuous survey of such multiple communities is not possible due to economic and time constraints, so it is limited to a sample survey (Kelley et al., 2003; Xi Meng et al., 2015). The sample size for determining the share of some attribute X in the general population of more than 5,000 units is determined by the formula (Berezin, 2018, Gorodilin, 2006):

$$n_1 = \frac{1}{\Delta^2} \quad (1)$$

Where Δ is the value of acceptable error, it is taken equal to 5 % (0.05) with probability 0.954. In our case, "attribute X" is the share of residents of flooded settlements suffering from damage to buildings. The total number of residents of flooded towns is 167,000 people (Table 1). Thus, given the volume of the general population of 167,000 people, $n_1 = 1/0,05^2 = 400$ people. Consequently, to determine the share of residents who feel the impact of dampness on buildings, it is necessary to conduct a survey among 400 people.

Table 1. Information on the population of cities subjected to waterlogging

City	Population, persons
Gulistan	90,000
Yangi-Yul	33,000
Syrdarya	27,000
Shirin	17,000
Total	167,000

Source: <https://www.stat.uz/ru/ofitsialnaya-statistika/demography>

The planning of the sample size for determining the numerical characteristics of the general population (e.g. average repair costs) is done as follows.

First of all, a sample survey is conducted (30 or more respondents). Then, based on the results of this survey, the sample size is determined according to the formula (Berezin, 2018; Paniotto and Maksimenko, 2017):

$$n_2 = \frac{\sigma^2 \cdot t^2}{d^2} \quad (2)$$

where: n_2 is the required sample size; σ^2 is the variance of the trait, the expected mean deviation of the obtained results from the expected mean value; t is the coefficient of the confidence level (2 - for 0.95, 3 - for 0.99); d is the level of accuracy for this factor.

The representativeness error is determined by the formula:

$$M = \frac{\sigma}{\sqrt{n_i - 1}} \quad (3)$$

Where $\sigma = \sqrt{\sigma^2}$ is the standard deviation, n_i is the number of pre-interviewees.

The marginal sampling error is determined by the formula

$$\Delta = tM \quad (4)$$

According to the survey data $n_1=400$ people about 60% of the population of the general population (100,200 people) have to make annual repairs of houses due to waterlogging. The remaining 40 per cent live in those parts of cities where the level of groundwater is low or on the upper floors of multi-storey buildings.

According to statistical data (Anon..., 2022), we take the average family composition of 5 people and determine the number of houses requiring annual repairs $100,200:5 = 20,040$ houses.

To obtain data on the costs of annual repairs due to dampness, residents were asked a questionnaire including questions about the number of additional repairs caused by waterlogging and rising salts.

A preliminary survey was conducted among 42 residents. The level of accuracy d was assumed to be ± 0.36 million UZS (10% of the arithmetic mean).

3. Result and Discussion

The results of the preliminary survey on annual repair costs are as follows (Table 2):

Table 2. Results of the preliminary survey to determine the sample size n_2

Number of preliminary respondents, people	Arithmetic mean of annual repair costs due to waterlogging, mln	Dispersion σ^2	RMS deviation σ	Representativeness error M	Marginal sampling error Δ	Required sample size n_2 , people
42	3.5952	12.34	3.5134	0.5485	1.0974	380.6 381

Source: Developed by the authors

Thus, the sample size $n_2=380$ people was taken for the survey of residents.

The survey was conducted among residents of different settlements of Syrdarya province. The results of the survey are presented in Table 3.

Table 3. Results of the survey of residents of Syrdarya province suffering from dampness

Indicator	Value
Type of repair	
- major	21.3 %
- medium	46.8 %
- cosmetic	31.9 %
Average number of repairs per year	1.3
Average cost of 1 repair, UZS million	3.1

Source: Developed by the authors

It can be seen from the above data that waterlogging of buildings in settlements causes different severity of damage to residential buildings. The average cost of one repair is UZS 3.1 million (about 248 USD), which, taking into account the average annual number of repairs of 1.3, gives a cost per household of UZS 4.03 million (322.4 USD).

Thus, the damage caused by waterlogging to the population of all cities subject to waterlogging is as follows:

$$D = 20040 \cdot 4,03 \cdot 10^6 = 80761,2 \cdot 10^6 \text{ UZS} = 6,62 \text{ million USD per year} \quad (5)$$

It should be taken into account that this calculation does not take into account smaller settlements.

Damage to roads due to salinisation of soils

On non-saline soils average repair is made once in 8 years (Kayumov et al., 2021), i.e. per year: $250,000:8 = 31,250 \text{ USD}/(\text{km} \cdot \text{year})$

On saline soils the necessity of average repair occurs on average once in 2,5 years, i.e.

$$250,000:2.5 = 100,000 \text{ USD}/(\text{km} \cdot \text{year}).$$

Thus, the damage to motorways is:

$$D_A = 100,000 - 31,250 = 68,750 \text{ USD}/(\text{km} \cdot \text{year})$$

For the whole length of roads:

$$D_{AT} = 68,750 \cdot 900 = 61,875,000 \text{ USD/year}$$

The obtained results show that the problem of waterlogging of settlements on the territory of Syrdarya province is markedly pronounced and has a serious impact on the welfare of the population, as the amount of costs for annual repairs exceeds the average monthly salary in Uzbekistan, which according to the State Statistics Committee of Uzbekistan in 2023 was about 319 USD.

The findings are generally consistent with the results of other researchers. For example, studies conducted by Nithila et al. (2022) for Bangladesh showed that the total flood damage for Dhaka city was estimated at about 48,500 USD for a sample size of 314 households. Moreover, the authors found that the magnitude of losses for high-income households is larger than for middle- and low-income households. The calculation shows that the average annual cost of additional

repairs in Dhaka was 154.46 USD. This figure is half as much as the result for Syrdarya province, which can easily be explained by the different socio-economic situation and cost of repair materials in Uzbekistan and Bangladesh.

4. Conclusion

The conducted research has shown that in the Syrdarya province of the Republic of Uzbekistan there is a permanent geo-ecological risk of waterlogging of a number of settlements. This risk is expressed in additional expenses of the population for repair. The analysis of works of other researchers allows to recommend as the main measure of struggle the development and competent operation of drainage network in the zones subjected to waterlogging. It is also possible to recommend expansion of application of economical methods of irrigation. Measures to protect the base of buildings from salt corrosion and high humidity should be envisaged during construction. In the construction of motorways it is also recommended to organise the waterproofing of the base.

The values of the monetary risk assessment obtained in this study will allow economic justification of the necessary measures.

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PROMOTING TEAMWORK SKILLS IN E-LEARNING

Abstract

Collaboration is a key value to anything from education and work, all the way down into everyday life. In this post, we examine how the E-Course Platform fosters collaboration with its AI-based gamified learning ecosystem. To encourage team working in disabled and non-disabled learners alike, the platform integrates interactive elements such as multiplayer games, group projects and peer-to-peer learning. Its design, which is inclusive in every respect (i.e. it enables all participants to participate as equals — regardless of their physical or cognitive abilities), means that the platform also facilitates cooperation among diverse groups, and improves social integration by involving everyone into activities on an equal footing.

Keywords

Teamwork, collaboration, AI, gamification, inclusive design, accessibility, e-learning

Introduction

Collaboration is an essential ability in educational and professional contexts. Being able to work together, share ideas openly with others and be resourceful is essential in achieving a common good. In a digitally driven world, filled with almost entirely digital transactions these days, E-learning platforms have become the powerhouse of developing such skills.

The E-Course Platform is an imagination to a technological advancement promoting teamwork through the aid of AI charged adventures for learning. The platform provides students with a variety of cooperative activities to promote teamwork, such as multiplayer games or team assignments. One unique feature of the E-Course Platform is its focus on inclusivity, meaning that any disability anyone may have can join and work actively in teamwork activities.

In this article, we explain how the E-Course Platform can help develop teamwork skills in all of those who choose to participate, including learners with and without disabilities. The platform enables collaboration, enhances mutual understanding and problem solving which is critical to effective teamwork by creating a flexible, adaptive environment that suits the dynamic needs of different learners.

Collaborative skills for non-disabled learners

Online opportunities for teamwork are abundant in the E-Course Platform, therefore people learning without disabilities do profit in this way. Fostering teamwork, one of the core reasons behind this platform is its massive array of

multiplayer gaming titles. It is played by learners who work as a team to achieve goals or complete tasks, some of which are psychological in nature (Johnson & Johnson, 1989). For instance, in a language puzzle game, students could be grouped up and asked to make sentences out of words that are mixed up. During this exercise learners are required to work together, share their ideas and pool lots of grammar and vocabulary knowledge in order to get the answer just right. These applications provide learners with a practice environment for critical teamwork competencies (Dillenbourg, 1999); such as communication, conflict resolution, and shared decision making.

As well as multiplayer games, you can also do group projects, where you team up with other learners to tackle bigger assignments such as research papers or creative writing pieces. These tasks involve kinesthetic learning and force learners to manage objectives, feedback, and the melding of components for a coherent final product. Group learning experience can guide learners in understanding the importance of appreciating each other as well as knowing how to negotiate roles, offer constructive criticism and build consensus (Garcia & Anderson, 2022). Group projects also illustrate teamwork in the real world and stress on working together towards common goals.

One of the things that stands out in this space are their gamification elements which incentivize learners to work together successfully. Educators can gamify the platform and students get badges, points, or rewards by doing team-based challenges. These incentives motivate the students to collaborate more with their colleagues and also unites the success inside of group. Additionally, the game also generates some competitive feelings and by bringing out leaderboards, it creates a healthy competition that motivates learners to elevate their collaborative efforts (Dillenbourg, 1999).

Collaboration for Students with disabilities

The E-Course Platform is based on the principle of universal design and can also be used by learners with disabilities to work together in teams without restrictions. This prevents obstructing of collaborative projects for disabled learners, as the accessibility tools such as closed captioning, screen reader compatibility and voice operated commands are provided in collaborative learning (Smith et al., 2018).

In the case of learners with a visual impairment, audio-based instructions and functions combined with screen readers can enable them to participate in group discussions while following along reading text or take part in collaborative writing experiences. One purpose of these tools is to ensure that visually impaired students have access to the same information as their peers, and can participate in group activities (Garcia & Anderson, 2022). For example, users with mobility impairments can still navigate and contribute to team projects on the platform by using keyboard shortcuts and voice commands (Meyer et al., 2014).

It also provides haptic feedback and sign language interpretation for hearing-impaired learners. These features make sure all auditory cues can be easily supported by visuals, or any tactile cues that learners need to remain engaged and interactive during collaborative activities. For example, when completing a group quiz or game, participants with hearing impairments can be informed of their turn to answer (and also know when someone has given feedback) through vibrational signals (Smith et al., 2018).

They have achieved this by providing readily available tools that are utilised for collaborative work, allowing disability learners to exhibit the unique knowledge they bring to the group and that has valuable positions in group achievements. This method builds a community of learners and ensures that all students, regardless of ability levels, have an opportunity to work on communication skills necessary for successful team work (Garcia & Anderson, 2022).

This support is team-oriented first so that it either builds or further fosters aspects of teamwork but also empathy and understanding as a learner. The platform also provides greater empathy as both a result of getting to know learners with different abilities and experiences, and working towards the same goals together.

It is an opportunity for all learners that when, for instance, a learner with hearing impairment uses closed captioning or sign language to take part in a group discussion then their peers learn more about the life and reality of those who have disabilities. In the same light, learners who have impairments in vision tend to depend on audio descriptions as well as description through discussion of their teammates hence create a collaborative environment and mutual respect (Lee, 2021). Members of the community engage in interactions that help to create an atmosphere where diversity is celebrated and people help each other reach common goals.

As well as encouraging people with disabilities to get involved in group activities which challenge common stereotypes or misconceptions about living with a disability. And as students collaborate, they can appreciate the varying values and ideas that their classmates have. The last view is an inclusive stance that nurtures understanding, kindness, and cooperativeness as pillars for success — essential building blocks of successful educational teamwork environments (Garcia & Anderson, 2022).

Conclusion

It excels in team building as it serves to be a platform that is adaptive and reduces many of the barriers present between learners with disabilities and learners without disabilities. It includes everything from multiplayer games, to group assignments and peer-to-peer Bantu chats- to help learners build essential teamwork skills such as communication, conflict resolution, collective problem-solving in collaboration with their peers.

It prides itself for being the unique and inclusive platform of choice. Closed captioning, screen readers, and voice commands are examples of the

Accessibility tools that allow students with disabilities to engage in team-based work. Furthermore, by embodying the collaborative principle which is also an important component in this pedagogical strategy, learners with disabilities acquire teamwork skills but at the same time promote empathy and social inclusion among all members of the learning community.

With AI-driven Adaptive Learning and Gamified Incentives, the E-Course Platform has successfully encouraged learners to collaborate, share goals and learn interpersonal skills which are basically required in this heavily connected world. This presentation of teamwork provides an excellent example for how e-learning platforms can help develop soft skills in a collaborative, all-encompassing manner.

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REDEFINING LEADERSHIP IN HIGHER EDUCATION INSTITUTIONS

Abstract

This article explores the role of leadership development in higher education and considers its heightened importance within a context characterized by 21st century challenges. It aims to discuss the historical evolution of leadership development, pedagogical principles and best practices by global trends. In addition, the pressures of technological change, demography and resource scarcity make strong leadership imperative. The structured design of leadership development programs designed to develop individual leader capabilities within academic institutions and cultivate future talent is also considered. Through training workshops, mentoring relationships, coaching sessions and experiential learning courses these programs work to develop leaders who can understand institutional dynamics in higher education and promote academic quality through a strengthened educational environment.

Keywords

Leadership Development, Higher Education, Global Trends, Pedagogical Leadership, Best Practices, Succession Planning, Experiential Learning, Institutional Resilience, Academic Excellence, Societal Impact

Introduction

Leadership development in higher education is the designed and intentional processes, strategies or programs that aimed to increase individual leadership capacity within academic institutions. It is also intended to be for students who will one day find themselves in leadership positions, as well not just administrators and faculty. Leadership development programmes aim to create leaders who can navigate the many difficulties that their institutions confront, stimulate entrepreneurship and academic achievement as well as nurture an institutional climate of goodwill (Bolden et al., 2014).

This changing academic landscape are the pressures and possibilities of external policies, budget constraints, technological disruptions highlight the urgent need for leadership development in academia. Not only is effective leadership paramount in achieving success for the institution, but also it advances an ethos

of academic integrity, inclusiveness and innovation that supports excellence overall in student teaching.

Leadership development is also important for succession planning in educational institutions. There is a growing urgency to develop the next generation of leaders as many current academic leaders near retirement. It is a complex and intentional exploration, with the purpose of discovering and cultivating leadership capability so that it may be passed from one generation to the next: our future leaders are being instructed on how their institution holds together in order for them to continue its mission.

Leadership development in higher education has evolved a great deal, both in terms of perception and application. In the early 20th century, leadership in universities and colleges were conceptualized as an administrative enterprise, led by senior faculty (often without any formal training) overseeing institutional operations within academic structures.

In the late 20th century, leadership development became a formal focus in higher education. This led universities to set up standalone leadership development centres and programmatic response designed for emerging academic leaders to critically address challenges, ranging from strategic planning, management of resources through people's efficient use as well academic excellence conversation. This era also heralded a trend towards leadership in a broader sense within institutions ranging from department chairs to college presidents.

In the 21st century, leadership development in higher education has grown and evolved to address these new complexities on campus. This requires a more flexible and resilient leadership given the growing emphasis on international perspectives, diversity & inclusion as well online/hybrid deliveries. Additionally, the COVID-19 pandemic has reinforced that people need these types of leaders, individuals who are skilled at leading in crises and fostering creativity during ambiguity (Fitzgerald & Mullen, 2020).

Effective programs in leadership development are purposefully structured to develop and facilitate effective leaders of organizations both now, and ahead into the future. These programs consist of a number of parts that are meant to carry out particular functions in the entire development process. The blending of these components follows a wealth of research and applied practice in the field for leadership development. This expanded session will take a deeper dive into each of these four types of elements, leadership training workshops, mentoring and coaching, experiential learning opportunities, and leadership assessment tools – looking at what they are for (the objectives), how they work to accomplish their goals still early but promising methodologies or frameworks based on current knowledge that supports their effectiveness.

Leadership programs

Many leadership training workshops serve as the basic building blocks of a number from which most people development programs. Workshops are deep-

dives into various leadership-related subject areas, usually customized to hone in on the dynamics and drivers within higher education. For example, Transformational coaching Training. They usually cover topics like strategic planning, decision-making, conflict resolution, communication, empowerment and emotional intelligence and change management.

One of the essential domain areas is strategic planning and decision-making. These workshops include strategic planning and decision-making to support academic leaders in becoming proficient long-term goal setters that operate consistently with the mission of vision for their institution. The program trains leaders in understanding these internal and external drivers, weighing risks, devising strategies that lead to institutional health and competitive advantage. Case studies and simulation exercises were the most frequently identified mechanisms for experiential strategic thinking (Rowley & Sherman, 2003).

Conflict resolution and communication are essential tools to ensure the well-being of students in an academic environment. These types of workshops can be used to enhance leadership skills using them as approaches for handling conflicts if within the faculty, between students or administration. Leaders are encouraged to incorporate techniques such as active listening, mediation and negotiation in order to help them in effectively engaging constructive conversation and dispute resolution, which should ideally improve relationships between stakeholders whilst supporting wider institutional goals.

Sought-after emotional intelligence (EI) is one of those essential leadership competencies. By attending sessions on EI, leaders can explore and control emotions from within them that either make or break the outcomes. It is especially critical when it comes to managing change, as leaders must lead their organizations through periods of transition without sapping morale and reducing productivity. Leaders who increase their EI, can deal more effectively with the stress and confusion of change in an organisation.

The theoretical learning and practical application combined is the success point of these Leadership Training Workshops. The training provides a dynamic learning environment where participants engage in interactive exercises, role-plays and small group discussions that encourage self-reflection and skill building. In addition, when we gather in these sessions to do this collective work it also offers the space for us leaders who stop and share our experiences with one another fostering peer learning which helps build a solid leadership community.

So then, organizations must be able to offer their up-and-coming leaders personalized guidance and support in the form of mentoring and coaching in order to complete a leadership development structure. Although they are both one-to-one exchanges, mentoring and coaching often serve two different functions that add to each other.

Mentoring and coaching

Mentoring is a relationship-based process whereby experienced leaders (mentors) offer advice, guidance and support to less experienced leaders (mentees). In higher education, mentoring is typically focused on helping emerging leaders learn the intricacies of academic administration (e.g., How to do a budget!) develop their leadership style; and expand their professional networks. It tells them about the culture of a place, how things are working there and much more while providing feedback on mentees performance and development. The mentoring relationship can last many years, providing stages of deep and meaningful then when personalized exchanges in the context which can contribute to mentee's development on a personal and professional level (Kram, 1985).

A structured approach, such as goal setting, ongoing meetings and mutually agreed expectations are required to effectively mentor. These programs should also train the mentors to be able to give constructive feedback and help in a successful manner.

With a focus on goals and forms to fill out with coaching, it is more structured as compared to mentoring. A professional coach partners with a leader to develop skills, clear obstacles or establish and meet specific objectives. Coaching is shorter-term and more intensive, with a sharper focus on immediate outcomes. In the domain of higher education, coaching may help with leadership presence and communication styles, or perhaps negotiating institutional politics. These types of coaching are often the most helpful in tackling immediate issues or assisting those making a leadership transition, like moving from one role to another. Coaching is customized, and as such it enables strategies that directly serve the leader's needs and current contexts. Studies suggest that coaching can increase leadership effectiveness, with higher levels of self-awareness, decision making and job performance reported by leaders after some form of appropriate intervention.

Mentoring and coaching both support a leadership development approach, which is oriented towards personalized-contextual help that complements the more general goals of any type of formal leadership training program. Together, they provide a solid foundation for training the next era of academic leaders.

Figure 1. Essential Components of Leadership Development Programs



The Venn diagram provides a visual image of what leadership development should look like in higher education. Three circles are for the components:

Workshops (Red)

Mentoring & Coaching (Green)

Experiential Learning (Blue)

These overlapping areas show how the parts intersect and complement one another in a leadership development program. At the central overlap, where all three circles come together, lies an integration of each component, making them golden triangles when working collaboratively and interdependently to develop a comprehensive leadership approach.

Directing a major project in the institution gives new leaders an opportunity to use their theoretical knowledge in reality. They often involve working across departments on different projects, money handling and strategic standpoints that help leaders to own their capability of leadership. Training during the answers to this question also might include learning experiences such as oversight of a new academic program or leading campus-wide initiative in [for example] help them (Kolb, 2015).

Cross-functional teams give leaders exposure to additional portions of the institution and a wider breadth view on how departments work together toward the same goal. The exposure to this kind of work is essential both in seeing the world as a whole and learning how different groups can complement one another.

International assignments because the face of education is often trans-continental today, this a big part to get right in downstream programming for key initiators/leaders as well. Here leaders have a chance to be exposed in different schools, geographies and leadership practices. These sorts of experiences are critical to developing cultural competence, global awareness and the capability to lead in diverse contexts (Stensaker et al., 2008).

The authentic nature of experiential learning, after all where leaders learn by doing. This on-the-job training reinforces the lessons that they learnt in their formal education and allows them to grow into a role confidently, by using what you will tell; may be even better. Real-world problem-solving will make leaders more critical thinkers, and decision-makers; crucial skills for becoming effective as a leader.

As part of the leadership development process, leaders benefit from assessing their strengths and weaknesses some excellent tools for doing this are in any number or form. Typically, these tools are used to set a benchmark for leaders' competencies, track progress and support an adaptive development journey.

360-degree feedback

360-degree feedback is one of the most commonly used assessment tools in leadership development. For reference, feedback is usually in the form of communication, decision making and team handling as well as matters relating to Emotional Quotient. Feedback allows leaders to better understand their own strengths and weaknesses, because it offers an opportunity for them to see how they are viewed by peers in different parts of the organization (Fleenor et al., 2008).

Personality assessments, such as the Myers-Briggs Type Indicator (MBTI) or Big Five Personality Traits is widely used in leadership development to assist leaders understand their personality characteristics and how these traits affect this performance of a leader. Knowing their personalities can also help leaders become aware of how they naturally operate, apply their strengths and be proactive about blind spots. For instance, a naturally introverted leader may need to develop his/her visibility and communication within the organization.

Other instruments, the Situational Leadership Model or Transformational Leadership Inventory, for example, provide a measurement of how an individual prefers to lead. These inventories are designed to alert leaders of their prevailing leadership style and how it fits with the uniqueness of their team or institution. Leaders can become more effective by accommodating various situations as well as with diverse teams' founders.

Emotional intelligence is a key elemental build of successful leadership abilities and as such assessments to rank leaders based on their ability to recognize emotion, control behavior by the emotions or combine Emotion with Thought are often used (EI – managers). Like the EQi profile, which measures five factors of emotional Intelligence: Self-awareness – Being aware that our all kinds feelings--happiness everywhere from mild boredom / sadness / anger / joy

elations. These assessments help leaders uncover areas where they may be in need of building better emotional awareness or interpersonal effectiveness. High emotional intelligence is connected with beneficent team building, better conflict management and enhanced management as explained by Goleman et al. (2002).

Competency models are a framework to identify the skills and actions necessary for good leadership within an environment. These models are typically developed to capture the values, mission, and strategic goals of an entity. These competencies are then compared to the assessment results of leaders and used help development efforts for those in a leadership role. Lucia and Lepsinger (1999) argue that competency models are key to ensuring the fit of leadership development with organization needs and priorities.

Using leadership assessment tools is an industry best practice for everyone working on their development, because it offers objective data that will help determine the actions they take and allow them to monitor progress so as not to lose sight of where you are headed. This way, when leaders know their strengths and the areas, they need to improve on most in line with what is a priority for them from an improvement perspective, or where it would make more difference, then those are back into development activities targeted only at these needs/goals. In addition, frequent evaluation can enhance accountability and guarantee that leadership growth programs are actually attaining what they set out to achieve.

The components of leadership development i.e., attending an educational workshop and working with a mentor, or being involved in coaching/multiple experiences/assessments & workshops—were related to higher self-assessed effectiveness among academic leaders primarily through these actions combining together for the creation on-going programmatic work around leadership development. Based on best practices and research, these fundamentals provide the essential foundation of knowledge that leaders require to understand and lead within higher education.

Incorporating these elements in leadership development programs enables institutions to establish a culture of lifelong learning and continuous improvement so that leaders are ready with the right mindset, skills, behaviors for leading innovation aspiration or tenacity towards success.

Figure 2. How Does Leadership Development Contribute to Much-Needed Institutional Success?

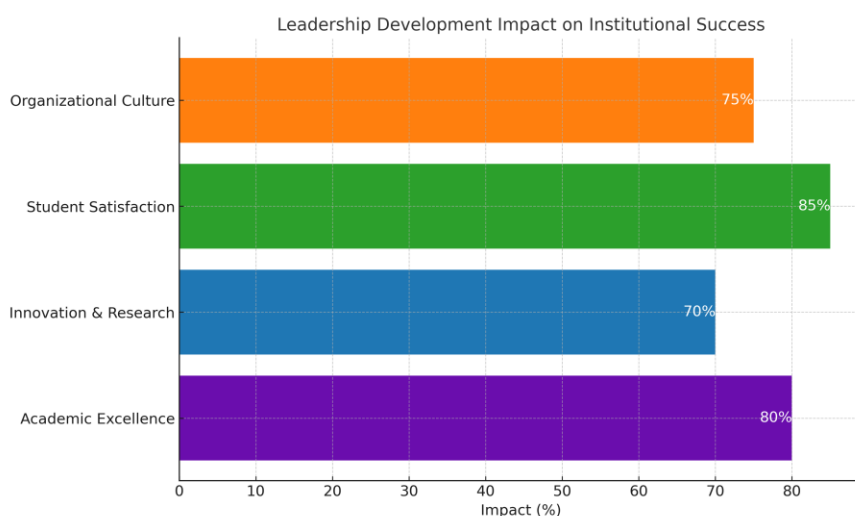


Figure 1.2 demonstrates the impact of Leadership Development on Institutional Performance depicts the percentages that are displayed in the influence of leadership development on institution-wide impact includes four type of metrics However, it does show how leadership development influences in nurturing and also sustaining a great organizational culture. This impact of leadership initiatives at 75% implies that they powerful in the creation and steering culture within an institution. This underscores the robust linkage between leadership development and student satisfaction. The chart presents a huge opportunity with 85% impact, illustrating students' highest satisfaction when leadership is leading the way. The first chart demonstrates that the perceived impact of leadership development on innovation and research within the institution is close to 70%. Thus, leadership efforts are presumed to be vital in building an innovative environment and attaining the status of a research center. 80 % of how leadership development impacts academic excellence. The only detail this reveals is that leadership from the top drives your academic quality and performance throughout your institution.

The specialised area of leadership in higher education which is focused on the teaching and learning activities, often referred to as pedagogical leadership. Whereas other forms of leadership may involve administrative, financial or strategic aspects towards education institutions pedagogical leavers are part and parcel dealing with the heart of these missions characterised by deliberate focus on creating a scholarly community that supports high quality teaching, encourages pedagogical innovation and seeks student success above all else (Hallinger 2011).

In order to set the context for teaching practices throughout their organizations, pedagogical leaders in higher education assume an essential function that shapes the educational experience. They are not only to look after the curriculum, but also have a wider responsibility when it comes to creating and maintaining an effective teaching-learning environment.

One of the expectations for all pedagogical leaders is to articulate a clear and compelling Vision regarding How We Teach, Learn in Our School. This vision must also be in harmony with the broader mission of an institution, yet at once both serve and fuel those for which its students and faculty strive. A pedagogical vision binds the faculty in common goals and provides a map for curricular design, practice of instruction, student assessment.

Pedagogical leadership

Part of pedagogical leadership is the ongoing maintenance and growth current teachers. These take the form of professional development workshops, seminars and conferences that are aimed at getting faculty to keep up with new pedagogical interventions, new technological tools or resources, and current research. Pedagogical leaders are also faculty mentors, guiding them through reflective teaching practices and working with instructors to set professional goals for growing their instructional capabilities.

Pedagogical leaders are an important part of creating a culture where faculty members reflect on and refine their teaching practices through individual or group purposeful reflection. Part of this includes having forums where faculty can do some self-reflection, review with peers and collaborative conversations about teaching practices. Reflection on practice aids faculty to mature as educators and apply continued enhancement in their delivery methods specific for all learners (Schön, 1983).

This is the era of change in educational requirements, where every day new technology gets innovated and for this reason pedagogical leaders are one stop enterprise to innovate teaching techniques. To achieve this objective, they will need to work with others in the delivery of educational content-JMOs and their supervisors-perhaps online learning platforms, simulation tools or digital assessment methods-and different pedagogical approaches such as flipped classrooms, project-based learning or collaborative knowledge construction. Pedagogical leaders enable schools to stay at the cutting edge of educational innovation by encouraging and facilitating innovative new teaching methodologies.

The central hallmark of pedagogical leadership should be founded on sophisticated understanding of educational theory and practical applications. To lead the instruction effectively, pedagogical leaders need to understand different educational philosophies and learning strategies used in teaching so that they can help faculty make appropriate curriculum decisions. This theoretical understanding leads to different dimensions which pedagogical leaders embraces within their institutions.

Pedagogical leaders need to implement learning theories like Constructivism, Behaviorism and Cognitivism just named a few. These theories provide us with an understanding of how students learn, which then guides the design of instructor interactions and assessment formats. For example, a constructivist

approach might prompt the institution for more student-centred teaching methods that encourage active learning and critical thinking (Piaget, 1971).

Pedagogical leaders must also understand various instructional design models (e.g., ADDIE: Analyze, Design Develop Implement Evaluate and Bloom's taxonomy). They help to systematically design and evaluate educational programmes, making sure they are conducive with learning outcomes while following leading pedagogical practices.

Finally, pedagogical leaders are charged with the important responsibility of keeping current on research in education. This may include staying up-to-date on research in cognitive science, learning analytics, and educational psychology to inform evidence-based teaching practices. Pedagogical leaders, through evidence-based practices ensure methods and strategies used by staff are made from sound principles of learning and instruction (Hattie, 2009).

In an educational landscape that is changing faster than ever before as a result of the rapid pace of technological advancements, pedagogical leaders have emerged to facilitate change in how technology may be used with their teachers and students. This has to do not only with the acquisition of new tools and platforms, but also with growing strategies that can be used by technology-enhanced education.

Before all else, pedagogical leaders have to make sure their faculty and learners are digitally literate in order to effectively use educational technologies. One of the biggest components is probably training faculty to learn learning management systems (LMS), digital collaboration tools, and other educational technologies that support teaching. Lastly, those serving as pedagogical leaders must examine whether or not these tools have a positive effect and in no way replace the more traditional methods of teaching (Selwyn, 2014).

Innovations in pedagogical leadership is also seen as an emerging field incorporating the use of learning analytics and how it informs our practice to assure better learner outcomes. It can profile the data and performance of how students learn, what they pay attention for while taking classes which ultimately provide help to new instructor insight Learning analytics is toolset that extract data from student demographic situation. Evidence-based decision making, for use by pedagogical leaders to select appropriate instructional strategies, course design aspects and student interventions.

Applying best practices in pedagogical leadership is a key to ensuring an environment where faculty and students flourish. These practices are grounded in research, experience and institutional knowledge that have shifted with the changing demands of how higher education institutions operate.

Using data and evidence to inform pedagogical practice has always been one of the most powerful moves that can be made in instructional leadership. It covers learning analytics as well not only but also student feedback, peer review and academic progress data. Using data, pedagogical leaders can focus on areas for improvement and determine the effectiveness of any instructional changes that

have been made to ensure a continuum between teacher practice and what an institution values as success (Shulman, 2004).

Pedagogical leadership also involves facilitating interfaculty interdisciplinary collaboration. This includes offering chances for faculty across disciplines to collaborate on teaching and research, exchange ideas about best practices that work within their own contexts. Interdisciplinary collaboration by contrast can be expected to produce innovative instructional practices, expanded research options and a learning environment that is more unified meaning students receive an education that will provide them with holistic development.

Ongoing faculty training is essential to help them stay up-to-date with advances in their fields as well as best practices in teaching. Pedagogical leaders need to be able to provide access for the faculty members into professional development resources such as workshops, seminars and conferences; moreover, they also need to instill in them a sense of lifelong learning. Second, this support can ensure that faculty continually refine their teaching practice and remain in touch with the wider academic community (Day & Sachs 2004).

Conclusion

In addition to specific programmes, an inclusive leadership ethos needs to be instilled institution-wide. It is about building an inclusive environment, and fostering diversity where all members of the leadership team feel comfortable contributing their views. Leadership Cultures drive practices like inclusive decision-making, proactive listening and addressing & breaking down barriers to inclusion at scale. Leadership development programs can support this by training all leaders – not just minority members – on the importance of diversity and inclusion, explaining why it matters to them as individuals and business leaders (Shore et al., 2011).

Leadership development programs, in turn, need to focus on the wider institutional policies and practices which affect diversity and inclusion. This includes promoting policies that contribute to equity in hiring, promotion and compensation along with holding people accountable for meeting diversity and inclusion goals. That includes teaching leaders how to spot and intervene in institutional biases that thwart diversity goals, and how to encourage equitable practices throughout all organizational levels.

Contrary to popular myth though, embedding diversity and inclusion into leadership development has made significant strides but there are many hurdles still left in addressing the issue termining “What Works?!” These topics include resistance to change, deep seated biases and the challenges associated with addressing intersectional identities in leadership development.

One of the main obstacles is combating institutional inertia. And that resistance can take many shapes – from passive to more aggressive forms of pushback against diversity and inclusivity action. Leadership development programs that aspire to have impact on this resistance need to prepare leaders with the strategies for building coalitions, involving stakeholders and framing diversity

and inclusion as connected both in values but also necessary to mission fulfillment.

The importance of recognizing intersectionality in leadership development programs also poses a setback. Intersectionality describes the hidden servers between various “-isms” such as racism, sexism and classism and provides a way to see how each person's unique identity relates. In other words, according to many opinions, leadership development programs need to be scaffolded in such a way as to take into account these intersections of identities so that all participants are recognized and supported according the particular struggles they face.

Third, there is the measurement issue of how impactful are these D&I initiatives on leadership development. Numerous programs designed to address the lack of diversity in leadership have been implemented, but evaluating whether these initiatives for change are actually achieving their aims is no easy task. These must include quantitative metrics like leader diversity and qualitative hints about overall attitudes of practice and approach to inclusion/experience for your faculty/staff. This knowledge is crucial for improving programs and proving their worth to the stakeholders.

Leadership development programs for higher education need to change with the times; institutions are hiring and serving more diverse populations, so leaders in turn must be able to relate. This means a greater emphasis on diversity/inclusion with global perspectives as institutions want to create leaders ready to interact in different cultures. This is in addition to a requirement for programs that address the intersection of diversity, inclusion and technology, as digital transformation fundamentally reshapes higher education.

Institution leaders, therefore, should continue to make diversity and inclusion central tenants of leadership development in higher education institutions being more intentional about it are likely to have not only executive teams who reflect the population they serve, but also those that can effectively lead an increasingly complex global community.

The quick emergence of technology has influenced leadership development in academia, changing the way we teach and learn about these essential tools for running an institution. It is no secret that leadership development has now integrated into the fabric of higher education and leverage digital tools and platforms to create training virtually accessible, personal & effective. However, these innovations bring with them new challenges that require leaders to have a sophisticated grasp on technology and its implications for their institutions.

Technological advancements have reshaped leadership development in a variety of ways, from how training is delivered to enabling virtual collaboration and feedback. With these tools, leadership development has become more tailor-friendly, as the leaders can now access training programs mouse click away leaving their schedules busy or turning recordings/screenshots for learning purposes.

Finally, leaders also need to conceive a plan for digital survival in which the purpose of their institutions can flourish. Under this concept an institution is constantly spending resources to remain at the cutting edge of technology, and more importantly setting themselves up for opportunities which are yet to come. Leadership development programmes must nurture this strategic perspective, helping leaders to view how technology might be integrated creatively to advance the institution's mission and goals. It entails creating an innovation-based culture where experimentation and risk-taking are promoted.

Overcoming these obstacles and developing leaders who can operate in a digital environment will go far to ensure that higher-education institutions are equipped for success as the world becomes increasingly interconnected. A higher level of understanding, on the other hand, will enable digital transformation-savvy leaders to innovate better and identify pathways for educational success while ensuring a more equitable learning experience that reaches beyond any limits from where learners find themselves.

Higher education is a dynamic, multi-dimensional environment and the development of leadership skills by everyone who puts on their academic gowns will always be critical to the success and sustainability of an institution. In an era when universities and colleges are confronting a broad array of challenges from globalization, to technology-enabled change, to the increasing clamor for greater diversity and inclusion in our institutions everywhere, there can be no too strong emphasis on leadership.

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ANALYSIS OF POPULATION LOCATION AND FACTORS AFFECTING IT (IN THE CASE OF KHOREZM REGION)

Abstract: *This research analyzes the distribution of the population and the factors influencing it. Based on the study of the features and patterns of population distribution, indexation of influencing factors and an assessment of the level of significance of the population were carried out. The settlements of the Khorezm region were taken as the object of the study. In the scientific work, methods of cartography, GIS analysis, interpolation, correlation, and an integrated approach were used.*

Key words: *Settlements, village, city, neighborhood, factors affecting population location, land use, correlation*

Introduction: About 4,000 years ago, ancient Egypt, the Middle East, India, and South and Central America saw the emergence of the first human civilizations and communities. In the fifth and sixth centuries BC, the earliest types of statehood started to emerge. Water features (such as river deltas) have undoubtedly been significant in the settlement of the population. The earliest agriculturally based villages appeared in the lower reaches of the rivers some 10,000 years ago [11]. The local environment is one of the most crucial elements influencing where the people is located. Because of this, the population first concentrates predominantly in the most advantageous places. The division of labor on a social and territorial level that results from population growth will also cause people to move to different areas.

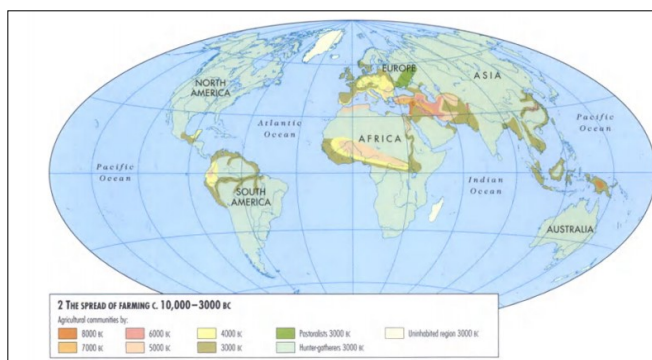


Figure 1. The spread of agricultural centers on Earth (10,000–3,000 years ago) Source: Atlas of world

Unique environmental conditions and a number of other reasons have influenced the settlement of the population in Uzbekistan, which is almost in the middle of the Eurasian continent. We can observe that the republic's natural environment has a continental feel, which has increased the significance of water resources in terms of people settlement. The majority of the population

resides in the catchments of significant rivers including the Amudarya, Syrdarya, and Zarafshan. The settlement of the population and its differentiation have been impacted by the river water regime, socioeconomic division of labor, and political and ethnic dynamics.

Material and methods: The population and its specific aspects can be analyzed in different directions. In particular, Damir Magaj, Sumita Gosh, Holly R. from foreign scientists on the composition and location of the population. Barcus, Keith Halfacree, Endalev Terefe Alain, J. Graunt, W. Petty. B.Ts. Urlanis, V.V. Pokshishevskiy, V.A. Borisov, S.I. Brook, V.M. Medkov, V.R. Bashirov conducted researches from CIS scientists. In the study of population and demographic processes in Uzbekistan, M.K. Karakhanov, I.R. Mullajonov, E.A. Akhmedov, R.A. Ubaydullaeva, O.B. Ata-Mirzaev, A.S. Soliev, A.A. Qayumov, Z.N. Tojiev, Yu. Akhmedaliev, A. Sadullaev, I. Atadjonov, H. Abduvaliev and others conducted scientific research.

In carrying out the research, on population mapping and its territorial organization, settlement development Damir Magaj, Sumita Gosh, Endalev Terefe Alen, N.N. Baransky, V.P. Maksakovskiy, Yu.G. Saushkin, S.I. Brook local the researches of scientists such as T. Mirzaliev, A.Egamberdiev, L. Kh. Gulyamova, E.Safarov, S.A.Avezov, D.N.Rakhmonov were familiarized with.

Object and subject of the work: population of Khorezm region and its location are taken as the object of the work. The subject of the work is the analysis of the factors affecting the location of the population.

Scientific research work began with the collection of information on the subject and their analysis. Historical geographic analysis, mathematical-statistical analysis, cartographic analysis, GIS analysis, comparison, and correlation methods were used in the research.

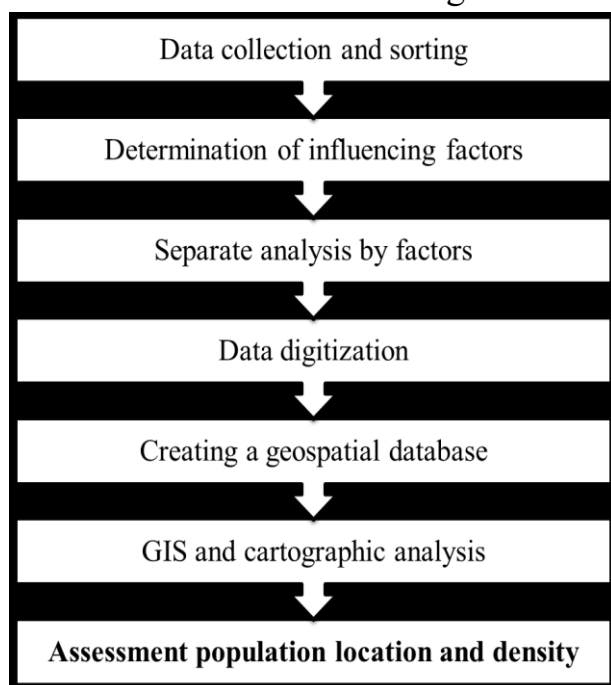


Figure. 2 Schematic of the method of population location analysis

Historical geographic analysis, mathematical-statistical analysis, cartographic analysis, GIS analysis, comparison, and correlation methods were used in the research.

3.Results and Discussion: Territorial form of population settlement is formed as settlements. Settlements are complex territorial structures, and their formation and development are influenced by natural conditions and resources, as well as several economic and social factors. The formation and development of settlements in most developing countries are influenced by natural conditions, economic and social factors, and demographic processes.

The population of the republic has increased from 24 million people to more than 34 million people in the last 10 years, and the average population

growth is 1.7-1.8% [15]. It should be noted that there are huge differences in the geographical location of the population.

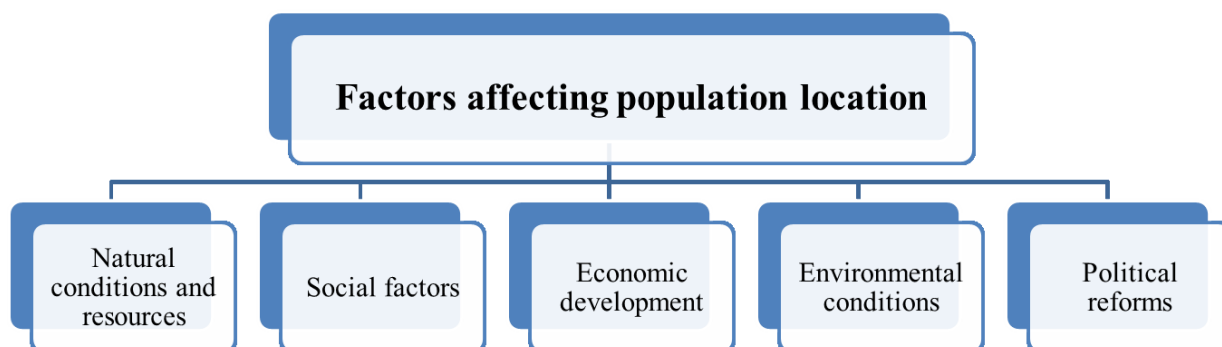


Figure 3. Factors affecting population location.

The main part of the population (90%) lives in the areas of the Syrdarya, Amudarya and Zarafshan rivers suitable for irrigated agriculture. Analyzing the distribution of the population by river basins, we can see that 50% are located in the Syrdarya basin, 25% in the Amudarya, 22% in Zarafshan, and 3% in other small water sources. In calculating these results, settlements in the areas located in the basin of the river and its irrigation networks were taken as a basis. Another important geographical aspect of the population location is that 45% of the total population lives in the northeastern and eastern regions (Tashkent and Fergana economic regions), which occupy 7.5% of the territory of the republic. If we look at the vertical location of the population, it was found that most of the settlements correspond to the highlands and depressions at an altitude of 300-500 meters. In this direction, the researches of H. Abduvaliev on the example of the Fergana Valley can be an example. Settlements are located in the river valleys in the form of narrow corridors or strips.

In plain areas, it forms ring areas of different sizes and in some cases scattered points [2]. Of course, this location of the population is directly related to the convenience of natural conditions and the level of economic and social development.

The average population density in these regions is several times higher than the national average. If we add permanent and seasonal migration (to the Tashkent economic region) to these indicators, the numbers can be even larger. Of course, more than 40% of the country's GDP is accounted for by these regions.

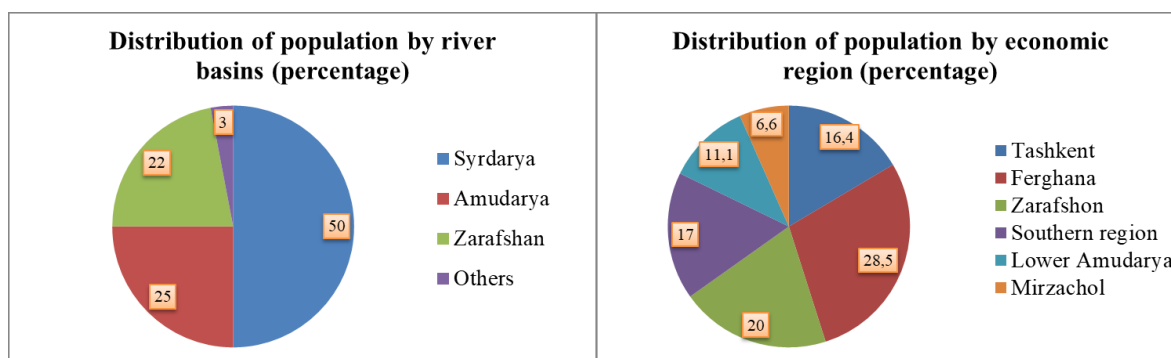


Figure 4. Analysis of population distribution by river basins and economic regions.

Economic and social factors also have a specific effect on the next stages of population settlement. In the conditions of Uzbekistan, we can see that specialization, jobs, infrastructure and demographic factors, as well as the reforms implemented by the state, are of high practical importance.

In the analysis of population location, indicators such as average and absolute

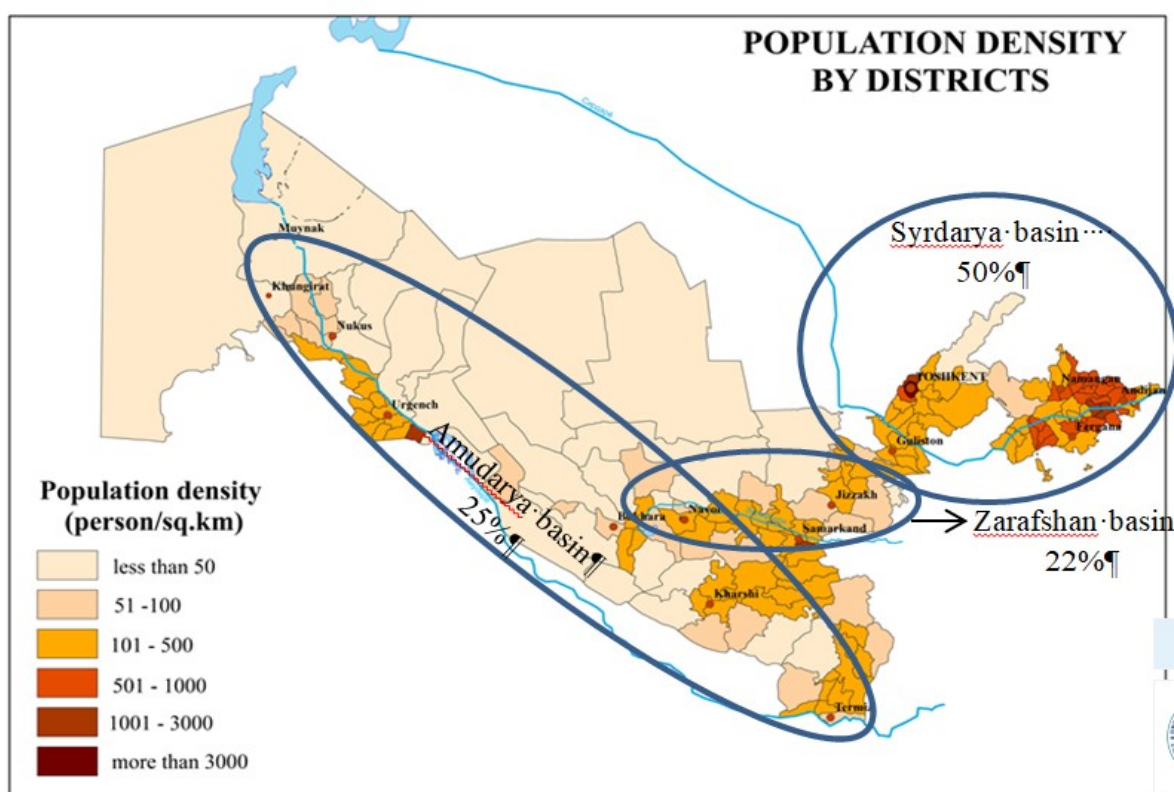


Figure 5. Population density map scheme of Uzbekistan

population density are used. The average population density at the national level is 78 people, while the average population density in Fergana, Zarafshan, Chirchik Ohangaron river valleys and on the left and right banks of the Lower Amudarya is around 500-1000 people. The highest indicator of population density is Andijan 756 people, the lowest indicator is 9 people in Navoi region, and this indicator is 318 people in Khorezm region. On the scale of districts, the average population density varies from 1 to 3 people in Tomdi, Uchkuduq,

Kunghirot, and Moynok, and 5,000 to 7,500 people in cities such as Tashkent, Andijan, Namangan, Samarkand, and Bukhara. (Figure 5)

Another peculiar aspect of the population location is that the absolute population density in the agricultural centers is several times higher than the average. Because the absolute population density is determined on the scale of the area where the population is located.

Irrigation networks, transport routes and land resources have become important in the settlement of population in Khorezm region. After Tuproqkala district was established within the province, Hazorasp district became the most densely populated area (1491 people). In the cities of Urgench and Khiva, this figure varies from 2,500 to 5,000 people, respectively [14].

Based on the main purpose of the work, the data of more than 100 population groups and 550 neighborhoods (MFY-mahalla citizens' meeting) were used in the research of population location of Khorezm region (Figure 6).

The analysis of the location of the population in the section of MFYs was carried out in the following methodological steps.

The data of Khorezm Region Neighborhood and Family Support Department

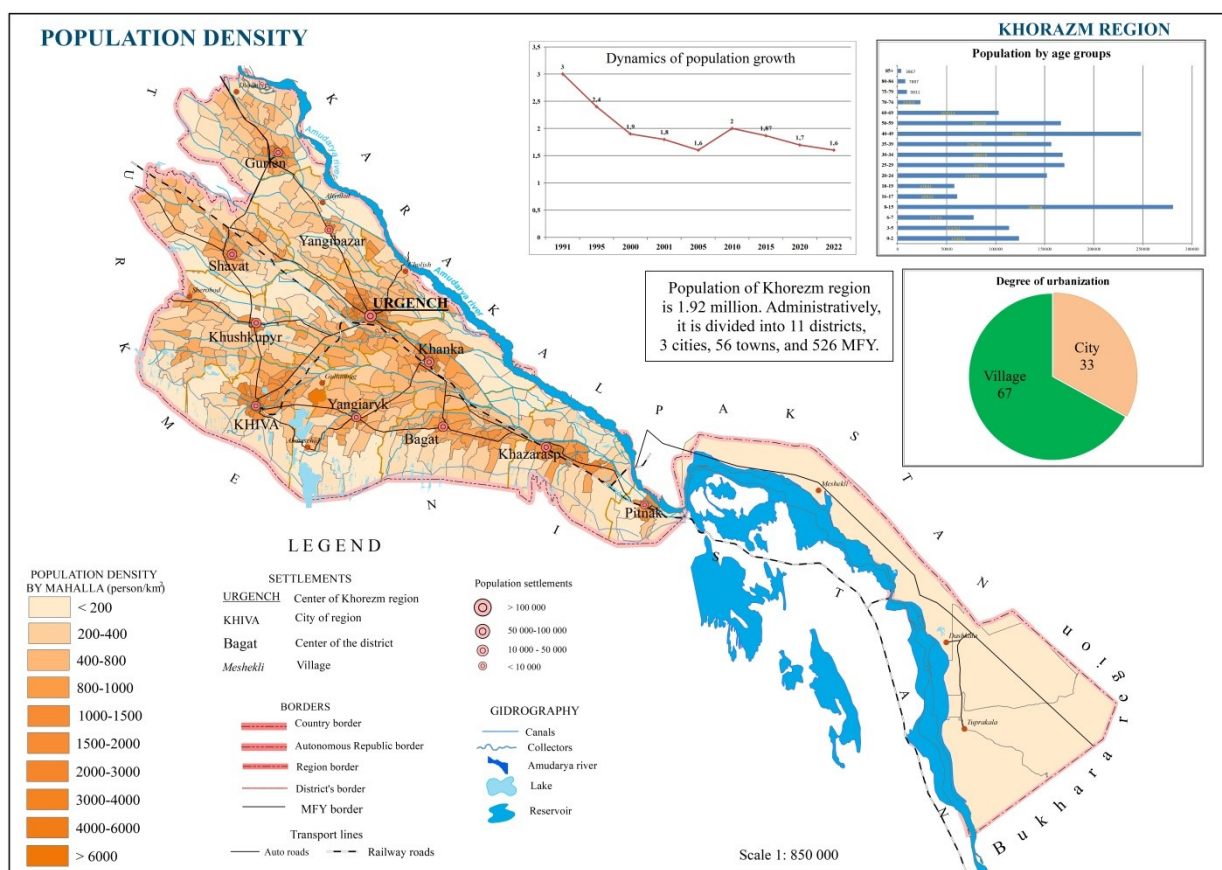


Figure 6. Map scheme of population density of Khorezm region (in MFY section) was analyzed

Based on the information of the Cadastre Agency of Khorezm region, geodata of neighborhoods were digitized and verified.

Attribute tables were created and population density was calculated on Field calculator

As a result of the research, the following assessment was developed in terms of factors affecting population density.

Based on the obtained results, the following table of factors affecting population density was compiled (Table 1).

Here, R² is the regression equation and the degree of dependence of the factors A The analysis of the degree of dependence of population density on the factors showed that the settlement was strongly influenced by canals, transport routes and soil quality. According to our results, groundwater is considered a dependent and variable factor, and the influence on population location was 0.2.

Table 1.

Factors influencing population settlement in Khorezm region and their dependence.

Population density is people/km.sq.	Proximity to canals R ² =0,9			Soil quality R ² =0,6			Groundwater R ² =0,2			Proximity to transport routes. R ² =0,7			Administrative centers		
	1 km	3 km	5 км	40 ball	40-60 ball	+80 ball	1 metr	1-3 metr	3 metr	+1 km	500 m	100 m	Village	District	City
Less than 50			+			+	+			+					
100		+			+			+			+				
500		+			+			+			+		+		
1000	+				+				+		+		+		
3000	+					+			+			+		+	
5000	+					+			+			+			+

Like many developing countries, it is observed that the importance of demographic factors in the settlement of population and territorial expansion of settlements is high in Uzbekistan. Because, in the regional organization of most settlements, housing shortage is caused not by production or service, but by excess population.

The population of the republic is growing by an average of 1.7-1.8% or 630 thousand people through natural growth. This process has different indicators in different regions of the republic. The natural growth indicators are the highest in the republic in Jizzakh and Surkhandarya regions, while the lowest indicators are recorded in the Republic of Karakalpakstan, Khorezm region and Tashkent city(Figure 7).

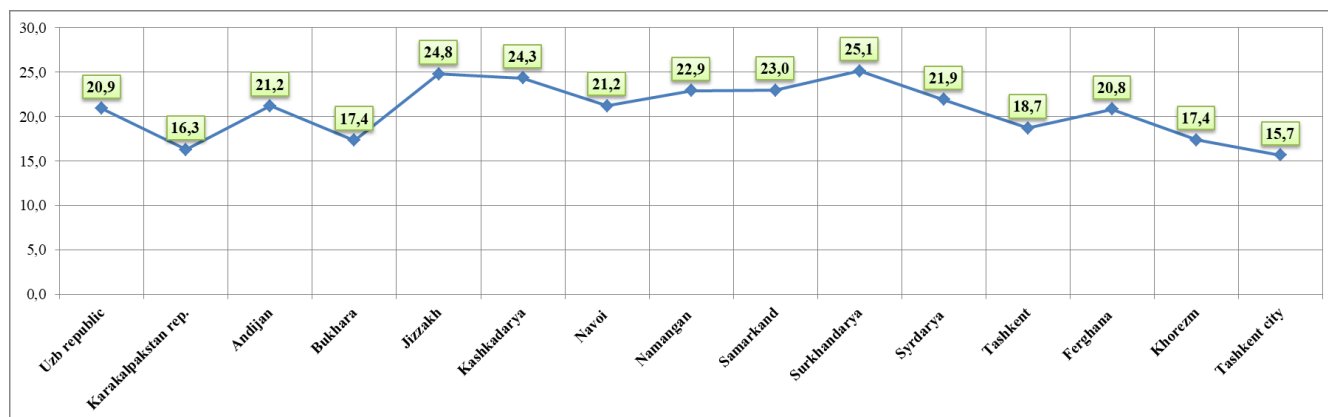


Figure 7 Dynamics of natural population growth in 2021

Source: prepared based on www.stat.uz data.

The population of Khorezm region increased by 177.8 percent during the years of independence (1991-2022). During this period, the average annual growth rate of the population decreased from 3% to 1.6%, while the total population was 30.6 thousand people in the 1990s, and 30.9 thousand people by 2022. Figure 8. Therefore, the absolute population growth has repeated the indicator of 30 years ago due to the reduction of the dynamics of general population growth.

According to the data for 2021, the natural growth rate of the population in the region was 17.5‰. We can see that these indicators are the highest in Khanka, Bogot, and Khiva districts, while they are relatively low in Urgench city, Koshkopir, Tuproqkala, and Yangariq districts.

Its migration also has a specific effect on the location of the population. In particular, in 2021, there is a negative migration balance in most territorial units of the republic, and in the Republic of Karakalpakstan, which has unfavourable natural conditions, this indicator is -3.6‰, in Kashkadarya region -2.86‰, and

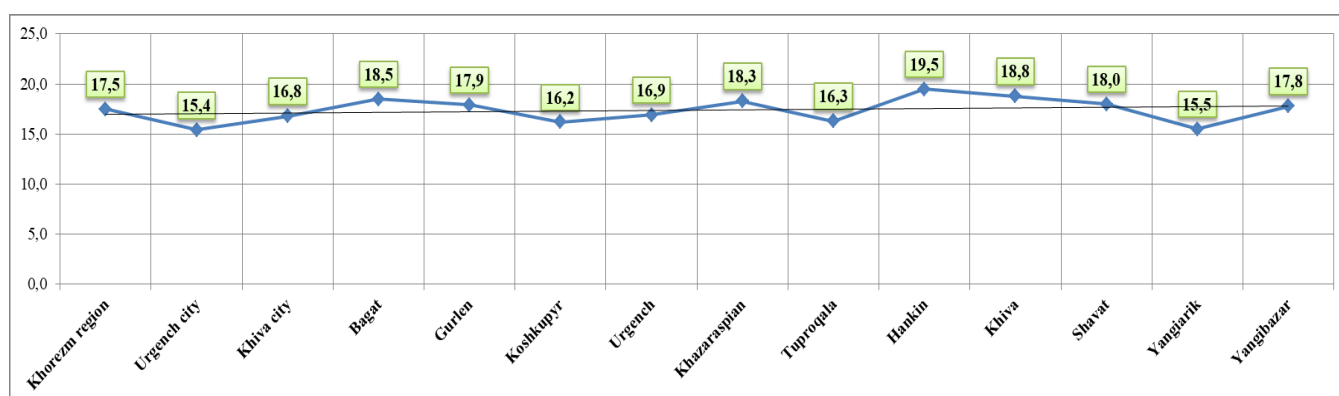


Figure 8. Dynamics of natural population growth.

Source: Khorezm regional statistical office data 2021.

in Khorezm region -1.2‰. At the same time, it should be noted that only in the city of Tashkent this indicator is positive 15‰, the reason for this is the capital factor and favourable economic and social conditions.

At the scale of districts of Khorezm region, the highest negative migration was observed in Hazorasp district equal to -9‰ (mainly due to the establishment of Tuproqkala district). In the city of Urgench, this indicator was -3.2‰, one of the highest among the cities of the republic.

In regions with severe natural conditions, the density is further decreasing due to population emigration. In urban areas where infrastructure and industry are developing, density is increasing. The high density of population in certain areas causes socio-economic problems and increases ecological pressure in these areas. In our republic, in the republic of Karakalpakstan, population migration is -34 per 10,000 inhabitants; -26 in Kashkadarya region; -21 in Surkhandarya region; and in Khorezm region -12; was found to be equal to [15].

Political reforms also affect population location and the territorial dynamics of settlements. Political reforms carried out by the state are of great importance in terms of population growth, urbanization processes, the employment of labor resources, the satisfaction of large-scale needs of the population, and the provision of infrastructure. As the population grows, the demand for land plots and residential facilities is increasing. However, the stock of available land resources is limited, for this reason, it is appropriate to take into account long-term strategic goals when making land resources available for housing construction [12]. The reforms implemented in the regulation of land use also affected the reduction of the area of land allocated for housing construction. For example, before 1998, 1300 m² of land for housing construction, 600 m² after 1998, and now 400 m² through electronic auction, affect the intensity of territorial expansion of housing areas.

In addition, the Address of the President of the Republic of Uzbekistan to the Oliy Majlis dated January 24, 2020 and the implementation of the State Program for the implementation of the five priority areas of development of the Republic of Uzbekistan in 2017-2021 in the "Year of Science, Enlightenment and Digital Economy Development", as well as In order to strengthen the guarantees of ensuring the rights and freedoms of the citizens of the Republic of Uzbekistan to move from one place to another within the territory of the country:

1. Abolition of the system of asking for a tip in the process of hiring specialists
2. It was decided to cancel the procedure for applying special rates of state duty in cases where citizens of the Republic of Uzbekistan registered as permanent residence in other regions of the Republic bought newly built houses in Tashkent city and Tashkent region and sold them within three years [19].

The creation of these opportunities depends on the location of the population, the activity of labor resources and, of course, the standard of living of the population

4. Conclusion: Population location shows a unique dynamic process that changes in certain factors can lead to changes in its intensity and direction. For this reason, we can say that forecasting the prospects of population settlement and the development of population centers requires complex scientific and

practical research. As a result of the geographical analysis of the population location, the following conclusions were reached.

1. The population is mainly located in river valleys, in irrigated farming centers, in mountainous areas at an altitude of 300-500 meters.
2. 45% of the total population lives in 7.5% of the territory of the republic. This indicator corresponds to the Tashkent and Fergana EGRs in terms of economic geographic regions (EGRs).
3. The population of the region is mainly located on the left bank of Amudarya in a unique claw-like shape.
4. The settlement of the population was strongly influenced by the shifting of the riverbed, the ancient riverbeds of Daryoliq, Davdon, Ozerniy collectors and canals.
5. The population is densely located near transport roads, canals, in areas with relatively higher relief, high-quality soil (land resources), district centers and cities (the population density in the MFY segment is 44,000 people/km.)
6. The population is very sparsely located in the Tuproqkala massif, in the regions adjacent to Unguzorti Karakumi, and in the lower part of Amudarya (1-5 km).

In the next stages, it would be appropriate to take into account the employment of the population and the provision of various services, connected to transport and production, while preventing the reduction of agricultural land.

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YOSHLAR TARBIYASIDA SPORT MUSOBAQALARINING O'RN

ANNOTATSIYA. *Ushbu maqola maktab o'quvchilari o'rtasida sport musobaqalarining ahamiyatiga, yosh sportchilarning musobaqalar jarayonida axloqiy va ruhiy tarbiyasiga bag'ishlangan.*

Kalit so'zlar: *sport musobaqalari, jismoniy tarbiya, raqibga nisbatan munosabat, o'zaro tushunish, bir-birini qo'llab-quvvatlash, intizom, mas'uliyat hissi.*

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THE ROLE OF SPORTS COMPETITIONS IN YOUTH EDUCATION

ANNOTATION. *This article is devoted to influence of sports competitions to schoolchildren as well as bringing sportsman up by morality and spirituality in the process of competitions.*

Key words: *sports competitions, physical education, attitude towards an opponent, mutual understanding, mutual assistance, discipline, sense of responsibility.*

KIRISH

Yosh avlod tarbiyasiga katta ahamiyat berilar ekan, ta'lim-tarbiya sohasida faoliyat ko'rsatayotgan pedagoglarimiz zimmasiga yuklangan ma'suliyat yanada oshadi. Yoshlarni sog'lom turmush tarziga o'rgatish, jamiyatimizda sog'lom muhitni yaratish, yoshlarni jismoniy, ruhiy va aqliy, bir so'z bilan aytganda ularni komil inson qilib tarbiyalash, biz pedagoglar oldida turgan va amalga oshirishimiz zarur bo'lgan eng muhim vazifalardan biridir.

Sinfdan tashqari va maktabdan tashqari jismoniy tarbiya bo'yicha ishlarning bir shakli, ya'ni sport musobaqalari yoshlar tarbiyasi uchun muhim o'rin tutadi. Sport bilan shug'ullanish va musobaqalarda qatnashish jarayonlari o'quvchi yoshlarimizda intizomlilik, o'zini tuta bilish, maqsadga intilish, qat'iyatlilik, mustaqillik, o'z kuchiga ishonch, tashabbuskorlik, mardlik, chidamlilik va juda ko'p shular kabi sifatlarni shakllantirishga sharoit yaratib beradi. Shuning uchun sport musobaqalarini tashkil qilish va unumli o'tkazish jarayonlariga katta e'tibor qaratiladi. Yana shunga e'tibor berish kerak-ki, bolalarda musobaqalarga qiziqish uyg'otish bilan birga raqibiga bo'lgan hurmatni shakllantirish ham eng muhim vazifalardan biridir.

Qaysi sport turini olmaylik hamisha musobaqalarda raqibni hurmat qilish talab etiladi, lekin bu har-bir sport turida o'ziga xos xususiyatga ega. Masalan, kurash sport turida raqibga ta'zim qilish uni hurmat qilishimizni, qolaversa raqibning shaxsiga va jamoasiga bo'lgan hurmatini namoyon qiladi. Shuningdek, musobaqa jarayoni qanchalik keskin va murosasiz jangovar su'ratda o'tmasin, uning so'nggida mag'lubiyatga uchragan kurashchi o'z raqibini hammadan birinchi bo'lib chin ko'ngildan qutlaydi, albatta, uning bu harakati kelgusi o'tkaziladigan musobaqalarda oliy o'rinlar olish uchun poydevor bo'lib xizmat qiladi.

Kuzatishlar shuni ko'rsatadiki, musobaqa jarayonida sportchining barcha qobiliyatlari va sifatlari shakllanadi hamda namoyon bo'ladi. Musobaqalar ko'pincha yuqori emotsional tarzda o'tkazilganligi sababli hatto tomoshabinlar ham o'z xulqi bilan salbiy, ba'zida ijobiy ta'sir ko'rsatishadi. Shunday sharoitda musobaqalar yoshlarda biri-biriga yordam berish, bir jamoa bo'lib musobaqa qoidalarini ahil bajarishda, umumiy maqsadlarga erishishda o'zaro javobgarligining shakllanishiga yordam beradi. Shuning uchun yoshlar o'rtasida o'tkaziladigan sport turlari bo'yicha musobaqalarning sifatiga katta e'tibor qaratilsa maqsadga muvofiq bo'ladi.

Musobaqalar rivojlantiradi, agar:

- a) ular bolaning yosh xususiyatlariga va uning imkoniyatlariga mos kelsa;
- b) shu bilan birga musobaqa murakkabligi bolalar imkoniyatlaridan biroz yuqoriroq bo'lsa.

Albatta, bu turdagi musobaqalar bolaning o'zi uchun qiziqarli va jozibali bo'lishi lozim.

Birinchiidan, musobaqalar bolalarning ichki motivatsiyasini va yuqori natijalarga erishish istagini rivojlantirishga yordam beradi. Bolalar musobaqalarda qatnashganda, muvaffaqiyatlarga erishish o'zlarining sa'yi-harakatlari va qat'iyatlilikiga bog'liqligini tushunishadi. Ular intizom, mehnatsevarlik va mas'uliyatni o'rganadilar, bu esa bunday ko'nikmalarni hayotning boshqa sohalarida qo'llashlariga imkoniyat yaratadi.

Ikkinchiidan, musobaqalar bolalarni jamoada ishlashga o'rgatadi. Qaysi sport turi yoki o'yin bilan shug'ullanmasin, bolalar hamkorlik, muloqot va bir-birlarini qo'llab-quvvatlashning ahamiyati haqida bilib olishadi. Ular sheriklar bilan birgalikda qaror qabul qilishni o'rganadilar va zamonaviy jamiyatda ajralmas bo'lgan jamoaviy ish ko'nikmalarini rivojlantiradilar.

Uchinchiidan, musobaqalar bolalarning sport va jismoniy ko'nikmalarini rivojlantiradi. Ular muvofiqlashtirish, moslashuvchanlik, kuch va chidamlilikni yaxshilashga yordam beradi. Muntazam mashg'ulotlar va musobaqalarga tayyorgarlik bolalarga sog'lom turmush tarzini saqlashga va butun hayoti davomida olib boradigan ijobiy odatlarni shakllantirishga yordam beradi. Va nihoyat, musobaqalar stressni boshqarish va muvaffaqiyatsizlikni boshqarish ko'nikmalarini rivojlantiradi. Hayotda har doim sinovlar xamda muvaffaqiyatsizliklar bo'ladi, shuning uchun musobaqalarga o'rganib qolgan

bolalar ularni shaxsiy o'sish va rivojlanish uchun imkoniyat sifatida qabul qilishni o'rganadilar. Ular muammolarni qanday hal qilishni va yangi vaziyatlarga moslashishni o'rganadilar, shuningdek, keyingi harakatlar uchun motivatsiya va kuch topadilar.

XULOSA

Shunday qilib, musobaqalar bolalarning rivojlanishida juda muxim rol o'ynaydi. Ular ichki motivatsiya, jamoaviy ish qobiliyatlari, jismoniy faollik va stressni boshqarish qobiliyatini rivojlantirishga yordam beradi. Shuning uchun bolalarni musobaqalarda ishtirok yetishni qo'llab-quvvatlash va rag'batlantirish, ularning o'sishi va o'zini namoyon qilishi uchun sharoit yaratish muhimdir.

Musobaqalarda, tanlovlarda ishtirok etishning foydali tomonlari shunda ki, ular bolalarning imkoniyatlarni tekshirishga yordam beradi, tayyorgarlik darajasini baholaydi, o'zini- o'zi tartibga solishni va qobiliyatlarini namoyish etishga sharoit yaratadi. Musobaqa davomida yangi do'stlar orttiradi. Bundan tashqari, yaxshi tashkil etilgan musobaqalar tayyorgarlikdagi (texnik-taktik, ruxiy, aqliy va boshqa) "muammoli" jihatlarni ochib beradi.

Yosh sportchilar o'zlarining faoliyatlari muximligini, kerakligini xis etishlari uchun oldilariga qo'ygan maqsadlari aniq bo'lishi kerak. Usha maqsadlariga intilgan holda ular qiziqish bilan shug'ullanadilar. Sportdagi muvaffaqiyatlarga intilish yosh sportchilardan mashaqqatlarni yengib o'tish, o'z oldiga buyuk bir maqsadni qo'yib, ya'ni o'z Vatanining himoya qilish, tug'ilib o'sgan mamlakat madxiyasini baralla yangratish, sportchi uchun bundan ulug' baxt yo'qligini xis qilishi kerak. Agarda jaxon chempionatlarida g'olib bo'lgan sportchilarimiz shoxsupa ustiga chiqqanda ko'rsangiz, ularning ko'zlari ichki his tuyg'ularini izxor qiladi.

Mana shunday xis tuyg'ularni yosh sportchilar ongiga singdirish, bu buyuk maqsadlar sari doimo olg'a intilishda ruxiy tomondan quvvat beradi. O'quv mashg'ulotlar va musobaqalar yordamida sportchi yoshlarimizni ma'naviy jixatdan yetuk, komil inson qilib tarbiyalash eng muxim vositalardan biri bo'lib xizmat qiladi.

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SPORTCHILARDA O‘YIN JARAYONINI YUQORI DARAJADA IDROK QILISH QOBILIYATINI SHAKLLANTIRISH- INTELLEKTUAL TAYYORGARLIKNING ASOSIY VAZIFASI

***ANNOTATSIYA.** Maqolada yosh sportchilarni sport o‘yinlariga intellektual tayyorlash haqida so‘z boradi, idrok, xotira, e’tibor, fikrlash kabi aqliy funktsiyalarning rivojlanish darajasi bilan bog‘liq bo‘lgan intellektual qobiliyatlarni rivojlantirish bo‘yicha fikrlar bayon etilgan.*

***Kalit so‘zlar:** intellektual tayyorgarlik, aqliy funktsiyalarni shakllantirish va takomillashtirish, o‘yin holatini idrok etish, ko‘rish chuqurligi va hajmi, "to‘p hissi", "darvoza hissi", "vaqt hissi".*

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FORMATION OF THE ABILITY TO PERCEIVE THE GAME PROCESS AT A HIGH LEVEL IN ATHLETES – THE MAIN TASK OF INTELLECTUAL TRAINING

***ANNOTATION.** In the article is mentioned young sportsman`s intellectual training in sports games. There are also given the most important information about the development of intellectual abilities, with mental functions such as memory, attention, critical thinking, perception and others.*

***Key words:** intellectual preparation, formation and improvement of mental functions, perception of the game situation, depth and volume of vision, "sense of the ball", "sense of the goal", "sense of time".*

KIRISH

Jahon sport maydonlaridagi o‘tib borayotgan raqobat, mashg‘ulot jarayonlarining jadallashib borishi, sportchilar muvaffaqiyatlarini davlatimiz tomonidan yuksak e’tirof etilishi, sportda ilm- fanining rivojlanganligi va boshqa ma’lumotlar sportchilardan mustahkam ilmiy- nazariy tayyorgarlikni talab qiladi.

Hozirgi kunda sport o'yinlarida o'yin jarayoni ko'p qirrali ekanligini ko'rib turibmiz va bu jarayon tahlili shuni ko'rsatadiki, uni muvaffaqiyatli amalga oshirish uchun sportchiga muhim bo'lgan bir qator ruhiy funktsiyalari katta ahamiyatga ega. Shuning uchun o'yin davomidagi sodir bo'layotgan ma'lumotlarni qabul qilish, qayta ishlash, saqlash va uzatish jarayonlarini ta'minlaydigan ruhiy funktsiyalarining shakllanishiga va takomillanishiga alohida o'rin ajratiladi. Sportchilar o'yin davomida ushbu ma'lumotlarni texnik - taktik masalalarini to'g'ri hal qilish uchun qo'llashadi, ya'ni o'yinchilarni maydonda eng qulay joylanishi, to'pning qaerda va kimdaligi, raqibning qarshilik ko'rsatish mumkinligi, murabbiy va sheriklarining ko'rsatmalari va hokazo.

Nazariy qism. Sportchilarning intellektual tayyorgarligi deganda sport faoliyatining mohiyatini tushunish jarayoni va u bilan uzviy bog'liq bo'lgan hodisalarni tushuniladi. O'yin davomidagi sodir bo'layotgan vaziyatlarni, yani ma'lumotlarni qabul qilish, qayta ishlash, saqlash va uzatish jarayonlarini ta'minlaydigan ruhiy funktsiyalarining shakllanishiga va takomillanishiga alohida e'tibor qaratiladi [1]. Buning uchun ko'rish idroki parametrlari, ayniqsa ko'rish doirasining chuqurligi va ko'rish doirasining xajmi muhim ahamiyat kasb etadi. Agar birinchisi harakatlanayotgan ob'ektni masofaviy –harakat hususiyatlarini idrok qilish, ya'ni uchib kelayotgan to'pgacha va harakatlanayotgan o'yinchigacha bo'lgan masofani aniqlash qobiliyati bilan bog'liq bo'lsa, ikkinchisi – o'yinchilarni o'yin maydonida joylashishini aniqlab beradi.

Hujum harakatlarini boshlayotganda o'yinchi o'zining sheriklarining joylashishini, shuningdek, himoyachi, darvozabon, boshqa raqiblarini bir vaqtning o'zida ko'ra bilishi muhim. Himoya paytidada to'p bilan harakatlanayotgan hujumchini ko'rish maydonida ushlab turishi va shu vaqtning o'zida o'z sherigini himoya qilishga tayyor bo'lishi kerak bo'ladi [3]. Ko'pincha sportchi o'z diqqat –e'tiborini shu paytdagi asosiy ob'ektda, ya'ni o'yinchida, jamlab, qolganlarini periferik ko'rish bilan nazorat qiladi. Shug'ullanish jarayonida ushbu faoliyatning o'ziga hos xususiyatlari sportchilarda kompleks idrok etishni shakllantiradi. Uning asosida har xil analizatorlardan, ya'ni muskul- harakatlantiruvchi, vestibulyar, ko'rish, eshitish va sezish analizatorlardan kelgan qo'zg'atuvchilarni aniq farqlash qobiliyati rivojlanadi. Shunday o'ziga xos idroklar qatoriga “darvozani sezish”, “o'yin maydonini sezish”, “to'pni sezish”, “vaqtni sezish” va boshqalar kiradi. Ana shunday idrok qilish qobiliyatlariga erisha olsagina, sportchilar yuqori sport natijalarga ega bo'lishlari mumkin. Sportchilarda o'yin jarayonini oliy darajada idrok qilishni shakllantirish- intellektual tayyorgarlikning asosiy vazifalaridan biri hisoblanadi.

Sportchilar texnik – taktik mahoratini muvaffaqiyatli takomillashtirishda ularning xotira hususiyatlari katta ahamiyat kasb etadi [2]. Ular qatoriga xotira hajmi, eslab qolish tezligi, olingan ma'lumotlarni mustahkam saqlab qolish va

kerakli paytda xuddi o'ziday qilib qaytarmoq kiradi. Sportchilarning xotira xususiyatlari 2 tipdagi xotiraning ishlashiga bog'liq bo'ladi: uzoq muddatli va qisqa muddatli, yoki operativ xotira. Sport o'yinchilari faoliyatida ko'proq operativ xotiraga ahamiyat beriladi. Operativ xotira qisqa vaqt ichida olingan ma'lumotni saqlash uchun hamda sportchi ongida uzoq muddatli xotiradagi ma'lumotlarning bir qismini eslamoq uchun qo'llaniladi.

O'quv – mashg'ulotlar jarayonida o'yinchilarga ko'plab taktik harakatlar chizmalarini eslab qolishga to'g'ri keladi. Bundan tashqari musobaqa davrida ular o'yin vazifalarini bajarishda qiziq, original, raqiblari uchun noaniq va noqulay taktik harakatlarini topib qo'llay bilishlari kerak bo'ladi. Bularning hammasini sportchi o'z hotirasida saqlab qolishi va kerakli paytda aniq bajara olishi kerak.

Jamoa o'yinida muvoffaqiyatga erishish uchun har bir o'yinchining harakatlari jamoaning umumiy maqsadiga mutanosib bo'lmog'i lozim. Masalan, gandbol va basketbol o'yinlarida yashirin to'p uzatishlar qo'llaniladi. Bu to'p tayyorlov harakatlarga muvofiq bo'lmagan yo'nalishlarda amalga oshiriladi. Bu to'p uzatishlarni amalga oshirishda jamoadoshlar o'zaro bir-birini yuqori darajada tushunishni, butun diqqat-e'tiborini o'yinga qaratishni talab etadi, chunki bu to'p uzatishlar faqat kichik masofalarda va raqib jamoasi o'yinchilarining bevosita yaqinligida amalga oshiriladi. Xujum natijasi ko'pincha yashirin to'p uzatishlarni mahorat bilan qo'llay bilishga bog'liq bo'ladi.

Yashirin to'p uzatishlarni amalga oshirish shartlari:

- to'pni qabul qiluvchi jamoadoshi yo'nalishiga harakat etmaslik;
- to'pni qabul qiluvchi jamoadoshiga nazar tashlamasdan, faqatgina pereferik qarash bilan uni nazorat etish;
- to'pni tez va aniq uzatish (to'p uzatishning maxfiyligi oshkor bo'lmasligi uchun);
- ta'qib etuvchi uzatilgan to'pni olib qo'ymasligi uchun bevosita ta'qib etuvchining yaqiniga borish kerak. Har bir aniq o'yin holatida to'pni uzatish usulini puxta tanlab olish, to'p uzatish tezligini to'g'ri rejalashtirish, to'pni qabul qiluvchi jamoadoshning maydondagi joylashishni to'g'ri aniqlab olish muhim ahamiyatga ega [3].

Sport o'yinlarida (gandbol, basketbol, futbol va boshqalar) o'yin sur'atining tezlashib ketganligi sababli ko'pincha qisqa vaqt ichida sportchi sheriklari bilan birga aniq va tez harakat qilishi talab etiladi. O'yin davomida sodir bo'lgan ma'lumotni qayta ishlashni va keyingi vaziyatni oldindan bilib olishni ta'minlaydigan ruhiy funktsiyalarining rivojlanganlik darajasi juda muhim.

Taktik tafakkurning samarali xususiyati tafakkurni amaliy harakatga kiritishni bildiradi. Masalan, basketbolchi texnik harakatni (to'pni dribling) bajarayotganda o'ylaydi (kimga pas berishini hal qiladi), qabul qilingan qarorni darhol amalga oshiradi. Kuchli zarba berishni maqsad qilgan voleybolchi to'siqni ko'rib, to'rdan sakrab o'tib, to'pni to'siqchilar orqasiga tashlashga qaror qiladi.

Yana shuni hisobga olish kerak-ki, operativ tafakkur ijodiy tafakkur unsurlarini o'z ichiga oladi. O'yinchilarning o'ziga xos talablariga javob beradigan intellektual qobiliyatlarini tarbiyalash jarayoni olingan bilimlariga asoslangan bo'lib, amaliy faoliyatda ijodiy yondoshuvni talab etadi. Masalan, taktik harakatlar chizmalarini yaxshi o'rganib olib, ularni xatosiz qo'llash mumkin. Lekin amaliyot shuni ko'rsatadiki, sportchilar operativ taktik tafakkurini rivojlantirish uchun har bir aniq vaziyatda qo'llanadigan yangi va yangi usullarni topishda faollik bilan izlanishlari kerak.

XULOSA

Texnik usullarini va taktik harakatlarini o'rganish va takomillashtirish, jismoniy, nazariy va intellektual tayyorgarlikni oshirish hamda ularga ijodiy yondoshish sportchilarining ruhiy funktsiyalarini rivojlantirishda amaliy asos hisoblanadi.

Sport o'yinlarida sportchining jismoniy, texnik va taktik tayyorgarligidagi yuqori natijalari uning ruhiy funktsiyalari, shaxs sifatlarining rivojlanishi bilan bog'liq bo'ladi. Masalan, sportchining harakat sezgirligini, harakat xotirasini, diqqatini oliy darajada maxsus rivojlantirilmasa, u yoki bu texnik usullarini mukammal bajarilishiga erishib bo'lmaydi.

Sportchilarda intellektual qobiliyatlarini rivojlantirish va takomillashtirilish uchun o'sib boradigan ijodiy yondoshuvga undaydigan maxsus bilimlar tizimi shakllangan. Ushbu vazifalar diqqatni taqsimlash, va shu vaqtining o'zida diqqatni jamlash mashqlardan iborat. Masalan, ikkita o'yinchi bir nechta to'p bilan mashq bajarishi; ikkita o'yinchi harakatda har xil yo'nalishlarda to'p uzatishi- murakkab reaksiyasini rivojlantirish uchun mashqlar qo'llaniladi.

Kuzatishlar natijasi shuni ko'rsatadiki, ko'pincha sport o'yinlarida o'yinchilar o'zlarining eng samarali texnik va taktik usullarini raqibining faol qarshilik ko'rsatayotgan sharoitida qo'llashadi. O'yin paytidagi tez o'zgarib turadigan taktik xulosalar operativ tafakkur jarayonining natijasi deb hisoblaymiz. O'yinchi darhol bir nechta variantlardan bittasini, uningcha bu vaziyatga mos keladiganini, tanlab qo'llaydi. Ko'pincha voleybolchilar, basketbolchilar va gandbolchilar to'g'ri keladigan, oldindan o'rganilgan va hammalariga tanish bo'lgan variantlarni (kombinatsiyalarni) tanlashadi.

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MAKTABGACHA YOSHDAGI BOLALARDA NAFAS OLISH TIZIMI: XUSUSIYATLARI VA TAVSIYALAR

Annotatsiya. Ushbu maqola maktabgacha yoshdagi bolalarda nafas olish tizimining salomatligini saqlash masalalariga bag'ishlangan. Bolalarda nafas olish tizimi salomatligiga ta'sir qiluvchi asosiy omillar, kasalliklarning oldini olish usullari, shuningdek, kun tartibi va jismoniy faoliyatni tashkil qilish bo'yicha tavsiyalarni o'z ichiga oladi.

Kalit so'zlar: Nafas olish tizimi salomatligi, maktabgacha yoshdagi bolalar, kasalliklarning oldini olish, nafas olish mashqlari, bolalar uchun yoga, jismoniy faollik, to'g'ri ovqatlanish, sog'lom kun tartibi, immunitet tizimi, bolalar salomatligi.

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RESPIRATORY SYSTEM IN PRESCHOOL CHILDREN: CHARACTERISTICS AND RECOMMENDATIONS

Abstract. This article is devoted to the issues of maintaining the health of the respiratory system in preschool children. The review includes the main factors affecting children's respiratory health, methods of disease prevention, and recommendations for organizing daily regimen and physical activity.

Keywords: Respiratory system health, preschoolers, disease prevention, breathing exercises, yoga for children, physical activity, proper nutrition, healthy daily regimen, immune system, children's health.

Kirish. Nafas olish tizimi inson hayoti va umumiy sog'lig'ini saqlashda, ayniqsa kichik yoshda asosiy rol o'ynaydi. Tanani kislorod bilan ta'minlash va karbonat angidridni chiqarib tashlash bu tizimning asosiy vazifalari hisoblanadi. Maktabgacha yoshdagi bolalar uchun nafas olish tizimining to'g'ri ishlashi juda muhim, chunki bu ularning jismoniy rivojlanishiga, o'yinlarda va o'rganishda faol ishtirok etish qobiliyatiga, umumiy holatiga ta'sir qiladi.

Bolaning umumiy salomatligi va rivojlanishi uchun nafas olish tizimining ahamiyatini ortiqcha baholab bo'lmaydi. Yurak-qon tomir tizimi bilan birgalikda nafas olish tizimi tananing barcha hujayralarini ularning ishlashi va o'sishi uchun zarur bo'lgan kislorod bilan ta'minlash uchun javobgardir. Kislorod bilan

ta'minlanmaganligi rivojlanishning kechikishi, charchoq, yomon uyqu va boshqa sog'liq bilan bog'liq muammolarga olib kelishi mumkin.

Maktabgacha yoshdagi bolalarda nafas olish tizimining o'ziga xos xususiyatlarini ta'kidlash va uni optimal holatda saqlash bo'yicha amaliy tavsiyalar berishdir. Biz anatomik va fiziologik xususiyatlarni, umumiy muammolarni, ta'sir qiluvchi omillarni, oldini olish usullarini va maktabgacha yoshdagi bolalarda nafas olish tizimining holatini yaxshilash bo'yicha amaliy maslahatlarni ko'rib chiqamiz.

Maktabgacha yoshdagi bolalar nafas olish tizimining anatomik va fiziologik xususiyatlari.

Anatomik xususiyatlari

Maktabgacha yoshdagi bolalarning nafas olish tizimi kattalarnikidan bir qancha muhim anatomik farqlarga ega:

Nafas yo'llarining o'lchami: Maktabgacha yoshdagi bolalarda nafas yo'llari (burun, halqum, traxeya va bronxlar) kattalarnikiga qaraganda nisbatan torroq va qisqaroq. Bu ularni obstruksiya va yallig'lanishga nisbatan himoyasiz qiladi.

Suyak tuzilishi: Yosh bolalarning qovurg'alari ko'proq egiluvchan va kamroq kalsifikatsiyalangan, bu o'pkaning mexanik ta'minotiga ta'sir qiladi.

Musku tuzilishi: Maktabgacha yoshdagi bolalarda ko'krak qafasi mushaklari va diafragma hali rivojlanish bosqichida bo'ladi, bu esa nafas olish samaradorligiga ta'sir qilishi mumkin.

O'pka: Bolalardagi o'pkaning tuzilishi kattalarniki bilan bir xil bo'lsa-da, maktabgacha yoshdagi bolalarda ular kichikroq va faol rivojlanishda davom etadilar. Bolalarda gaz almashinuvi sodir bo'ladigan alveolalar maydoni ancha kichikroq.

Fiziologik ko'rsatkichlar

Nafas olish tezligi: maktabgacha yoshdagi bolalar nafas olish tezligi kattalarga qaraganda yuqori, ular daqiqasiga o'rtacha 20-30 marta nafas oladilar. Taqqoslash uchun, kattalarda bu ko'rsatkich taxminan 12-20 marta.

O'pka hajmi : Bolalarning umumiy o'pka hajmi ancha kichik. Hisob-kitoblar shuni ko'rsatadiki, bolalarda o'pka hajmining tana vazniga nisbati kattalarnikiga qaraganda ancha kichikdir, bu ularning nafas olish qobiliyatiga ta'sir qiladi.

O'pka ventilyatsiyasi: Bolalarda nafas olish tezligi yuqori va o'pkaning hajmi kichik bo'lsada bir daqiqada o'pkadan o'tadigan havo hajmi kattalarnikiga yaqin.

Ushbu anatomik va fiziologik xususiyatlar maktabgacha yoshdagi bolalarning nafas olish tizimini noyob qiladi va uni qo'llab-quvvatlash, kasalliklarning oldini olish uchun alohida e'tibor va yondashuvni talab qiladi. Ushbu farqlarni tushunish bolalarning nafas olish tizimini yaxshilash va qo'llab-quvvatlash bo'yicha samarali dasturlarni yaratishda asosiy rol o'ynaydi.

Nafas olish tizimining rivojlanish bosqichlari

Nafas olish tizimi inson salomatligi va hayotiy ehtiyojlarini qondirish uchun muhim ahamiyatga ega. Uning rivojlanish bosqichlarini tushunish nafaqat

fiziologik jarayonlar haqida ko'proq bilimga ega bo'lish, balki tashqi omillar, parvarish qilish va profilaktik tadbirlar ahamiyatini anglashga yordam beradi. Quyida nafas olish tizimining rivojlanish bosqichlari keltirilgan:

Neonatal davr (0-1 oy) :

Anatomik xususiyatlar: Nafas olish tizimining tug'ma tuzilmalari hali to'liq shakllanmagan. Alveolalar tug'ilgandan keyin ham rivojlanishda davom etadi.

Nafas olish shakllari: Yangi tug'ilgan chaqaloqlar asosan diafragma orqali nafas oladi. Nafas olish tezligi ancha yuqori: daqiqasiga 30-60 marta.

Muammolar: Zaif immunitet va o'pkaning anatomik yetuk emasligi respirator kasalliklar xavfini oshiradi.

Go'daklik davri (1 oy - 1 yil) :

O'pka rivojlanishi: Alveolalarning rivojlanishi davom etmoqda, alveolyar bo'limlar soni ortadi, bu gazlar almashinuvini yaxshilaydi.

Nafas olish tezligi: asta-sekin bir daqiqada 20-30 nafas olish harakatigacha kamayadi.

Immunitet: Shaxsiy immunitet shakllana boshlaydi, bu infeksiyalarga nisbatan zaiflikni kamaytiradi.

Erta bolalik (1-3 yosh) :

O'pka o'sishi: O'pka hajmi o'sishda davom etadi, gaz almashinuvi uchun hajm va sirt maydoni yaxshilanadi.

Nafas olish mushaklarining rivojlanishi: qovurg'alar yanada qattiqlashadi va ko'krak qafasi mushaklari rivojlanadi, bu nafas olish samaradorligini oshiradi.

Jismoniy faollik: Bolalarda jismoniy faollikning kuchayishi nafas olish tizimining rivojlanishiga yordam beradi.

Maktabgacha yosh (3-6 yosh) :

Nafas olish parametrlarining barqarorlashishi: Nafas olish tezligi bir daqiqada 20-30 martagacha barqarorlashadi.

Anatomik rivojlanish: nafas olish yo'llari kengroq va uzunroq bo'lib, obstruksiya xavfini kamaytiradi.

Immunitet tizimini mustahkamlash: Immunitet tizimi mustahkamlanadi, bu infeksiyalarga nisbatan sezgirlikni kamaytiradi.

Bolalarda nafas olish tizimining rivojlanishi ko'p bosqichli jarayon bo'lib, alohida e'tibor va tushunishni talab qiladi. Har bir bosqichning o'ziga xos fiziologik xususiyatlari va xavf-xatarlari mavjud bo'lib, bu bilimlar ota-onalar va mutaxassislariga bolaning sog'lig'ini saqlash va mustahkamlashga yordam beradi.

Maktabgacha yoshdagi bolalarda nafas olish tizimi kasalliklarining oldini olish.

Muvozatanlangan ovqatlanish. Meva va sabzavotlar immunitet tizimini mustahkamlovchi vitamin va minerallarga boy (C, A vitamini, antioksidantlar).

Oqsillar antitanachalar va immunitet tizimining boshqa tarkibiy qismlarini shakllantirish uchun zarurdir. Oqsilning ajoyib manbalari orasida go'sht, baliq, dukkaklilar va sut mahsulotlari mavjud. Yetarli suv iste'moli barcha tana

tizimlarining, shu jumladan immunitet tizimining normal ishlashini qo'llab-quvvatlaydi.

Uyqu rejimi. Sifatli uyqu to'qimalarni tiklash va qayta tiklash, shuningdek, tananing infeksiyalarga umumiy qarshiligini oshirish uchun zarurdir. Uyqu rejimi tana soatini o'rnatishga va umumiy energiya va salomatlik darajasini saqlab qolishga yordam beradi.

Stressni kamaytirish. Bolaning hissiy va psixologik holatini qo'llab-quvvatlash, umuman olganda, sog'lig'iga va ayniqsa immunitet tizimiga ijobiy ta'sir ko'rsatadi. O'yin terapiyasi va art-terapiya bola uchun sog'lom hissiy muhitni yaratishga yordam bering.

Chiniqish va toza havoda yurish. Chiniqish usullarini joriy etish sovuqqa kichik ta'sir qilishdan boshlab (masalan, oyoqlarga salqin suv quyish) asta-sekin sodir bo'lishi kerak. Iliq va sovuq suvdan muqobil foydalanish tananing moslashuvchan mexanizmlarini yaxshilashga yordam beradi. Kundalik yurishlar umumiy salomatlikni yaxshilaydi, nafas olish tizimini rivojlantiradi va kasalliklarga chidamliligini oshiradi. Ochiq havodagi mashg'ulotlar qon aylanishini yaxshilaydi, qonni kislorod bilan boyitadi va immunitet tizimini mustahkamlaydi.

Emlash va uning ahamiyati. Milliy tibbiyot tashkilotlari tomonidan tavsiya etilgan emlash jadvaliga rioya qilish ko'plab jiddiy kasalliklarning oldini olishga yordam beradi. Vaksinalar gripp, ko'k yo'tal, pnevmokokk infeksiyasi va nafas olish tizimiga jiddiy zarar etkazishi mumkin bo'lgan boshqa infeksiyalarning oldini olishda samarali ekanligi isbotlangan.

Maktabgacha yoshdagi bolalarda nafas olish tizimi kasalliklarining oldini olish immunitet tizimini mustahkamlash, muntazam ravishda chiniqish va toza havoda sayr qilish, shuningdek, o'z vaqtida emlashni o'z ichiga olgan kompleks yondashuvni o'z ichiga oladi. Ushbu chora-tadbirlar nafas olish kasalliklari xavfini sezilarli darajada kamaytirishga yordam beradi va bolaning nafas olish tizimining sog'lom rivojlanishini ta'minlaydi.

Maktabgacha yoshdagi bolalarda nafas olish sog'lig'ini saqlash tizimli kundalik tartibni, muntazam jismoniy faoliyat va nafas olish mashqlarini, shuningdek, to'g'ri ovqatlanish va namlanishni o'z ichiga olgan kompleks yondashuvni talab qiladi. Ushbu tavsiyalarga rioya qilish nafas olish tizimining normal rivojlanishi va bolaning umumiy salomatligi uchun sharoit yaratishga yordam beradi.

Xulosa. Maktabgacha yoshdagi bolalarda nafas olish tizimining salomatligi ularning umumiy jismoniy rivojlanishi va farovonligining asosiy omilidir. Sog'lom nafas yo'llari tanani yetarli miqdorda kislorod bilan ta'minlaydi, bu barcha tana tizimlarining, shu jumladan miya va yurak-qon tomir tizimining normal ishlashi uchun zarurdir. Nafas olish tizimi kasalliklarining oldini olish tez-tez uchraydigan kasalliklarning oldini olishga yordam beradi va bolaning barkamol rivojlanishiga, immunitetini va umumiy salomatligini mustahkamlashga yordam beradi.

Maktabgacha yoshdagi bolalarda nafas olish tizimining salomatligini saqlash ota-onalarning faol ishtirokini va maqolada keltirilgan tavsiyalarni diqqat bilan amalga oshirishni talab qiladi. Ushbu oddiy, ammo samarali qadamlarni muntazam ravishda bajarish bolaning o'sishi va rivojlanishi uchun sog'lom poydevor yaratishga yordam beradi. Kun tartibiga rioya etish, muntazam jismoniy faoliyatni ta'minlash, ovqatlanish va gidratatsiya, chiniqish, emlash kabi profilaktika choralarini unutmang.

Farzandingizning nafas olish tizimi salomatligiga bo'lgan faol g'amxo'rligingiz va e'tiboringiz uning muvaffaqiyatli va barkamol rivojlanishi uchun mustahkam zamin yaratadi, uning sog'lom va baxtli bolaligini ta'minlaydi.

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STEPS OF ANALYSIS AND IMPROVEMENT OF INTERNATIONAL CREDIT LINES AND THE WAYS OF IMPROVING THE EFFICIENCY OF THEIR USE

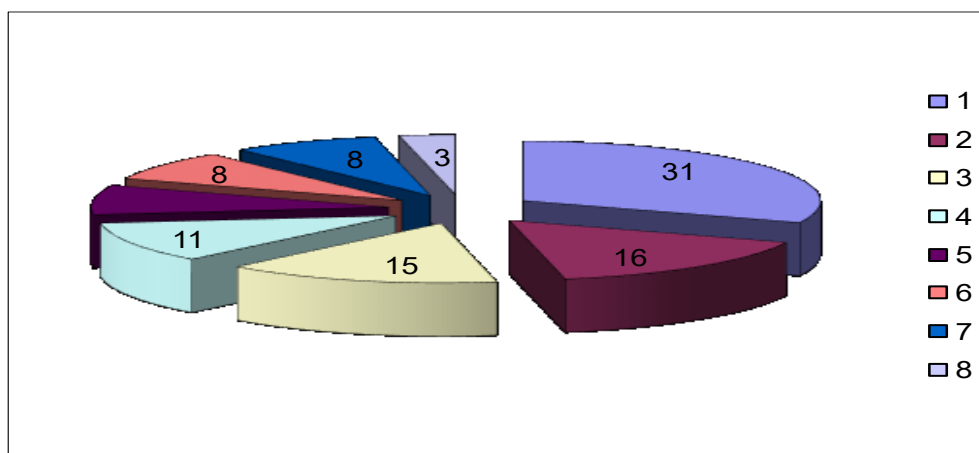
Abstract: *The entry of the Republic of Uzbekistan into the top 30 by 2030 requires ensuring stable economic growth (annual) at the level of 5 percent, which requires maintaining a high level of financing of the real sector. However, investment, credit and money supply generally tend to decline in the medium term. In this context, the objective of this study is to assess the contribution of finance to economic growth, as well as to identify the systemic problems that limit the growth of economic finance.*

Keywords: *projects; contractual relations; contract policy; contract strategy; accounting and analytical engineering tools; situational approach; derivative balance of a situational.*

Today, 29 banks in the republic are in bankruptcy, of which 5 are state, 13 are joint-stock companies, 6 are private, and 5 are foreign banks that require a lot of capital. The banking sector is experiencing rapid growth, including Jamia Bank. assets increased by 37.0%, of which loans increased by 46.6%.

The total capital of banks has increased by 30.0%, and the ground is being created for commercial banks to establish indicators of capital adequacy and measures based on liquidity.

The purpose of the study is to comprehensively study the existing sources of financial and credit support for the innovative sector in the Republic of Uzbekistan and to assess their impact on the development of the innovative sector. The strengths and weaknesses, threats and opportunities of the existing system of financing the innovative sector through bank loans are defined, and directions for its improvement are defined. Based on the use of regression analysis, this article examines possible changes in the volume of exports of high-tech products under the influence of sources of financial and credit support, such as the costs of scientific development and research, the volume of bank loans, the volume of foreign loans . investment potential of the investment, pension and insurance sectors. The results of the study showed that the volume of export of high-tech products is significantly influenced by scientific research expenses, bank loans to the private sector, pension and insurance sector assets.



1 – financial statements; 2 – market analysis; 3 – security; 4 – management; 5 – financial planning; 6 – sector analysis; 7 – other; 8 – account analysis.

Figure 1. General stages of analysis of credit lines and their use

It takes its place in the implementation of the requirements of the basic economic law, creating conditions for profit-making by market entities. As an element of the mechanism of the Law of Value, international credit lowers the individual value of goods compared to their social value, for example, based on the introduction of imported equipment purchased on credit. International credit is associated with the law of saving working time, living and material labor, which helps to increase social wealth, provided that debt funds are used effectively.

Credit risk is the main type of risk in banking, since most of the assets of universal banks, both foreign and Russian, are loan portfolios. According to the information of the Central Bank of the Republic of Uzbekistan, credit deposits make up more than 75% of the total assets of the banking system of the Republic of Uzbekistan. The core of such a reform should be a strategy for effective development of the banking and real sectors of the economy based on the convergence effect, unlike the traditional approach, it is necessary to take into account the multi-directional goals of the interaction between the studied sectors .

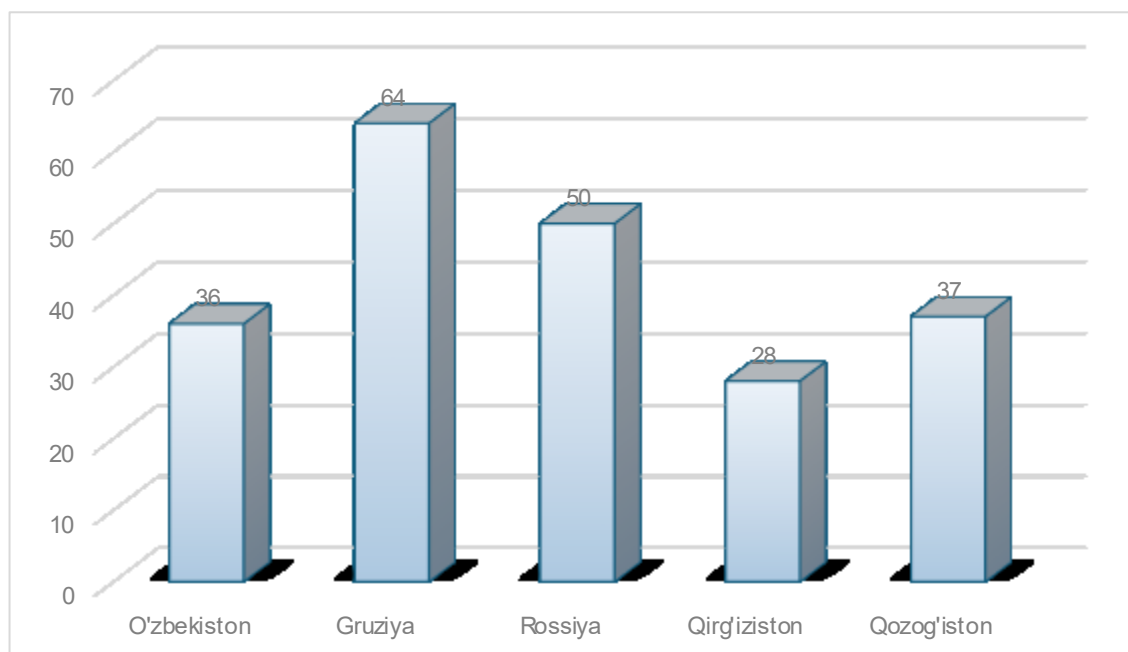


Figure 2. International credit lines and indicators of their use total credit (2022 status)
 From the analysis of Figure 2, international credit lines and their use in the Republic of Uzbekistan at the end of 2022 amounted to 36 percent, which is lower than the average value in the region of Central Asian countries (the average was 40 percent).

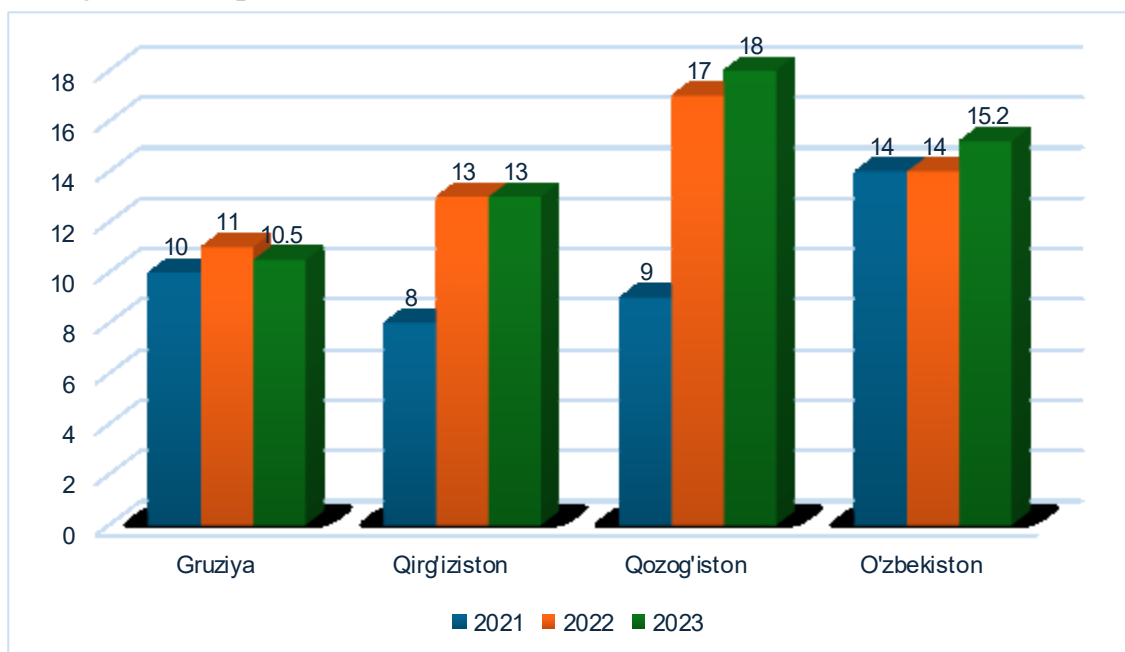


Figure 3. International credit lines of the Republic of Uzbekistan in relation to other countries and indicators of their use

In the pre-crisis period of 2021-2023, indicators of international credit lines and their use, growth in the volume of investments in fixed capital, significant inflow of foreign direct investments, indicators of domestic savings occurred against the background of increase and growth of lending.

Due to under-crediting of the population, insufficient capitalization and efficiency of banks, and limited mechanisms for credit scoring and risk assessment, performance in Uzbekistan, Kyrgyzstan and Azerbaijan is below average, which hinders the provision of loans. At the end of 2022, international credit lines and their use amounted to 36% of GDP, which is much lower than the average for Central Asian countries.

The introduction of international credit systems in Uzbekistan can have a number of advantages, including:

1. Improving access to credit: International credit systems provide a standardized way to assess a borrower's creditworthiness, which allows lenders to provide credit more reliably. This can make it easier for individuals and businesses in Uzbekistan to get loans from foreign lenders, which can be especially important for companies looking to expand internationally.

Increased investment: By improving access to credit and reducing risk for lenders, the introduction of international credit systems can attract more foreign investment to Uzbekistan. International lenders may be willing to invest in Uzbekistan if they are confident of the borrowers' creditworthiness and have reliable credit records.

Public awareness: Implementation of the international credit system relies heavily on public trust. Public education events help educate citizens about the benefits of credit reporting and credit scoring, while dispelling any misconceptions about the system.

Therefore, it is necessary to carefully plan the introduction of the international standard of credit reporting in Uzbekistan, taking into account these main issues.

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RESEARCH OF THE LENGTH OF WOOL FIBERS, BODY TYPES, AND THE EXPRESSION OF COLORING IN LAMBS OF DIFFERENT COLORS

In the article, the length of wool fiber, types of constitution, and the expression of wool color of Karakol lambs of different colors were studied in the conditions of a breeding farm, while no reliable difference was observed between the groups. Only the silver sur lambs have slightly higher indicators, which indicates that they are in the process of adaptation to the conditions.

Keywords: black, lamb, silver color, golden color, color, build, desert, skin, curly.

The length of the wool fiber of Karakol lambs is an important feature in assessing the commercial properties of their skins. Different types and shapes of Karakol skin flowers have different lengths of wool fibers [1].

According to Yu.Yusupov (2010), the length of wool fibers can only be regulated by selection. A.Ombaev (2008), noting that this trait is a genetic trait, noted that it has significant variability depending on nutritional conditions.

S.Yusupov (2010), S.Bozorov (2015) note that the length of wool fiber at the time of birth of lambs is to a certain extent related to their body type, live weight and color. The results obtained in our experiment are presented in table 1 [2,3].

Table 1

Length of wool fibers of lambs of different colors, mm
(Data from H. Tursunov, 2007)

Colour variety	Number of lambs obtained	On a stump			On the back edge		
		M±m	g	S, %	M±m	G	S, %
Silver paint	106	10,24±0,13	1,13	15,7	11,73±0,12	1,2	14,3
Gold paint	60	10,41±0,17	1,17	11,9	12,12±0,13	1,4	12,4

As can be seen from the data in the table, the silver colored lambs had a shorter wool fiber length at the withers and 11.73 mm at the back edge, the wool fiber length was relatively golden. The lambs had a wool length of 10.41 mm at the withers and 12.12 mm at the back edge.

Body types of lambs of different colors

It is important to consider the constitutional types of Karakol sheep and lambs. The constitutional type of Karakol lambs is one of the main features, and this feature is an indicator of health, vitality, adaptability to extreme desert conditions and productivity of sheep. Karakol lambs are assessed by the level of development and constitution at birth and are divided into 3 groups.

Strong constitutional type of Karakol lambs - according to the rate of development of such lambs, the live weight is 4-4.5 kg, the skeleton is strong, normal, the body structure is proportional, the skin is thin, clean, the wool cover is silky, medium shine, the fineness of the curls is average, the wool cover of secondary parts of the body is average, the skin reserve, the fatness is from good to average.

Coarse type of constitution of Karakol lambs - these lambs are high-bodied, weigh 4-6 kg, have a coarse skeleton, a relatively short head, a wide, very rounded body, without legs, the body is wide, restrained, the skin is thick, mature or less clear, loose, the wool is predominantly coarse, the curls are enlarged, but can also be of medium size, secondary parts of the body are rarely covered with wool.

Thin type of constitution of Karakol lambs - lambs of this type are small, weigh up to 3.5 kg, have a compact skeleton or are elongated due to the facial part, narrow, have a straight or slightly concave profile, have smaller curls, sometimes medium, secondary parts of the body are covered with thick wool, sometimes somewhat more sparse.

Currently, in animal husbandry, including cattle breeding, the classification of P.Kuleshov and M.Ivanov is widely used, which is mainly divided into coarse, thin, loose and strong types of constitution.

S.Bozorov (2015) argues that the productivity of constitutional type animals is expressed depending on their reaction to the external environment and that yellow sheep are constitutionally weaker than black ones, therefore their feeding and care should be given special attention.

S.Bozorov (1998), S.Sattorov, M.Egamkulov, S.Bozorov (2001) established that mating sheep with a strong constitution allows obtaining 81% of offspring of this type.

S.Yusupov (2010), S.Bozorov (2015) and others paid great attention to the importance of constitutional types and noted the need to evaluate lambs according to this indicator during examination [2,3,4].

Table 2

Constitution types of lambs of different colors, %

Colour variety	Number of lambs	Delicate		Strong		Rude	
		n	%	n	%	n	%
Silver paint	106	14	13,2	75	70,8	17	16,0
Gold paint	60	7	11,7	42	70,0	11	18,3

As can be seen from the data in Table 2 above, silver-colored lambs have a relatively large number of thin-type lambs, which amounted to 13.2%. Among golden-brown-colored lambs, there were more lambs of the coarse type of constitution, which amounted to 18.3%. The output of lambs of the solid type of constitution was almost the same for silver and golden-yellow-colored lambs. There is no significant correlation between the color of the coat and the type of constitution.

Expression of sur color in lambs of different colors

The intensity of color in lambs is one of the main quality indicators, this feature is an indicator that is passed on from generation to generation, and this indicator also depends on the influence of the external environment, mainly pasture conditions. Strong expression of this indicator is an important and selective feature in determining the breeding value of lambs, as well as in assessing the market value of black skins, and in lambs left for breeding, this indicator must be given great attention.

In Karakol lambs, the brown color is formed as a result of uneven distribution of pigment along the length of the fiber. The pigment is abundant at the base of the fiber, spreads to it, giving it a dark color, and decreases at the tip, giving various light colors. The pronounced expression of this feature has an important and first-class selection value in determining the breed of lambs, assessing the market value of black sheepskins (Table 3).

As can be seen from the table, the expression of silver coloration in silver-colored lambs was very high and amounted to 37.7%. Lambs with unsatisfactory coloration were 10.0% more in golden-yellow colored lambs and 3.4% more than in silver-yellow colored lambs.

Table 3

Expression of sur color in lambs of different colors (%)

Colour variety	Number of lambs	Excellent		Good		not satisfied	
		n	%	n	%	n	%
Silver paint	106	40	37,7	59	55,7	7	6,6
Gold paint	60	20	33,3	34	56,7	6	10,0

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GEOGRAFIYADAN AMALIY MASHG'ULOT DARSLARIDA QUYOSHNING UFQDAN BALANDLIGINI TURLI KENGLIKLARDA ANIQLASH USULLARI

***Annotatsiya:** Ushbu maqolada Yerning Quyosh atrofida aylanish va uning geografik oqibatlari tahlil qilingan bo'lib, Yer sharining Quyosh sistemasidagi o'rni va harakatlari yoritilgan. Geografiya darslarida amaliy mashg'ulotlarda Quyosh nurining Yer yuzasiga tushishiga oid mulohazalar va geografik masalalar ishlashning eng maqbul usullari tavsiya etilgan.*

***Kalit so'zlar:** Yerning shakli, o'lchamlari, vaqt hisobi, Quyosh energiyasi, ufqdan balandligi, burchak, qiyalik*

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METHODS FOR DETERMINING THE HEIGHT OF THE SUN ABOVE THE HORIZON AT DIFFERENT LATITUDES IN PRACTICAL GEOGRAPHY CLASSES

***Abstract:** This article analyzes the rotation of the Earth around the Sun and its geographical consequences, and also examines the role and movement of the globe in the Solar system. Practical geography classes offered arguments about the fall of sunlight on the surface of the earth and the best ways to solve geographical problems.*

***Keywords:** shape of the Earth, dimensions, time counting, solar energy, height above the horizon, angle, slope*

Kishilar ibtidoiy jamoa tuzumi davridayoq o'z joyini bilish va unda oriyentir olish ehtiyojlari tufayli ayrim, ba'zan esa ancha keng tasavvurlarga ega bo'lganlar. Bugungi kunga qadar Yer shari haqidagi tasavvurlar va ishlanmalar adadi sanoqsiz bo'lib ularning eng asosiylariga to'xtalib o'tsak.

Geografiya tarixidan ma'lum, Midoddan oldingi VI asrda Pifagorning shogirdlari "Yer sharsimon bo'lsa kerak",- degan fikrni aytishgan bo'lsa-da, grek faylasufi Aristotel (miloddan oldingi IV asr) Yerning sharsimonligini isbot qildi, «Meteorologiya» kitobini yozdi, vulkanizm, yer osti suvlarining paydo bo'lishi, daryolarning vujudga kelishi kabi tabiiy hodisalarni tushuntirib

berishga urindi. Faylasufning fikriga ko'ra, Yer Olamning qo'zg'almas markazi edi, hatto Filolay (miloddan oldingi V asr) Yerning markaziy olov atrofida aylanishi haqida gapirdi, Dristrax (miloddan oldingi III asr) esa Yerning Quyosh atrofida va o'z o'qi atrofida aylanishi haqida ishonch bilan yozgan bo'lsa ham, Aristotelning fikrini Kopernik rad eta oldi va o'zining Geliosentrik nazariyasini ommaga ma'lum qildi.

XVII asrda fan rivojlanishi munosabati bilan Yerning shakli va o'lchamlari haqida ma'lumotlarning yetarli emasligi ma'lum bo'lib qoldi.

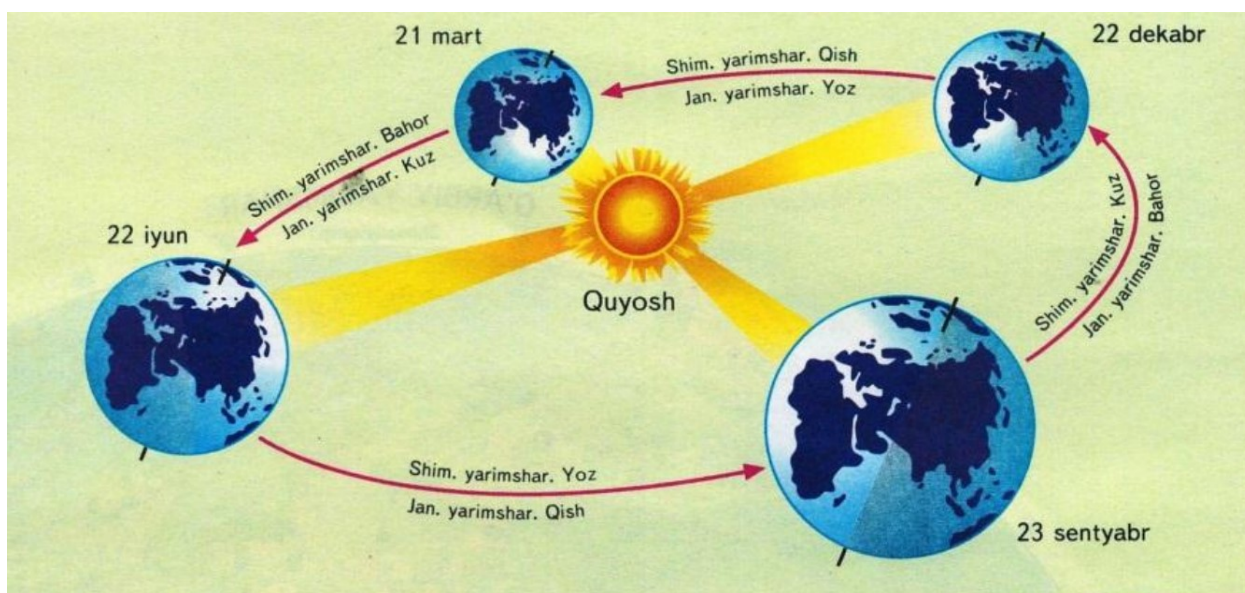
1672 yilda Parijdan Kayennaga soat olib borilgan. Bu soat mayatnigining uzunligi Parijda sekundni uradigan uzunlikda ishlangan. Ekvatorda bu soat kuniga 2 minutu 28 sekund orqada qolgan va mayatnikni 2,8 mm ga qisqartirishga to'g'ri kelgan. Nyuton bilan Gyuygens bu hodisaga yer yuzasining quyi geografik kengliklarda o'rta va yuqori kengliklardagiga qaraganda planeta markazidan uzoqligi, shuningdek, markazdan qochma kuchning oshishi natijasida ekvatorida og'irlik kuchining kamayishini sabab qilib ko'rsatishdi. Nyuton Yer qutblari siqiq, ya'ni uning yuzasi qutblar yaqinida yassi, ekvatorida esa qabariq degan fikrni aytdi va buning sababi Yerning o'z o'qi atrofida aylanishini ekanligini ko'rsatdi. [1].

Yerning Quyosh atrofida aylanishi -yilni hosil qiladi. Lekin yil faqat vaqt hisobi birligigina bo'lib qolmay, aksar tabiiy hodisalarning fasliy o'zgarishi sikli ham hisoblanadi. Quyosh nuri Yerning sharsimon yuzasiga turli geografik kengliklarda turlicha burchak ostida tushadi va buning asosida issiqlik mintaqalari paydo bo'ladi.

Yer Quyosh atrofida 365 kun 6 soat 9 minut 9 sekundda to'liq aylanib chiqadi.

Yillik harakat davomida Yer o'qi holati o'zgarmaydi, ya'ni doim o'ziga o'zi parallel bo'ladi. Yer orbita tekisligiga nisbatan $66^{\circ} 33' 15''$ og'gan o'q atrofida aylanadi. Yerning Quyoshga nisbatan turli tomonda bo'lishi sababli yilning turli fasllarida janubiy va shimoliy yarim sharlarning yoritilishi va isitilishining o'zgarishiga sabab bo'ladi.

21 mart va 23 sentyabrda Yer o'qining qiyaligi Quyoshga nisbatan neytral bo'ladi. 22 iyunda Yer o'qining shimoliy qismi Quyoshga enkaygan bo'ladi. Shimoliy qutb doirasi ichidagi hududlarda Quyosh gorizontda aylanib yuradi botmaydi, janubiy Qutb doirasi esa yoritilmaydi. 22 dekabrda Quyosh nurlari janubiy tropikka tik tushadi. Shuning ushun shimoliy qutb doirasi ichidagi hududlar yoritilmaydi. (1-rasm.)



1-rasm. Yerning quyosh atrofida yillik aylanishi.

Yer sharining Quyosh atrofida aylanishi oqibatida Quyoshning ufqdan balandligi kengliklarda turlicha bo'ladi.

Quyosh radiatsiyasining eng muhim omili bu-issiqligi (energiyasi) va yoritib turish davri. O'rta Osiyo o'lkasining eng shimoliy chekka qismida Quyosh yozda 60° , qishda 13° burchak hosil qilib tushsa, eng janubiy qismida esa yozda 79° , qishda 32° burchak hosil qilib tushadi. Quyoshning yoritish davri o'lka hududining hamma qismida bir xil bo'lmasdan shimoldan janubga ortib boradi. Quyosh o'lkaning shimoliy qismini (Kustanayda 2050 soat, Astanada 2102 soat) yiliga 2000—2100 soat, O'rta qismini (Jez-Qazganda — 2683 soat, Shimkentda — 2892 soat) 2700—2800 soat, janubiy qismini esa (Termizda — 3059 soat) 3000 soat yoritib turadi. Binobarin, Quyosh yoritadigan davrning uzoqligi bo'yicha O'rta Osiyo shimoliy yarimshardagi eng serquyosh o'lkalardan biri hisoblanadi. [2]

Jamiyat va iqtisodiyotning barcha sohalari Quyosh radiatsiyasi ta'sirida shakllanadi, rivojlanadi va moslashadi. Ayniqsa tabiat zonalari, tuproqlar, flora va faunaning geografik tarqalishida asosiy omillardan hisoblanadi. O'quv adabiyotlarida Quyoshning ufqdan balandligi va qancha burchak hosil qilib nur sochishini aniqlash ifodalari yilning 4 ta davri (teng kunliklar, 22 iyun, 22 dekabr) misolida qisman yoritilgan.

1-ish. Quyoshning turli kengliklarda ufqdan balandligi **Teng kunliklarda** tush vaqtida (h) quyidagi ifoda bilan aniqlanadi:

$$h = 90^\circ - \varphi$$

bu yerda: h =Quyoshning ufqdan balandligi, φ = joy yoki nuqtaning geografik kengligi

Masalan:

1. Andijonda ($\varphi -40^\circ30'$) 21 mart va 23 sentyabrda tush vaqtida Quyosh $90^\circ - 40^\circ30' = 49^\circ30'$ balandlikda turadi.

2. Berlinda ($\varphi -52^{\circ}31'$) yoki Singapurda ($\varphi -1^{\circ}18'$) quyoshning ufqdan balandligi: mos ravishda $90^{\circ}-52^{\circ}31'=38^{\circ}29'$ va $90^{\circ}-1^{\circ}18'=88^{\circ}42'$ bo'ladi.

2-ish. Yarim sharlarda Yoz Quyosh mazkur yarim sharning tropigi ustida turgan vaqtda, 22 iyun kuni uning tush vaqtidagi balandligi $23^{\circ}27'$ ga ortadi, shu sababli ifoda:

$$h = 90^{\circ}-\varphi+23^{\circ}27'$$

bo'ladi.

bu yerda: h =Quyoshning ufqdan balandligi, φ = joy yoki nuqtaning geografik kengligi.

Masalan: Andijonda 22 iyun kuni Quyoshning tush vaqtida ufqdan balandligi aniqlaymiz.

$90^{\circ}-40^{\circ}30'+23^{\circ}27' = 72^{\circ} 53'$ ga, taqriban 73° teng bo'ladi.

Berlinda ($\varphi -52^{\circ}31'$) yoki Singapurda ($\varphi -1^{\circ}18'$) 22 iyun kuni quyoshning ufqdan balandligi:

Berlin uchun: $90^{\circ}-52^{\circ}31'+23^{\circ}27'=60^{\circ}56'$

Singapur uchun: $90^{\circ}-1^{\circ}18'+23^{\circ}27'=112^{\circ}09'$ bu yerda Singapur shimoliy yarim sharda joylashgan va Quyosh undanda shimolda turib nur sochayotganligi ma'lum bo'ladi. Aniqlik kiritish uchun qiyalikni shimoldan olsak u holda $180^{\circ}-112^{\circ}09'=67^{\circ}51'$ burchakga teng bo'ladi.

3-ish. Yarim sharlarda Qishda Quyosh narigi yarim sharga o'tib ketganda (masalan, shimoliy yarim shar qishida-janubiy yarim sharga o'tganda) Quyosh balandligi kamayadi va uni $23^{\circ}27'$ qisqartirish zarur bo'ladi, bunda ifoda

$$h = 90^{\circ}-(\varphi+23^{\circ}27')$$

bo'ladi.

bu yerda: h =Quyoshning ufqdan balandligi, φ = joy yoki nuqtaning geografik kengligi.

Yuqorida keltirilgan geografik ob'ektlar misolida ko'rib chiqamiz.

Andijonda 22 dekabr kuni Quyosh ufqdan qanday burchak bilan balandda bo'ladi?

$90^{\circ}-(40^{\circ}30'+23^{\circ}27') = 26^{\circ} 03'$

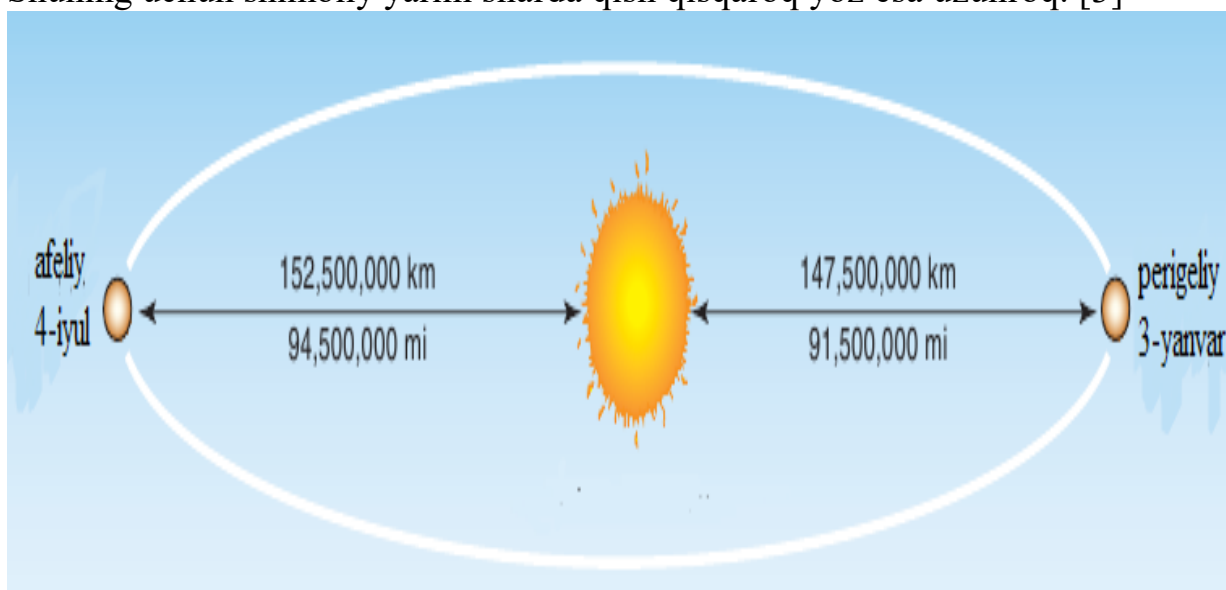
Berlinda ($\varphi -52^{\circ}31'$) yoki Singapurda ($\varphi -1^{\circ}18'$) 22 dekabr kuni quyoshning ufqdan balandligi:

Berlin uchun: $90^{\circ}-(52^{\circ}31'+23^{\circ}27')=24^{\circ}02'$

Singapur uchun: $90^{\circ}-(1^{\circ}18'+23^{\circ}27')=65^{\circ}15'$ yechimga ega bo'ladi.

Yer Quyosh atrofida 365,242 sutkada to'liq bir marta aylanadi va bu 1 yil deyiladi. Quyosh nur sochishining ufqdan balandligini yilning boshqa vaqtlarida ham aniqlash zarurati tug'ilganda qanday amallar bajariladi? Bu muammoga quyida javob topamiz.

Yer Quyosh atrofini 365 kun, 6soat, 9 min, 9 sek.da to'la bir marta aylanib chiqadi. Yerning yillik aylanma harakati (orbitasi) ellips shaklga ega, ellipsning bitta fokusida Quyosh turadi. Shuning uchun Quyosh bilan Yer o'rtasidagi masofa doimo o'zgarib turadi. Ular o'rtasidagi eng qisqa masofa (perigeliy) 3-yanvarda 147 mln. km. bo'ladi. Ular o'rtasidagi eng uzun masofa esa (afeliy) 5-iyunda 152 mln.km. bo'ladi.(2-rasm) Yer orbitasining uzunligi 940 mln.km. Bu masofani Yer soatiga 107 ming km. yoki sekundiga 29,8 km. tezlikda bosib o'tadi.Afeliyda ya'ni Yer Quyoshdan uzoqlashganda uning tezligi kamayadi va sekundiga 29,3 km.ni tashkil qiladi. Perigeliyda, ya'ni Yer Quyoshga yaqinlashganda uning tezligi ortadi va sekundi-ga 30,3 km. ni tashkil qiladi. Shuning uchun shimoliy yarim sharda qish qisqaroq yoz esa uzunroq. [3]



2-rasm Yer va Quyosh o'rtasidagi masofa.

22 dekabrda, ya'ni qishki Quyosh turishi kunida Quyosh nurlari janubiy tropikka tik tushadi, shimoliy qutbiy doiradan shimoldagi qutbiy o'lkalar yoritilmaydi, janubiy qutbiy doirada va undan janubda qutbgacha bo'lgan joylarda Quyosh butun kun davomida gorizontdan yuqorida bo'ladi. Bu holat-bahorgi kun-tun tengligi kuni-21 martgacha davom etadi.

Demak, Quyosh ufqda $23^{\circ}27'$ harakatlanish uchun o'rtacha 91 kun vaqt kerak bo'lyapti yoki bir sutkada $23^{\circ}27' \div 92 = 0.255^{\circ}$ harakat qilmoqda ekan. Shundan kelib chiqib 4-ishda yuqorida berilgan *“Quyosh nur sochishining ufqdan balanligini yilning boshqa vaqtlarida ham aniqlash zarurati tug'ilganda qanday amallar bajariladi?”* savoliga javob beramiz.

4-ish. Masalani shimoliy yarim sharda joylashgan nuqtalar kesimida talqin qilamiz. Qishki va Yozgi Quyosh turish vaqtida foydalanganimiz ifodalardan chiqib, yilning dekabr-iyun oraliq davri uchun:

$$h = 90^{\circ} - (\varphi + 23^{\circ}27') + (0.255 \times d)$$

Iyun-dekabr oraliq davri uchun:

$$h = 90^{\circ} - \varphi + 23^{\circ}27' - (0.255 \times d)$$

ifodalarni tavsiya etamiz.

bu yerda: h =Quyoshning ufqdan balanligi; φ = joy yoki nuqtaning geografik kengligi; **0.255**- Quyoshning ufq tekisligiga nisbatan burchak harakati; d -kunlar soni

Masalan: Andijonda 15 yanvar yoki 15 may kunida Quyosh ufqdan qancha burchakda nur sochadi?

Yechim: so'ralayotgan davr dekabr-iyun oralig'ida bo'lgani uchun:

1) 22 dekabrda 15 yanvargacha 24 kun bor

$$h = 90^\circ - (\varphi + 23^\circ 27') + (0.255 \times d) = 90^\circ - (40^\circ 30' + 23^\circ 27') + (0.255 \times 24) = 90^\circ - 63^\circ 57' + 6,12 = 32^\circ 15'$$

2) 22 dekabrda 15 yanvargacha 144 kun bor

$$h = 90^\circ - (\varphi + 23^\circ 27') + (0.255 \times d) = 90^\circ - (40^\circ 30' + 23^\circ 27') + (0.255 \times 144) = 90^\circ - 63^\circ 57' + 36,72 = 62^\circ 45'$$

Javob: Andijonda Quyosh ufqdan 15 yanvar kuni $32^\circ 03'$, 15 may kuni $62^\circ 03'$ burchak bilan nur sochadi.

2-misol: Andijonda 1 sentyabr va 20 oktyabr kunlari Quyosh ufqdan qancha burchakda nur sochadi?

1) 22 iyundan 1 sentyabrgacha 70 kun bor.

$$h = 90^\circ - \varphi + 23^\circ 27' - (0.255 \times d) = 90^\circ - 40^\circ 30' + 23^\circ 27' - (0.255 \times 70) = 55^\circ 08'$$

2) 22 iyundan 20 oktyabrgacha 120 kun bor.

$$h = 90^\circ - \varphi + 23^\circ 27' - (0.255 \times d) = 90^\circ - 40^\circ 30' + 23^\circ 27' - (0.255 \times 120) = 42^\circ 21'$$

Javob: Andijonda Quyosh ufqdan 1 sentyabr kuni $55^\circ 08'$, 20 oktyabr kuni $42^\circ 21'$ burchak bilan nur sochadi.

Geografiya va geometriya, matematika fanlari o'rtasidagi aloqadorlik zahirida tayyorlangan maqola o'quvchini fanlarga bo'lgan qiziqishlarni yanada oshirishga xisssa qo'shadi. Geografiya fani mukammal fan sifatida fanni o'rganish-o'zlashtirish uchun yo'ldosh fanlarga ham e'tibor berish lozimligini ifodalaydi. Geografiya darslarida bu kabi masalalarni yechimini topish orqali talaba va o'quvchilarda ko'nikma va malaka shakllanadi. Ayniqsa iqtidorli o'quvchilarni tarbiyalashda biz tavsiya etayotgan usullardan foydalanish maqsadga muvofiq.

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PECULIARITIES OF PEDAGOGICAL ACTIVITY IN THE HIGHER EDUCATION SYSTEM

Abstract: *This article discusses the specific features of pedagogical activity in the higher education system. The author says that pedagogical activity in the higher education system requires a lot of preparation and experience. A pedagogue who meets the requirements of the times must be able to use interactive methods, connect life and science, and use new technologies.*

Key words: *pedagogical activity, experience, interactive methods, modern pedagogue, science, knowledge*

The higher education system plays an important role in the scientific, social and economic development of society. Pedagogical activity is an integral part of this process and ensures the learning process of students. However, the modern educational process includes a number of problems. This article analyzes current problems of pedagogical activity in higher education.

Improving the quality of education in higher education is one of the most urgent problems today. In order to improve the quality of education, teachers need to undergo continuous professional development, acquire modern pedagogical technologies and methods. The use of interactive teaching methods that meet the needs of students in the educational process improves the quality of education.

The problem of introducing innovative educational methods in higher education is urgent. Since many teachers stick to traditional teaching methods, innovative teaching methods are rarely used. For example, problem-solving education, project-based education, and teamwork methods help develop analytical thinking among students.

The relationship between the teacher and the student is an important component of the educational process. Problems in these relationships often reduce the effectiveness of the educational process. The interaction of teachers with students should be open and based on cooperation. This helps students to form a wide range of ideas and express themselves freely.

One of the important problems in higher education is educational programs and curricula. Curriculum must meet the needs of modern students and develop their skills. Programs should be oriented to modern knowledge and practical skills. Also, educational plans should include theoretical knowledge as well as practical skills.

Modern digital technologies are creating new opportunities in higher education. However, there are specific difficulties in using them effectively in the educational process. It is important for teachers to acquire digital technologies,

introduce them to their pedagogical activities and involve students in this process. At the same time, students' digital literacy should be at a high level.

Encouraging students to study in higher education is one of the urgent problems. Student motivation determines the effectiveness of the learning process. Teachers need to motivate students through interesting reading materials, practical exercises and success stories. This increases self-awareness and preparation for future professional activity among students.

Taking into account the changing nature of the modern world, higher education institutions should adapt to the changing social environment. Pedagogical activities include responding to social requests and forming social responsibility for students. Students should be ready to contribute to social changes in society through their activities.

Pedagogical activity in higher education includes a number of actual problems. Aspects such as improving the quality of education, introducing innovative methods, relationships between teachers and students, educational programs, digital technologies, student motivation and adaptation to a changing social environment determine the effectiveness of the higher education process. By solving these problems, there is an opportunity to make the educational process more effective and qualitative. The future success of the higher education system depends on so many aspects.

Research object and applied methods.

The topic of current problems of pedagogical activity in higher education is very important and comprehensive. Within this topic, we will analyze the research object, subject and methods.

Processes, systems and their interactions related to current problems of pedagogical activity are the object of our research. This includes:

- Educational processes in the higher education system.
- Relations between students and teachers.
- Criteria and methods for evaluating the quality of education.
- Teaching methods and innovative pedagogical technologies.
- Problems arising in the process of education, for example, motivation, didactic strategies, the impact of globalization, etc.

Concrete issues and problems that are studied in depth in the process as a subject of research. For example:

- Student satisfaction and academic success in higher education.
- Professional development of teachers and their impact on the educational process.
- Use of innovative technologies to improve the quality of education.
- Pedagogical procedures and their place in the educational process.
- Cooperation and exchange of experience between higher education institutions.

Methods such as analysis and synthesis, comparative analysis were used in the research.

Pedagogical activity in higher education is an important process that ensures the intellectual development of society. This process should be carried out on the basis of effective pedagogical approaches and should be focused on solving current problems. Mutual decision-making between teachers and students and the use of innovative methods are the main factors that help to improve the quality of education. By improving and improving the quality of this pedagogical activity in the higher education system, we can successfully prepare the next generation. Successful pedagogical activity ensures effective communication between students and teachers. Communication and cooperation increase the effectiveness of the educational process.

In general, pedagogical activity in higher education is necessary to organize the educational process, to control teaching and upbringing, as well as to prepare students based on modern requirements and requirements. The development of effective communication and cooperation between teachers and students, as well as the use of news, will help to improve the quality of education.

Summary. Training of high-potential graduates in higher education today is an integral part of national and global socio-economic development. Based on the above, it can be concluded that:

- First, it is necessary to strengthen the connection between education and production in higher education. It is important to strengthen cooperation between schools and industrial enterprises, to provide students with internship opportunities, and to develop educational programs suitable for the needs of employers.
- Secondly, the issues of introducing modern pedagogical approaches and innovative technologies are relevant. It is necessary to develop critical and creative thinking skills by encouraging students to express their opinions and communicate by using advanced methodologies in the teaching process.
- Thirdly, it is necessary to improve the education quality assessment system and pay attention to the professional development of teachers. It is possible to increase the quality of the educational process by improving the qualifications of teachers and updating their pedagogical skills.

In short, the training of high-potential higher education graduates is closely related to solving current problems. By improving all aspects of the education system, establishing effective communication between students and teachers, using modern technologies and improving skills, we will achieve the training of highly qualified specialists who will make a worthy contribution to national and global development.

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INVESTITSION MUHITNI SHAKLLANTIRISHDA KAPITAL QO'YILMALAR HISOBINI TO'G'RI TASHKIL ETISHNING AHAMIYATI

***Annotatsiya:** Ushbu maqolada korxonalarda investitsion muhitni shakllantirishda kapital qo'yilmalar hisobini to'g'ri tashkil etishning ahamiyati, buxgalteriya hisobi milliy standartlari hamda xalqaro standartlar asosida kapital qo'yilmalar hisobini yuritishdagi alohida xususiyatlari ochib berilgan. Xususan kapital qo'yilmalarni, investitsion mulkni, nomoddiy aktivlarni yaratish bilan bog'liq xarajatlarni mohiyati yoritilgan.*

***Kalit so'zlar:** investitsiya, kapital qo'yilma, asosiy vositalar, nomoddiy aktiv, biologik aktiv, investitsion mulk, asosiy vositalarni xarid qilish, parvarishlash, nomoddiy aktivlarni yaratish, uskunalarni o'rnatish.*

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THE IMPORTANCE OF CORRECT ORGANIZATION OF ACCOUNTING OF CAPITAL INVESTMENTS IN THE FORMATION OF THE INVESTMENT ENVIRONMENT

***Annotation:** This article reveals the importance of the correct organization of accounting for capital investments in the formation of the investment environment at enterprises, the features of accounting for capital investments based on national accounting standards and international standards. In particular, the nature of expenses associated with the creation of capital investments, investment real estate and intangible assets is highlighted*

***Key words:** investments, capital investments, fixed assets, intangible assets, biological assets, investment real estate, acquisition of fixed assets, maintenance, creation of intangible assets, installation of equipment.*

Kirish. Bozor munosabatlarining mukammallashuvi, tarmoqlar iqtisodiyotining jadal rivojlanishi va uning samaradorligini ta'minlashda investitsiyalar katta iqtisodiy ahamiyatga ega. Bugungi kunda investitsiya larni bozor iqtisodiyotiga moslashtirish va investitsion faoliyatni boshqarish o'zgacha yondashishlarni talab etmoqda. Chunki, xo'jalik yuritishning zamonaviy yo'lini tanlash investitsion siyosatni ham tubdan o'zgartirishni talab qiladi. Chet el investitsiyalarini jalb qilish davlat siyosatida muhim vazifalardan biri ekanligi shubhasiz.

O'zbekistonda bozor munosabatlarining shakllanishi va rivojlanishi iqtisodiy tarmoqlarining barcha sohalari va yo'nalishlarida iqtisodiy erkinlikni ta'minlashni talab etadi. Bu esa investitsion faoliyat rivojlanishi bilan chambarchas bog'liqdir.

Yurtboshimiz ta'kidlaganlaridek, "Bizning asosiy maqsadimiz – O'zbekistonni xorijiy investorlar uchun ishonchli va uzoq muddatli hamkorga aylantirishdir." [2]

Bozor munosabatlarining rivojlanib borishi, uni tashkil etuvchi subyektlar iqtisodiy faoliyatlari moddiy bazasining rivojlanishiga bog'liq, chunki moddiy resurslardan samarali foydalanish har qanday iqtisodiy o'sishning sharti va bosh omili hisoblanadi.

O'tkazilayotgan islohotlar natijasida mazkur muammoning yechimi sifatida "yirik davlat korxonalarida moliyaviy hisobot tuzish va audit o'tkazishda xalqaro standartlarni joriy qilish"[1] kabi muhim vazifalar belgilab qo'yildi. Korxonalar faoliyatida kapital qo'yimlarni to'g'ri hisobga olish, dastlabki xujjatlashtirish va iqtisodiy samaradorligini baholash, ularni tegishli obyektlar o'rtasida aniq taqsimlanganligi hamda maqsadli sarflanganligini tekshirishda ko'pgina muammolar mavjudligini ko'rsatmoqda.

Kapital qo'yimlarni hisobga olishning amaldagi tartibi sarflangan kapital xarajatlarni to'liq va ishonchli aks ettirish, kapital qo'yimlar bilan bog'liq mablag'larni aniq maqsadga yo'naltirish, qurilish ishlarini moliyalashtirishda mablag'lar taqchilligini bartaraf etish hamda qurilishi tugallangan obyektlarni foydalanishga o'z vaqtida topshirilishini ta'minlash, shuningdek axborotdan foydalanuvchilarga ma'lumotlarni aniq va o'z vaqtida yetkazish imkonini bermaydi.

Shuningdek, respublikamizda bu masalalar buxgalteriya hisobining xalqaro standartlari va boshqa meyoriy hujjatlar talablari darajasida ilmiy jihatdan iqtisodchi olimlar tomonidan to'liq hal etilmagan hamda bu boradagi muammolarning zamonaviy yechimlarini batafsil qamrab olmaydi.

Iqtisodiyot tarmoqlarida iqtisodiy islohotlarni bosqichma-bosqich amalga oshirish jarayoni jahon tajribalari asosida, respublikamizning milliy xususiyatlarini inobatga olgan holda, iqtisodiyotni rivojlantirish modelini yaratish turli xil mulkchilik va xo'jalik shakllarida faoliyat yuritayotgan jamoa, ijara, shirkat, aksiyadorlik jamiyatlarida buxgalteriya, ayniqsa xarajatlarining tarkibini belgilash, ularning hisobini va iqtisodiy tahlilini tashkil etish va

takomillashtirish
muhim vazifalar qo'yilmoqda.

kabi

Mavzuga oid adabiyotlar tahlili. Ta'kidlash joizki, keyingi vaqtlarda Rossiyalik iqtisodchi olimlar olim A.D.Sheremetning [4] tadqiqotlarida kapital qo'yilmalar hisobi hamda auditni mustaqil fan sifatida tan olish, uning predmeti va obyektlarini aniqlashtirish va fanning yangi qirralarini tadqiq etish dolzarb deb qaralmoqda. Mazkur masalada yana bir iqtisodchi olim V.I.Podolskiy[5] esa, o'z tadqiqotlarida A.D.Sheremet[4] shakllantirgan xulosalarga asoslangan holda kapital qo'yilmalar hisobi hamda audit nazariyasining bir qator qoidalarini yanada rivojlantirgan.

Mamlakatimiz iqtisodchi olimlari tomonidan bu masalalar yaratilayotgan darslik, monografiya va o'quv qo'llanmalar, shuningdek, e'lon qilinayotgan ilmiy maqola va tezislarda qisman o'rganilgan. Bu borada, M.M.Tulaxodjayevaning ta'rifiga ko'ra "korxona o'zini modernizatsiya qilishga investitsiya qilayotgan mablag'lar kapitalizatsiya xarajatlari yoki kapital qo'yilmalar deb ataladi." [6]. Yana bir iqtisodchi olim, professor H.N.Musayevning ta'kidlashicha: "iqtisodiyotda kapital qo'yilmalar deganda asosiy vositalarni yangilash bilan bog'lik bo'lgan xarajatlar tushuniladi.

Hozirgi davrda mamlakatimizda kapital qo'yilmalar asosiy vositalarga qilinadigan investitsiyalar shaklida amalga oshiriladi." [7].

R.D.Dusmuratovning fikriga ko'ra "iqtisodiyotda kapital qo'yilmalar deganda asosiy vositalarni yangilash bilan bog'liq bo'lgan xarajatlar tushiniladi. Hozirgi davrda mamlakatimizda kapital qo'yilmalar asosiy vositalarga qilinadigan investitsiyalar shaklida amalga oshiriladi" [8].

Ta'kidlash joizki, yuqoridagi tadqiqotlarda mavzuga oid umumiy qarashlar keltirilgan bo'lsada, biroq kapital qo'yilmalarni xarajat sifatida uning mohiyatini ochib berish va uning metodologik masalalari alohida ilmiy tadqiqot obyekti va yaxlit tizim sifatida tadqiq qilinmagan. Bu holat mazkur mavzuda kompleks ilmiy izlanishlar olib borishni taqozo etmoqda.

Tadqiqot metodologiyasi. Ushbu maqolada xorijiy va mahalliy olimlarning ilmiy ishlari, ilmiy monografiyalari, o'quv qo'llanmalari va maqolalarini tahlil qilish, statistik tahlillari, jadvallarni analitik taqqoslash, guruhlash, miqdor va sifat ko'rsatikichlarni hisoblash, ularni bir-biri bilan solishtirish kabi uslublardan foydalanildi.

Tahlil va natijalar. Xo'jalik yurituvchi subyektning moliyaviy hisoboti yuzasidan xulosa berishda auditorlar o'zlarining shaxsiy, haqqoniy va mutaxassisligi bo'yicha yuqori darajadagi bilimlariga tayanishlari lozim, zero auditorlar tomonidan xo'jalik subyektining moliyaviy hisobotlari to'g'risida berilgan beg'araz xulosadan mulk egalari, investorlar, kreditorlar, banklar aksiyalarni sotib olishda va sotishda, kreditlar va qarzlar berish to'g'risida qarorlar qabul qilishda foydalanadilar.

Shuningdek, audit rejasida kapital qo'yilmalarni tarkibi, ularni shakllantirish manbalari va korxonada kapital qo'yilmalar bo'yicha ichki nazorat

tizimining samaradorligi kabi masalalar aks ettiriladi. Bu masalalarni o'rganishda korxona hisob siyosati va kapital qo'yimlarni shakllantirishga doir hujjatlar, qurilish tashkilotlari bilan tuzilgan pudrat shartnomalari, qurilish ishlarining bajarilishini tasdiqlovchi hujjatlar ma'lumotlaridan foydalaniladi.

Bozor munosabatlari sharoitida "investitsiyalar", "kapital qo'yimlar" va "oborotdan tashqari aktivlarga qo'yimlar" kabi iqtisodiy atamalar keng qo'llanilmoqda. Aslini olganda, bu atamalar zahirida korxona mulkini qurish, sotib olish, yangilash, ko'paytirish kabi mazmun yotadi. Kapital qo'yimlar tarkibiga asosiy vositalar, tabiiy resurslar va nomoddiy aktivlarni sotib olishdan tashqari asosiy vositalarni o'sishi va ularni yaxshilanishiga sarflanadigan xarajatlar ham kiradi.

O'zbekiston Respublikasi buxgalteriya hisobining 21-sonli standartiga ko'ra kapital qo'yimlarga shunday ta'rif berilgan: Kapital qo'yimlar- "Korxonaning asosiy vositalar va nomoddiy aktivlarga investitsiyalari, shuningdek mahsuldor va ishchi hayvonlarning asosiy podasini tashkil qilish bo'yicha xarajatlardir" [3].

Kapital qo'yimlarni ta'rifi hozirgacha aksariyat iqtisodiy adabiyotlarda asosiy vositalar va nomoddiy qurish, xarid qilish bilan bog'liq xarajatlar deb qaralib kelingan. Shundan kelib chiqib, kapital qo'yimlar hisobini xalqaro standartlar asosida tashkil etish uchun kapital qo'yimlarga ta'rif berishda buxgalteriya hisobini va moliyaviy hisobotning xalqaro standartlar asosida tashkil etishda bizningcha, kapital qo'yimlarni ta'rifi hamda hisobga oluvchi schyotlarni ham tarkibini o'zgartirish zarur.

Kapital qo'yimlar ta'rifi quyidagicha ifodalansa maqsadga muvofiqdir: "Uzoq muddatli aktivlarni qurish, xarid qilish, yaratish (nomoddiy aktivlarni ayrimlari yaratiladi), parvarishlash (bioloik aktivlarni ayrimlari o'simliklar o'stiriladi, hayvonlar boqiladi), shakllantirish (ayrim uzoq muddatli aktivlar-investitsion mulk shakllantiriladi) bilan bog'liq xarajatlar kapital qo'yimlar deyiladi."

Mamlakatimizda iqtisodiy islohotlarni chuqurlashtirish sharoitida korxonalarida kapital qo'yimlar hisobini takomillashtirish dolzarb muammolardan hisoblanadi. Shu munosabat bilan respublikamizda kapital qo'yimlarni hisobga olib boruvchi schyotlarni xorijiy davlatlardagi amaliyot bilan taqqoslash maqsadga muvofiqdir (1-jadval).

Shu nuqtai nazardan amaldagi kapital qo'yimlarni hisoba oluvchi schyotlarni tarkibini quyidagicha shakllantirishni taklif etamiz:

Kapital qo'yilmalar bo'yicha qo'llanilayotgan schyotlarning tavsifi

Schyotlar ning raqami	Schyotlarning nomi	Schyotlar ning raqami	Schyotlarning nomi
Amaldagi		Taklif etilayotgan varianti	
0810	Tugallanmagan qurilish	08-1	Tugallanmagan qurilish
0820	Asosiy vositalarni sotib olish	08-2	Asosiy vositalarni xarid qilish
0830	Nomoddiy aktivlarni sotib olish	08-3	Asosiy vositalarning alohida ob'ektlarini sotib olish
0840	Asosiy podani shakllantirish	08-4	Nomoddiy aktivlarni xarid qilish
0850	Yerni obodonlashtirishga kapital qo'yilmalar	08-5	Nomoddiy aktivlarni yaratish
0860	Uzoq muddatli ijara shart-nomasi bo'yicha olingan asosiy vositalarga	08-6	Biologik aktivlarni shakllantirish
0890	Boshqa kapital qo'yilmalar	08-6-1	Mahsuldor hayvonlarni sotib olish
		08-6-2	Ishchi hayvonlarni sotib olish
		08-6-3	Yosh mahsuldor hayvonlarni parvarishlash
		08-6-4	Yosh ishchi hayvonlarni parvarishlash
		08-6-5	O'simliklarni parvarishlash
		08-7	Investitsion mulk obektlarini shakllantirish
		08-8	Yerni obodonlashtirishga kapital qo'yilmalar
		08-9	Moliyaviy ijara shartnomasi bo'yicha olingan asosiy vositalarga kapital qo'yilmalar
		08-10	Boshqa kapital qo'yilmalar

Schyotlar rejasiga taklif etilayotgan variantdagi yangi schyotlarni kiritilishi kapital qo'yilmalarni kelgusidagi samaradorligini tahlil qilish imkoniyatini kengatiradi. Xususan, asosiy vositalarning alohida ob'ektlarini sotib olish schyotini kiritish orqali katta hajmdagi asosiy vositalar obyektlarini sotib olish xarajatlari agar kelgusida mavjud asosiy vositalar qiymatini oshirsa, ularga qilingan kapital qo'yilmalarni shakllantirish xarajatlarini tahlil qilishda 08-3-“Asosiy vositalarning alohida ob'ektlarini sotib olish” schyotida shakllangan summani ajratib ko'rsatishda ma'lumotlarni aniqlashtirish imkoni yaratiladi. Nomoddiy aktivlarni ayrimlarini xarid qilinsa, ayrimlari yaratiladi, ularni boshlang'ich qiymatini to'g'ri shakllantirish uchun xarid qilingan va yaratilgan

¹ Muallif ishlanmasi

nomoddiy aktivlarga kapital qo'yilmalar schyotlarini alohida aks ettirish muhim ahamiyat kasb etadi. Shuning uchun biz 08-4- «Nomoddiy aktivlarni xarid qilish», 08-5-«Nomoddiy aktivlarni yaratish» schyotlarini taklif etamiz.

Mahsuldor hayvonlarni va ishchi hayvonlarni sotib olish va parvarishlash bilan bog'liq xarajatlarini alohida aks ettirish maqsadga muvofiq. Chunki kelgusida ular asosiy podaga o'tkazilganda ularni boshlang'ich qiymati to'g'ri shakllanishi kerak. Chunki standartlarga ko'ra, ishchi hayvonlarga amortizatsiya hisoblanasa, mahsuldor hayvonlarga hisoblanmaydi. Shuning uun ularni shakllantirish bilan bog'liq xarajatlar 08-6-1- «Mahsuldor hayvonlarni sotib olish», 08-6-2-“ Ishchi hayvonlarni sotib olish”, 08-6-3-“ Yosh mahsuldor hayvonlarni parvarishlash”, 08-6-4-“ Yosh ishchi hayvonlarni parvarishlash” schyotlarida alohida hisobga olinsa ma'lumotlarni tahliliy xususiyati oshadi.

Xulosa va takliflar. Mamlakatimizda iqtisodiy islohotlarni chuqurlashtirish sharoitida korxonalarida kapital qo'yilmalar hisobini takomillashtirish dolzarb muammolardan hisoblanadi. Shu munosabat bilan respublikamizda kapital qo'yilmalarni hisobga olib boruvchi schyotlarni xorijiy davlatlardagi amaliyot bilan taqqoslash maqsadga muvofiqdir.

Kapital qo'yilmalarning hisobini yuritishda boshlang'ich xujjatlarni to'g'ri to'ldirish va ular hisobini aniq yuritish buxgalteriya ishlarining asosini tashkil etadi. Shu bilan birga buxgalteriya hisobining asosiy vazifasi bo'lgan nazorat qilishni kuchaytirish lozim.

Iqtisodiyot tarmoqlaridagi korxonalarda kapital mablag'lardan samaraliroq foydalanish uchun, mablag'larni oqilona sarflash, xarajatlarni qisqartirish, buxgalteriya hisobi hujjatlarini ixchamlashtirish, kapital qo'yilmalar tahlilini takomillashtirish va kapital qo'yilmalar bilan bog'liq xarajalarni hisobga oluvi schyotlarda ma'lumolarni to'g'ri aks ettirish masadida schyotlar rejasiga xalqaro standartlar talablariga javob bera oladigan tarzda analitik schyotlarni kiritishni taklif etamiz.

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BULUTLI TEXNOLOGIYALARDAN FOYDALANISH: ZAMONAVIY BIZNESNING KALITI

Annotatsiya: Bugungi kunda texnologiya va Internet juda tez rivojlanmoqda. Albatta, ularning foydalanuvchilari ham kundan-kunga ko'payib bormoqda. Foydalanuvchi bo'lgan joyda taklif ham bo'ladi, ya'ni talab bo'lgan joyda taklif bo'ladi. Daromadlarini oshirishni istaganlar o'zlari taklif qilishlari kerak. Zamonaviy biznesda texnologiya va Internet yordamida o'z biznesingizni rivojlantirish mumkin. Ushbu maqola bulutli texnologiyalarning kichik biznesga ta'sirini ta'kidlaydi. Ushbu maqolada ekonometrik tahlil asosida bulutli texnologiyalar kichik biznesga qanday ta'sir qilishi ko'rib chiqiladi.

Kalit so'zlar: Bulutli texnologiyalar, kichik biznes, ilovalar, model, innovatsiya, ekonometrik tahlil, korrelyatsion tahlil, elastiklik koeffitsienti, regressiya.

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THE USE OF CLOUD TECHNOLOGIES: THE KEY TO MODERN BUSINESS

Annotation: Today, technology and the Internet are developing very quickly. Of course, their users are also increasing day by day. Where there is a user, there will also be an offer, that is, where there is a demand there will be an offer. Those who want to increase their income should make their own offers. In modern business, it is possible to develop your business using technology and the Internet. This article highlights the impact of cloud technologies on small businesses. This article examines how cloud technologies affect small businesses based on econometric analysis.

Keywords: Cloud technologies, small business, applications, model, innovation, econometric analysis, correlation analysis, elasticity coefficient, regression.

KIRISH

Hozirgi kunda texnologiyalar va internet juda ham jadallik bilan rivojlanmoqda. Albatta ularni foydalanuvchilari ham kundan-kunga ortib bormoqda. Foydalanuvchi bor joyda ya'ni talab bor joyda taklif ham bo'ladi. Daromadini oshirmoqchi bo'lganlar esa o'z takliflarini berishi kerak. Zamonaviy biznesda texnologiyalar va internetdan foydalangan holda o'z biznesini rivojlantirish mumkin.

Bulutli texnologiyalar hayotning deyarli barcha jabhalariga kirib kelmoqda, xoh u ijtimoiy, xoh professional rivojlanish bo'lsin, u internet bo'ylab tarqalgan serverlarda bulutga asoslangan dasturiy ilovalar orqali ishlaydigan tarmoq hisoblari bo'lsin. Bu Internet bo'ylab tarqalgan serverlarda bulutga asoslangan dasturiy ta'minot ilovalari orqali ishlaydigan katta tarmoq hisoblarini ifodalaydi. Kompaniyangizni bulutga o'tkazishni tanlash biznes operatsiyalarining barcha jabhalariga ta'sir qiladigan muhim tanlovdir.

Bozordagi noaniqlik tufayli kompaniyalar an'anaviy ravishda masshtabni kengaytirish bilan kurashadilar. Bulutli hisoblashning kengayishi kompaniyalarga samarali rivojlanish imkonini beradi. Ya'ni undan foydalanish kompaniya uchun oki qo'shimcha saqlash hajmini sotib olmasdan o'z infratuzilmasi va jihozlarini oshirishi mumkin. Korxonalar bugungi zamonaviy raqobat muhitida samaradorlik, mahsuldorlik va umumiy ish faoliyatini oshirish uchun vositalarga muhtoj va bulutli texnologiya kengayishning moslashuvchan vositalarini taklif etadi.

Bulutli texnologiyalar biznesning rivojlanishi uchun quyidagicha imkoniyatlarni beradi: masshtablilik, innovatsiya, tejamkorlik, moslanuvchanlik, sanoatning uzliksiz o'sishi, bir nechta xizmat takliflari va shu kabi qulayliklarni beradi.

ADABIYOTLAR TAHLILI

Ushbu maqolada, ko'plab xorijiy va o'zbek adabiyotlari o'rganildi. Ulardan biri bu C.Lakshmi Devasenaning "Bulutli texnologiyalarning biznes rivojlanishiga ta'sirini o'rganish" nomli maqolasidir. Bu maqolada quyidagilar yoritilgan, bulutli ilovalar kamroq xarajat qiladi, chunki mijoz ularni ishga tushirish uchun barcha apparat va dasturiy ta'minot, jihozlar yoki to'liq texnologiya konfiguratsiyasi va texnik xizmat ko'rsatish uchun to'lov to'lashi shart emas. Cloudni qabul qilish mijozga ko'proq ilovalar, yangi loyihalar va innovatsiyalarni joylashtirishga e'tibor qaratish imkonini beradi. Bulutli hisoblash oddiy g'oya, lekin u har qanday biznesga katta ta'sir ko'rsatishi mumkin.

Preethi Josephina Mudialbaning "Bulut texnologiyasining korxonalarni avtomatlashtirishga ta'siri" maqolasida bulutli texnologiyalarni korxonalarga avtomatlashtirish uchun bir nechta loyihalar o'rganilgan va ko'rib chiqilgan. Maqoladagi loyiha maqsadi, mavjud texnologiyalarni, bulutli serverni va iBeaconni birlashtirish, tashkilotlarda davomatni qabul qilish jarayonini avtomatlashtirishga yordam beradigan mobil ilovani ishlab chiqishdir. Loyiha birinchi qismining maqsadi bulutli serverni o'rnatish bo'lib, u bulutli hisoblash g'oyasini ularni qo'llab-quvvatlaydigan infratuzilmaga egalik qilish va qo'llab-quvvatlash zarurati bilan bog'liq bo'lmagan AT xizmatlari takliflarini tavsiflash usuli sifatida taqdim etadi. Loyiha ikkinchi qismi davomatni qabul qilish jarayonini avtomatlashtirishga yordam beruvchi android asosidagi mobil ilovani ishlab chiqish edi. Avtomatlashtirish nafaqat qo'lda qilingan xatolar va samarasizlik tufayli yuzaga keladigan xarajatlarni kamaytirishga

yordam beradi, balki tashkilot ichida shaffoflikni ta'minlaydi va soxta davomat kabi korruptsiya amaliyotlarning yuzaga kelishiga o'rin qoldirmasdan davomat tizimining ishonchliligini oshiradi. Bundan tashqari, ilova kompaniyaning ro'yxatdan o'tgan a'zolari bo'lmagan shaxslarni aniqlash orqali xavfsizlik tekshiruvini vazifasini ham bajaradi.

Mohsen Attaran va Jeremy Woodslarning “Bulutli hisoblash texnologiyasi: Internetdan foydalangan holda kichik biznes faoliyatini yaxshilash” maqolasi. Ushbu maqola kichik biznes uchun bulutli hisoblash texnologiyasini qabul qilishning uch bosqichini ko'rib chiqadi va bulutli platformani tanlashda e'tiborga olish kerak bo'lgan asosiy omillarni ko'rib chiqadi. Rivojlanayotgan texnologiyalar va tendentsiyalarni, kichik biznes uchun bulutli hisoblash texnologiyasini joriy etishning afzalliklari va kamchiliklari, bulutga asoslangan yechimni qabul qilishda kichik biznes uchun keladigan qiyinchiliklar, bulutli hisoblash texnologiyasini ishlab chiqish va joylashtirish uchun zarur bo'lgan asosiy amalga oshirish bosqichlari, kichik biznesda bulutli hisoblash texnologiyasidan keng tarqalgan foydalanish ko'rib chiqiladi va kichik biznes uchun bulutga asoslangan xizmatlardan foydalanish mumkin bo'lgan vaqtni tejash vositalari ta'kidlanadi.

METADOLOGIYA

Tadqiqot kichik biznes ya'ni o'quv markaz misolida olib borildi. Bu tadqiqot ekonometrik tahlil orqali o'rganiladi. “IDEAL” o'quv markazi 2018 yildan buyon o'z faoliyatini olib bormoqda. O'quv markazda asosan tabiiy va aniq fanlarga ixtisoslashgan kurslar tatbiq etilgan. O'quv markaz yana onlayn kurslarni ham tatbiq etgan. Bu kurslar orqali o'quvchilar uyida o'tirgan holda, internet orqali va bulutli texnologiyalar yordamida o'z darslarini olib boradilar. Quyida bu o'quv markazning daromadi va unga ta'sir etuvchi omillar ko'rib chiqiladi.

Tadqiqot davomida, Y va X ko'rsatkichlarning bog'liqlik zichligi korrelyatsion tahlili, $y = a_0 + a_1x + \varepsilon$ regressiya tenglamaning a_0 va a_1 parametrlari, student t-taqsimoti, elastiklik koeffitsienti, approksimatsiyaning o'rtacha xatoligi, Fisher mezonini va yana bir qancha ishlar olib borildi.

“IDEAL” o'quv markazining daromadini (\$ da) Y deb belgilanib olindi. Unga ta'sir etuvchi omillar X qilib belgilanib olindi.

Yillar	O'quv markazning yillik umumiy daromadi (Y)	O'quv markazning yillik onlayn daromadi (X)
2017	10800	432
2018	16800	1200
2019	21600	4800
2020	25920	23760
2021	33600	14400
2022	50160	21120
2023	63000	30000

Korrelyatsion tahlil

Korrelyatsion tahlil ikkita omil o'rtasidagi (juft bog'liqlikda) hamda natijaviy omillar bilan boshqa ko'p omillar o'rtasidagi (ko'p omilli bog'liqlikda) bog'liqlikning zichligini miqdoriy jihatdan aniqlashda iborat. Korrelyatsiya – bu tasodifiy kattaliklar o'rtasidagi unda tasodifiy kattaliklardan birining o'zgarishi boshqasining matematik kutishi o'zgarishiga olib keluvchi statistic bog'liqlik.²

O'quv markazning onlayn daromadi va yillik daromadi ko'rsatkichlarning bog'liqlik zichligi korrelyatsion tahlil orqali aniqlandi. Korrelyatsion koeffisienti (r_{xy})ni topish uchun quyidagi formulalardan foydalanildi;

$$r_{yx} = \frac{\overline{y\bar{x}} - \bar{y} * \bar{x}}{\sigma_x * \sigma_y}$$

bu yerda:

$$\sigma_x = \sqrt{\frac{\sum(x_i - \bar{x})^2}{n}} \quad \sigma_y = \sqrt{\frac{\sum(y_i - \bar{y})^2}{n}}$$

Yuqoridagi formulalar asosida hisoblanganda, Korrelyatsion koeffisienti (r_{xy})= 0,8605664 hosil bo'ldi. Demak, o'quv markazning yillik onlayn daromadi, yillik umumiy daromadiga to'g'ri va kuchli bog'langan. Empirik tahlil natijasiga asosan o'quv markazning onlayn daromadi ortishi o'quv markazning yillik daromad hajmini sezilar darajada ortishiga olib kelmadi.

Regression tahlil

Regression tahlil bog'liqlikning unda natijaviy omilning o'zgarishibir yoki bir necha omillarning ta'siri bilan shartlangan, natijaviy omilga ta'sir ko'rsatuvchi boshqa barcha omillar ko'pligi esa doimiy va o'rtacha qiymat sifatida qabul qilinadigan tahliliy shaklini aniqlashdan iborat.³

² Sh.I.Mustafakulov, H.N.Sabirov, Ekonometrika I. O'quv qo'llanma.-T.: "Ilm-fan va innovatsiya" 2022, 232 bet.

³ Sh.I.Mustafakulov, H.N.Sabirov, Ekonometrika I. O'quv qo'llanma.-T.: "Ilm-fan va innovatsiya" 2022, 232 bet.

Chiziqli model parametrlarni topish uchun regression bog'lanishdan ya'ni quyidagi formulalardan foydalanildi:

$$a_1 = \frac{\overline{y\bar{x}} - \bar{y} * \bar{x}}{\bar{x}^2 - \bar{x}^2}$$

$$a_0 = \bar{y} - a_1 \bar{x}$$

Ushbu formulalar bo'yicha MS Excel dasturi yordamida ko'rib chiqilganda, $a_1 = 1.371554584$ ga $a_0 = 12943.6811$ ga tengligi aniqlandi.

$$y = a_0 + a_1 x + \varepsilon$$

Yuqoridagi natijalar orqali ekonometrik model hosil qilindi:

$$y = 1.371554584 * x + 12943.6811$$

Demak, o'quv markazning yillik onlayn daromadi 1 birlikka oshsa, o'quv markazning yillik umumiy daromadi 12943.6 ga oshadi. Bu yerda a_1 modelimizning konstantasi hisoblanadi. Agar o'quv markazning yillik onlayn daromadi 0 ga tenglashsa, o'quv markazning yillik umumiy daromadi 12943.6 ga tenglashadi.

Styudent t-taqsimoti

Regressiya tenglamasi parametrlarining statistik ma'nodorliligini baholash Styudent t-kriteriyasi yordamida amalga oshirildi va har bir ko'rsatkich uchun ishonchlik intervallari aniqlash uchun ishlatiladi. Quyidagi formulalar orqali ko'rsatkichlar hisoblandi:

$$t_a = \frac{a}{m_a}; \quad t_b = \frac{b}{m_b}; \quad t_r = \frac{r_{xy}}{m_r}.$$

Parametrlarning tasodifiy xatolari quyidagi formulalar bilan hisoblanadi:

$$m_a = \sqrt{\frac{\sum(y - \widehat{y}_x)^2}{n - 2} * \frac{\sum x^2}{n * \sum(x - \bar{x})^2}} = \sigma_{qol} \sqrt{\frac{\sum x^2}{n * \sum(x - \bar{x})^2}};$$

$$m_b = \sqrt{\frac{\sum(y - \widehat{y}_x)^2 / (n - 2)}{\sum(x - \bar{x})^2}} = \frac{\sigma_{qol}}{\sqrt{\sum(x - \bar{x})^2}};$$

$$m_r = \sqrt{\frac{1 - r^2}{n - 2}}.$$

t-statistikaning haqiqiy t_{haq} va kritik (jadval) t_{jad} qiymatini solishtirib ko'rsatkichlarni qabul qilinadi yoki rad etiladi.

Agar t belgining topilgan asl qiymatlari uning jadval qiymatidan katta bo'lsa (ya'ni $t_a > t_{jadv}$, $t_b > t_{jadv}$, $t_{r_{xy}} > t_{jadv}$) a va b parametrlar statistik ma'nodor hisoblanadi.

Degrees of freedom (ν)	Amount of area in one tail (α)							
	0.0005	0.001	0.005	0.010	0.025	0.050	0.100	0.200
1	636.6192	318.3088	63.65674	31.82052	12.70620	6.313752	3.077684	1.376382
2	31.59905	22.32712	9.924843	6.964557	4.302653	2.919986	1.885618	1.060660
3	12.92398	10.21453	5.840909	4.540703	3.182446	2.353363	1.637744	0.978472
4	8.610302	7.173182	4.604095	3.746947	2.776445	2.131847	1.533206	0.940965
5	6.868827	5.893430	4.032143	3.364930	2.570582	2.015048	1.475884	0.919544
6	5.958816	5.207626	3.707428	3.142668	2.446912	1.943180	1.439756	0.905703
7	5.407883	4.785290	3.499483	2.997952	2.364624	1.894579	1.414924	0.896030
8	5.041305	4.500791	3.355387	2.896459	2.306004	1.859548	1.396815	0.888890
9	4.780913	4.296806	3.249836	2.821438	2.262157	1.833113	1.383029	0.883404
10	4.586894	4.143700	3.169273	2.763769	2.228139	1.812461	1.372184	0.879058
11	4.436979	4.024701	3.105807	2.718079	2.200985	1.795885	1.363430	0.875530
12	4.317791	3.929633	3.054540	2.680998	2.178813	1.782288	1.356217	0.872609
13	4.220832	3.851982	3.012276	2.650309	2.160369	1.770933	1.350171	0.870152
14	4.140454	3.787390	2.976843	2.624494	2.144787	1.761310	1.345030	0.868055
15	4.072765	3.732834	2.946713	2.602480	2.131450	1.753050	1.340606	0.866245
16	4.014996	3.686155	2.920782	2.583487	2.119905	1.745884	1.336757	0.864667
17	3.965126	3.645767	2.898231	2.566934	2.109816	1.739607	1.333379	0.863279

I-rasm. Student t-taqsimoti jadvali

Parametrlarni ishonchliligini tekshirish uchun yuqoridagi student t jadvalidan foydalanildi. Bu yerda 95% aniqlikda hisoblandi. Parametrlar natijasi jadvaldagi 1.894579 dan yuqori bo'lsa ishonchli, aksi bo'lsa ishonchsiz bo'ladi.

$$t_a = 3.778009; t_b = 2.037907; t_{r_{xy}} = 3.778009.$$

Demak, natijalarni t-studentning jadval qiymatiga solishtirilganda ko'rsatkichlar baland bo'lgani uchun ishonchli hisoblanadi va ko'rsatkichlar qabul qilinadi.

Fisher F-kriteriyasi

Regressiya tenglamasining "ma'nodorligini" baholash uchun Fisherning F-kriteriyasidan foydalaniladi. Fisherning F-kriteriyasi quyidagi formula orqali topiladi:

$$F_{haqiqiy} = \frac{r_{xy}^2}{1 - r_{xy}^2} * (n - 2), n \geq 3.$$

Fisherning F-kriteriyasi jadval qiymati – F_{jadv} topiladi. Agar ushbu $F_{haqiqiy} > F_{jadv}$ tengsizlik o'rinli bo'lsa regressiya tenglamasi statistik ma'nodor hisoblanadi. Bu tadqiqotda $F_{haqiqiy} = 14.27335811$ ga teng bo'ldi.

Denominator														
Numerator DF														
DF	1	2	3	4	5	7	10	15	20	30	60	120	500	1000
1	161.45	199.50	215.71	224.58	230.16	236.77	241.88	245.95	248.01	250.10	252.20	253.25	254.06	254.19
2	18.513	19.000	19.164	19.247	19.296	19.353	19.396	19.429	19.446	19.462	19.479	19.487	19.494	19.495
3	10.128	9.5522	9.2766	9.1172	9.0135	8.8867	8.7855	8.7028	8.6602	8.6165	8.5720	8.5493	8.5320	8.5292
4	7.7086	6.9443	6.5915	6.3882	6.2560	6.0942	5.9644	5.8579	5.8026	5.7458	5.6877	5.6580	5.6352	5.6317
5	6.6078	5.7862	5.4095	5.1922	5.0504	4.8759	4.7351	4.6187	4.5582	4.4958	4.4314	4.3985	4.3731	4.3691
7	5.5914	4.7375	4.3469	4.1202	3.9715	3.7871	3.6366	3.5108	3.4445	3.3758	3.3043	3.2675	3.2388	3.2344
10	4.9645	4.1028	3.7082	3.4780	3.3259	3.1354	2.9782	2.8450	2.7741	2.6996	2.6210	2.5801	2.5482	2.5430
15	4.5431	3.6823	3.2874	3.0556	2.9013	2.7066	2.5437	2.4035	2.3275	2.2467	2.1601	2.1141	2.0776	2.0718
20	4.3512	3.4928	3.0983	2.8660	2.7109	2.5140	2.3479	2.2032	2.1241	2.0391	1.9463	1.8962	1.8563	1.8498
30	4.1709	3.3159	2.9223	2.6896	2.5336	2.3343	2.1646	2.0149	1.9317	1.8408	1.7396	1.6835	1.6376	1.6300
60	4.0012	3.1505	2.7581	2.5252	2.3683	2.1666	1.9927	1.8365	1.7480	1.6492	1.5343	1.4672	1.4093	1.3994
120	3.9201	3.0718	2.6802	2.4473	2.2898	2.0868	1.9104	1.7505	1.6587	1.5544	1.4289	1.3519	1.2804	1.2674
500	3.8601	3.0137	2.6227	2.3898	2.2320	2.0278	1.8496	1.6864	1.5917	1.4820	1.3455	1.2552	1.1586	1.1378
1000	3.8508	3.0047	2.6137	2.3808	2.2230	2.0187	1.8402	1.6765	1.5811	1.4705	1.3318	1.2385	1.1342	1.1096

2-rasm. Fisher F-jadvali

Bu tadqiqotda kuzatuvlar soni (n) 7 ga tengligi sababli, $F_{jadv} = 5.5914$ bilan taqqoslanadi. Bunda $F_{haqiqiy} > F_{jadv}$ shart bajarildi. Demak, qurilgan regressiya tenglamasining ma'noga ega ekanligi haqida xulosa qilish mumkin.

Approksimatsiyaning o'rtacha xatoligi

Approksimatsiyaning o'rtacha xatoligi - natijaviy belgini hisoblangan qiymatlarini haqiqiy qiymatlaridan o'rtacha og'ishi.⁴

Tuzilgan modelning sifatini approksimatsiyaning o'rtacha xatoligi formulasi orqali baholanadi. Quyidagi formula orqali aniqlanadi:

$$\bar{A} = \frac{1}{n} \sum \left| \frac{y - \hat{y}_x}{y} \right| * 100\%$$

Natija $\bar{A} = 22.4\%$ ga teng bo'ldi. $\bar{A}$ ning mumkin bo'lgan qiymatlari 12% dan katta bo'lganligi sababli tuzilgan modelning sifat yaxshi emas deb baholanadi.

Elastiklik koeffitsienti

Chiziqli bo'lmagan funksiyalar ichida iqtisodiy tadqiqotlarda eng ko'p foydalanadigan funksiya, bu $y = a * x^b + \varepsilon$ darajali funksiyadir. Bunga sabab, uni chiziqli ko'rinishga keltirish mumkin va undagi "b" parametr aniq iqtisodiy ma'noga ega bo'lib, u *elastiklik koeffitsienti* deb ataladi. "b" koeffitsientning qiymati - omil belgi 1% ga o'zgarganda, natijaviy belgi o'rtacha necha foizga o'zgarishini ko'rsatadi.⁵

Elastiklik koeffitsienti quyidagi formula orqali aniqlanadi:

⁴ I.Habibullayev, A.M.Jumayev, Ekonometrika amaliy mashg'ulot uchun o'quv qo'llanma-T.: "Iqtisod-Moliya" 2020, 176 bet.

⁵ I.Habibullayev, Ekonometrika, darslik-T.: "Iqtisod-Moliya" 2020, 240 bret

$$\bar{\varepsilon} = a_1 \frac{\bar{x}}{\bar{y}}$$

Olib borilayotgan tadqiqot shuni ko'rsatdiki, o'quv markazning onlayn daromadi 1% ga o'sishi, o'quv markazning yillik umumiy daromadini 0.59% ga oshishiga olib keladi. Tadqiqot barcha mezonlardan muvaffaqiyatli o'tdi.

XULOSA

Xulosa qilib shu aytish mumkinki, o'quv markazning yillik onlayn daromadi, o'quv markazning yillik umumiy daromadiga kuchli bog'langan. Ekonometrik modelda ko'rish mumkinki, o'quv markazning yillik onlayn daromadi 1 birlikka oshsa, o'quv markazning yillik umumiy daromadi 12943.6 ga oshishini ko'rsatdi. Bu ekonometrik model shuni anglatadiki, hozirgi kunda kichik biznes egalari ko'proq e'tiborini onlayn xizmatlarga, bulutli texnologiyalarga qaratishi kerakligini, bular yordamida o'z daromadlarini ko'paytirishi mumkin ekanligini yuqoridagi tadqiqotda ko'rib o'tildi. Buning uchun yurtimizda internet bilan ta'minlanganlik darajasi yuqori bo'lishi kerak. Bulutli texnologiyalar yordamida o'quv markazlar o'z onlayn darslarini o'tishi mumkin. Bu kabi dasturlar juda ham ko'p. Misol uchun Google Classroom veb xizmati. Bu xizmat o'qituvchi va talabalar o'rtasida fayllarni almashishni osonlashtiradi, topshiriqlarni qog'ozsiz yaratishni va talabani baholashni osonlashtiradi. Buning yana bir xususiyati talabalar kod yordamida kursga taklif qilinishi mumkin. Bu huddi offline kabi sinflarga bo'linib dars o'tish kabidir. Kurs yaratilganda, tegishli foydalanuvchi Google Drive-diskida alohida papka yaratiladi, unda talaba o'qituvchi tomonidan baholash uchun ishni topshirishi mumkin. Bu xizmat mobil ilovalar iOS va Android qurilmalari uchun mavjud va veb sahifasi orqali ham kirib bimalol foydalanishlari mumkin. Bu xizmatdan hamma foydalana oladi, faqat internet hamda telefon yoki kompyuter bilan ta'minlangan bo'lsa bas. Bu kabi foydali bulutli texnologiyalar yordamida masofalar yo'q bo'ladi. O'quvchilar uyidan chiqmagan holda o'zlariga kerakli bilimlarini o'qituvchilaridan olishadi. Kichik biznes egalari mana shunday texnologiyalarni o'zlarining xizmatlari bilan integratsiya qila olishsa, daromadlariga yaxshi ta'sir etishi mumkin. Shuni aytish mumkinki, bulutli texnologiyalardan foydalanish, zamonaviy biznesning kalitidir.

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ASALARICHILIKDA RAQAMLI TEXNOLOGIYALARNI TRANSFARMATSIYA QILISHNI MOLIYALASHTIRISH MANBALARINI OCHIB BERISH YO‘LLARI

Annotatsiya. Maqolada asalarichilik tarmog‘ida raqamli texnologiyalarni transfarmatsiya qilishni rag‘batlantirishning tashkiliy va iqtisodiy dastklari ifodalangan. Tarmoqda raqamli texnologiyalarni joriy etishni subsidiyalash bo‘yicha takliflar bayon etilgan. Shuningdek, raqamli texnologiyalarni joriy etishni moliyalashtiradigan tuzilmalarni qo‘llab-quvvatlash maqsadida “Asalarichilikda texnologik transfer” jamg‘armasini tashkil etish va uni moliyalashtirish manbaalari ochib berilgan.

Kalit so‘zlar: asalarichilik, raqamlashtirish, rag‘batlantirish, raqamli texnologiya, subsidiya, “Asalarichilikda texnologik transfer”, 3D qurilmalari, sun‘iy yo‘ldosh novigatsiyasi, Big Data.

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WAYS TO FINANCING DIGITAL TRANSFORMATION IN BEEKEEPING

Abstract. The article describes the organizational and economic levers for promoting the transformation of digital technologies in the beekeeping industry. Proposals for subsidizing the implementation of digital technologies in the network are described. Also, in order to support the structures financing the implementation of digital technologies, the organization of the Technological Transfer in Beekeeping fund and the sources of its financing are disclosed.

Keywords: beekeeping, digitalization, stimulation, digital technologies, subsidy, Technological Transfer in Beekeeping, 3D devices, satellite navigation, big data.

Kirish. Rivojlangan davlatlar tajribasi ko‘rsatishicha qishloq xo‘jaligini raqamlashtirish bilan bog‘liq tadbirlar doim davlat nazoratida va qo‘llab-quvvatlash mexanizmlari yordamida amalga oshiriladi. Xususan AQSh, Germaniya, Yaponiya kabi texnologik rivojlangan hamda xususiy sektor ulushi

va xizmat ko'rsatish sifati yuqori bo'lgan davlatlarda ham aynan qishloq xo'jaligi uchun raqamlashtirish masalasi davlatning zimmasiga yuklatilgan.

Asosiy qism. Tadqiqotlarimiz asosida asalarichilikda raqamli texnologiyalarni transformatsiya qilishni rag'batlantirish yo'llari sifatida tashkiliy va iqtisodiy dastaklardan keng foydalanish lozim deb hisoblaymiz. Xususan tashkiliy yo'nalishda quyidagi vazifalarni amalga oshirish maqsadga muvofiq:

- "Aqlli asalari uyalarini"ni tashkil qilish, mamlakatimiz iqlim sharoitlariga moslashtirishga oid tadqiqotlar va tajribalarni olib borish;
- raqamli qurilmalar, masofadan boshqarish vositalardan foydalanishga oid huquqiy asoslarni takomillashtirish, barcha uchun sodda tizim yaratish;
- raqamli qurilmalardan foydalanishni ommalashtirish, targ'ib qilish, tushuntirish ishlarini olib borish maqsadida seminarlarni tashkil etish;
- aqlli qurilmalar bilan jihozlangan asalarichilik xo'jaliklarini o'rmon fondi yerlaridan maqsadli va tartibli foydalanish yo'llarini tashkil etish va boshqalar.

Shuningdek asalarichilikda raqamli texnologiyalarni joriy etishni rag'batlantirishning iqtisodiy yo'nalishlari sifatida quyidagi vazifalarni bajarish lozim deb hisoblaymiz. Jumladan:

- raqamli texnologiyalarni to'liq joriy etgan xo'jaliklar uchun imtiyozli kreditlash tizimini joriy etish, sug'urtalash tizimini takomillashtirish;
- xo'jalik bilan hamkorlikda kooperatsion aloqalar orqali aqlli qurilmalarni ishlab chiqaruvchi korxonalarni moliyaviy qo'llab-quvvatlash;
- jami asalari oilalari sonining ma'lum ulushiga raqamli texnologiyalarni joriy etgan xo'jaliklarni tabaqali subsidiyalash tizimini joriy etish;
- asalarichilikda raqamli texnologiyalarni joriy etishni moliyaviy qo'llab-quvvatlashga ko'maklashuvchi fondlarni tashkil etish va rivojlantirish va boshqalar.

Ushbu tashkiliy va iqtisodiy dastaklarning har birining amaliyotdagi o'rni beqiyos bo'lib, u monografik tadqiqotlarda ham o'zining tasdig'ini topgan. Ayniqsa sug'urtalash, imtiyozli kreditlash, subsidiyalash masalalari hamda sohani moliyalashtiradigan alohida jamg'armalarning shakllanishi o'zining ijobiy ta'sirini ko'rsatishi ta'kidlangan.

Shu bois tadqiqotlarimizda subsidiyalash hamda maxsus jamg'armalarni tashkil etish hamda ularni moliyalashtirish yo'nalishlariga alohida urg'u qaratgan holda ilmiy taliflar asoslangan. Jumladan hududlarda o'tkazilgan so'rovnomalar tahlillari ko'rsatishicha bir asalari xo'jalikda o'rtacha 1 ta pavilion (32 yashik, 64 ta oila) parvarishlanishini e'tiborga olinsa, unda kamida 4 ta yashik (12,5 foizi) doimiy nazoratdagi, raqamli texnologiya bilan jihozlangan bo'lishi talab etiladi. Shundagina asalarilarning kunlik holatini

minimal darajada real vaqt rejimida monitoring qilish imkoniyati mavjud bo'ladi.

Shundan kelib chiqqan holda asalarichilik xo'jaliklari uchun raqamlashtirishga subsidiya ajratishda minimal me'zon belgilanishi taklif etilmoqda. Ushbu me'zonni minimal darajada bajargan hamda uni paviliondagi yashiklar soniga mos ravishda oshirib borishdan manfaatdor bo'lgan xo'jaliklarni tabaqali subsidiyalash tizimini joriy etish maqsadga muvofiq (jadval).

1-jadval

Raqamli texnologiyalarni joriy etgan asalarichilik xo'jaliklarini subsidiyalash tizimi va uning tabaqalari⁶

Subsidiyalash miqdori	Minimal me'zon	Tabaqalashgan holda qo'llanilishi		
		Minimal talabni bajargan	30 foiziga joriy etgan	50 foiziga joriy etgan
BXM ning 5 barobari miqdorida	Jami yashiklar sonining 12,5 foizida raqamli texnologiya joriy etish	1,0	5,0	10,0
Shuningdek mintaqaviy, o'simlik turidan kelib chiqqan holda koeffitsientlar ham joriy etish mumkin				
Tog' va tog' oldi asalarichiligi uchun		1,0	5,0	10,0
Paxtachilik asalarichiligi uchun		1,0	8,0	12,0
Cho'l va yarim cho'l asalarichiligi uchun		1,5	6,5	11,0

Raqamli texnologiyalarni joriy etgan asalarichilik xo'jaliklarini subsidiyalashda 2023 yil holatiga amaliyotdagi bahodan kelib chiqqan holda BXM ning 5 barobari miqdorida subsidiya ajratish taklif etilmoqda.

Ushbu miqdor xo'jalikda mavjud jami yashiklar sonining 30 foizida joriy etgan xo'jaliklar uchun 5 koeffitsientga ko'paytirilishi hamda 50 foizida joriy etilgan bo'lsa 10 koeffitsientda qo'llanilishi maqsadga muvofiq.

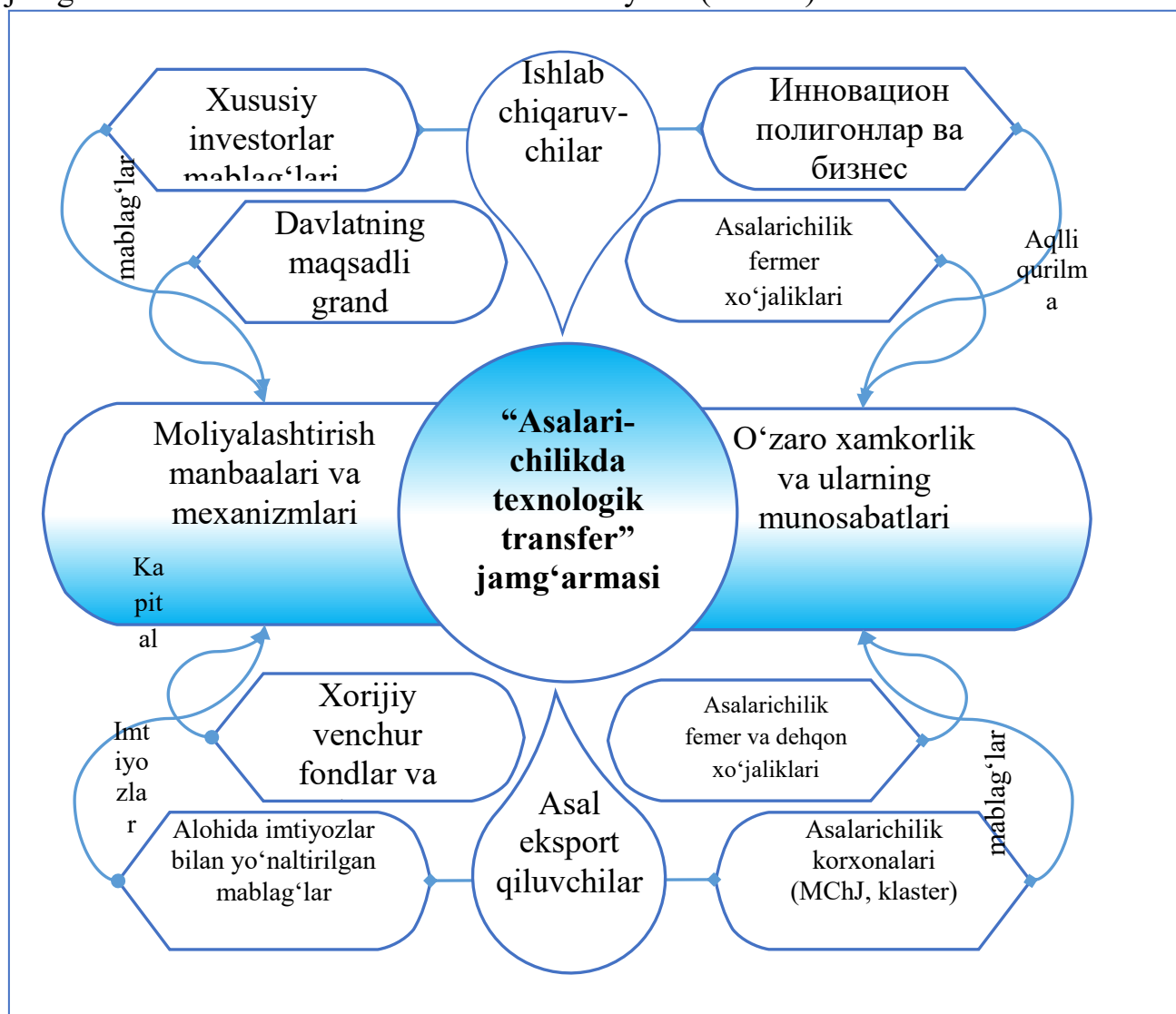
Shu bilan birgalikda ushbu miqdor tog' va tog' oldi asalarichiligi uchun qo'llanilib, kimyoviy preparatlar ta'siri yuqoriligini inobatga olgan holda paxtachilik hududlarida asal yetishtiradigan xo'jaliklar uchun mos ravishda 30 foizga 8 hamda 50 foizda 12 koeffitsientlar taklif etiladi.

Bozor munosabatlari sharoitida xususiy sektorning o'rni oshib borishi tabiiy jarayon bo'lib, davlat tomonidan subsidiyalash bu dastlabki bosqichlarida, xo'jaliklarning oyoqqa turib olishi va yangi texnologiyalarning keng targ'ib qilinishi uchun xizmat qilib, istiqbolda u bozor mexanizmlari yordamida ishlab ketishi lozim bo'ladi.

Buning uchun esa ushbu texnologiyalarni joriy etishni moliyalashtiradigan tuzilmalar, qo'llab-quvvatlaydigan idoralar tashkil etilishi maqsadga muvofiq.

⁶ Muallif tomonidan taklif etilgan

Shuning uchun tadqiqotlarimizda “Asalarichilikda texnologik transfer” jamg‘armasini tashkil etish lozim deb hisoblaymiz (1-rasm).



1-rasm. “Asalarichilikda texnologik transfer” jamg‘armasining takshiliy-iqtisodiy munosabatlari⁷

Ushbu jamg‘armaning maqsadi asalarichilik xo‘jaliklarida zamonaviy raqamli texnologiyalarni joriy etishni moliyaviy qo‘llab-quvvatlash, ularni imtiyozli kreditlar, yangi texnologiyalarning amaliyotga joriy etilishiga ko‘maklashish, xo‘jaliklarning qiziqish va ko‘nikmalarini oshirib borish hisoblanadi.

Ushbu jamg‘arma o‘z faoliyati jarayonida quyidagi vazifalarni bajaradi. Xususan:

- asalarichilik xo‘jaliklarining moddiy-texnik bazasini mustahkamlash, raqamli texnologiyalarni joriy etish, o‘rganish maqsadlari

⁷ Mualliflar tomonidan ishlab chiqilgan.

uchun kredit resurslarini ajratish hamda undan foydalanishni yanada kengaytirish;

- asal yetishtiruvchilarning innovatsion faoliyatini moliyaviy qo'llab-quvvatlash, zamonaviy qurilmalar yaratish, ishlab chiqarish va joriy etishni rag'batlantirish;

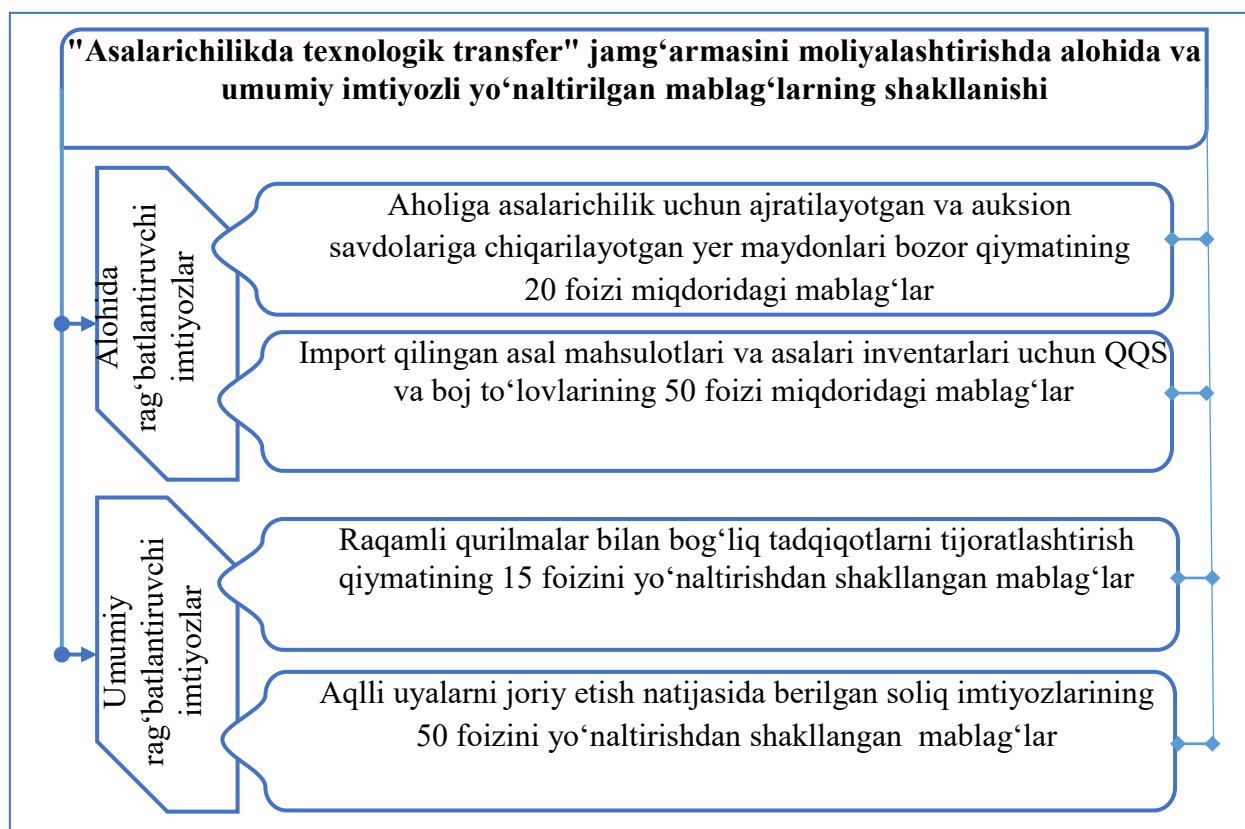
- asalarichilikni rivojlantirishga qaratilgan maqsadli davlat, tarmoq va hududiy dasturlarni, ilmiy-texnik loyihalarni moliyalashtirish, shu bilan birgalikda ushbu tadbirlarni joriy etishda ishtirok etish;

- raqamli texnologiyalarni joriy etishda aylanma mablag'larga muhtoj bo'lgan asal yetishtiruvchilar, qayta ishlovchilar hamda xizmat ko'rsatuvchilar faoliyatiga ko'maklashish;

- asal va asalarichilik mahsulotlarini tashishga mo'ljallangan maxsus avtotransport vositalari, asbob-uskunalar, qurilmalar bilan ta'minlash maqsadlari uchun lizing faoliyatini yo'lga qo'yish, ushbu maqsadlar uchun manfaatdor tomonlar bilan hamkorlik qilishdan iborat.

Ushbu jamg'armaning moliyaviy resurslarini shakllantirishda davlatning maqsadli va donorlik pul mablag'lari bilan birgalikda alohida va umumiy imtiyozlar bilan yo'naltirilgan mablag'larning shakllanishi mumkin bo'lgan manbaalar taklif etiladi (2-rasm).

Unga ko'ra alohida rag'batlantiruvchi imtiyozli mablag'lar sifatida aholiga asalarichilik uchun ajratilayotgan va auksion savdolariga chiqarilayotgan yer maydonlari bozor qiymatining 20 foizi miqdoridagi mablag'lar hamda import qilingan asal mahsulotlari va asalari inventarlari uchun QQS va boj to'lovlarining 50 foizi miqdoridagi mablag'larni yo'naltirish taklif etilmoqda.



2-rasm. "Asalarichilikda texnologik transfer" jamg'armasini moliyalashtirishda alohida imtiyozlar bilan yo'naltirilgan mablag'larning shakllanishi⁸

Shuningdek, umumiy rag'batlantiruvchi imtiyozli mablag'lar sifatida raqamli qurilmalar bilan bog'liq tadqiqotlarni tijoratlashtirish qiymatining 15 foizini yo'naltirishdan shakllangan mablag'lar hamda aqlli uyalarni joriy etish natijasida berilgan soliq imtiyozlarining 50 foizini yo'naltirishdan shakllangan mablag'lardan shakllanishi maqsadga muvofiq.

Xulosa va takliflar. Xulosa qilib aytganda, "Asalarichilikda texnologik transfer" jamg'armasini tashkil etish orqali asalarichilikni raqamlashtirish, aqlli uyalarni joriy etishga xususiy sektorni jalb qilish, sohada olib borilayotgan ilmiy innovatsion loyihalarning yakuniy ishlanmalarini amaliyotga joriy etish ko'lamini kengaytirish, uning tijoratlashish, xo'jaliklarning moddiy texnik va moliyaviy rag'batlarga ega bo'lishiga zamin yaratib berish, provardida esa ijtimoiy (oziq-ovqat xavfsizligi, ilm-fan rivoji, texnologik qurollanish, ko'nikmalarning shakllanishi) hamda iqtisodiy (yuqori foyda, raqobatbardosh bozor segmentiga ega bo'lish, nobutgarchilikni kamaytirish) kabi bir qator samaralarning yuzaga kelishiga xizmat qiladi.

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MATEMATIKA O'QITISHDA IQTISODIY MASALALARNI ISHLABCHIQRISH JARAYONLARIGA TADBIQIY YECHISH

Annotatsiya: Ushbu maqolada iqtisodiyot tarmoqlarida ishlab chiqarish jarayonining omillar ta'sirini matematik statistikaning korrelyatsion koeffitsientlari orqali aniqlash haqida ma'lumotlar keltirilgan.

Kalit so'zlar: Matematik usul, juft va ko'p sonli korrelyatsiya, koeffitsient, tannarx, omil, sarf- xarajat.

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APPLIED SOLUTION OF ECONOMIC PROBLEMS IN PRODUCTION PROCESSES IN MATHEMATICS TEACHING

Annotation: This article provides information on determining the influence of factors of the production process in the economy through the correlation coefficients of mathematical statistics.

Keywords: Mathematical method, even and multiple correlations, coefficient, cost, factor, cost.

Mamlakatimizda matematika 2020-yildan ilm-fanni rivojlantirishning ustuvor yo'nalishlaridan biri sifatida belgilangan. O'tgan davr ichida matematika ilm-fani va ta'limini yangi sifat bosqichiga olib chiqishga qaratilgan qator tizimli ishlar amalga oshirilgan bo'lsada, sohada yechimini topmagan qator masalalarning mavjudligi, ayniqsa, iqtisodiyot tarmoqlarining matematik yechimini talab etadigan muammolar va ularning jarayonlarini matematik modellashirish ehtiyojlari asosida ilmiy-tadqiqot ishlarining ishlab chiqilishi hozirgi paytda dolzarbligicha qolayapti.

Ana shunday amaliy yechimini kutayotgan masalalardan biri korxonada ishlab chiqarish xarajatlarini optimallashtirish masalasidir. Korxona faoliyati uchun tannarx muhim rol o'ynaydi, chunki mahsulot ishlab chiqarish va sotish xarajatlari qancha kam bo'lsa korxona foydasi va rentabelligi shuncha oshadi. Mahsulot tannarxi korxona mahsulotini ishlab chiqarish va sotish bilan bog'liq bo'lgan, pul bilan ifodalangan xarajatlarning yig'indisidir. Tannarxning pasaytirilishi bilan korxonalarning pul jamg'armalari oshadi, ishlab chiqarishni yanada kengaytirish va takomillashtirish uchun qo'shimcha mablag' beradi, mahsulotlar chakana narxini pasaytirib bu bilan aholining turmush darajasini yuksaltirishga imkon

yaratadi. Mahsulot tannarxining ma'lum darajasi juda ko'p ishlab chiqarish omillarining o'zaro ta'sir natijasiga bog'liq bo'ladi. Ular o'rtasidagi bog'liqlik darajasi matematik statistikaning korrelyatsion metodlari orqali tahlil o'tkazib, yuqori aniqlikda topish mumkin.

Korrelyatsion tahlil iqtisodiyot, sotsiologiya va psixologiya, tibbiyot, sifat menejmenti, biometriya va boshqa sohalarda qo'llaniladi. Korrelyatsion tahlilning ommabopligi korrelyatsiya koeffitsientlarini nisbatan oson hisoblashi va ularni qo'llash maxsus matematik tayyorgarlikni talab qilmasligi bilan izohlanadi. Boshqa tomondan, korrelyatsiya koeffitsientlarini talqin qilish oson.

Korrelyatsion tahlil bu ikki yoki undan ortiq tasodifiy o'zgaruvchilar o'rtasidagi bog'liqlikni o'rganishning statistik usuli. Empirik tadqiqotlarda tasodifiy o'zgaruvchilar sifatida o'zgaruvchilarning qiymatlari, kuzatuv obyektlarining o'lchangan xususiyatlari mavjud. Korrelyatsion tahlilning mohiyati korrelyatsiya koeffitsientlarini hisoblashdan iborat. Korrelyatsiya koeffitsientlari, qoida tariqasida, ijobiy va salbiy qiymatlarni qabul qilishi mumkin. Korrelyatsiya koeffitsientining belgisi bog'lanish yo'nalishini, absolyut qiymat esa bog'lanishning kuchini izohlashga imkon beradi. Korrelyatsiya koeffitsientlarini hisoblash usuli o'zaro bog'liqlik o'rganilayotgan o'zgaruvchilarning o'lchov o'lchovlariga bog'liq. Kantitativ miqyosda (interval shkalasi yoki nisbatlar shkalasi) o'lchangan o'zgaruvchilar uchun kovaryans yoki korrelyatsiya momenti hisoblab chiqiladi. Tartibli miqyosda o'lchangan o'zgaruvchilar o'rtasidagi bog'liqlik kuchi va yo'nalishini baholash uchun parametr bo'lmagan darajadagi korrelyatsiya koeffitsientlari qo'llaniladi. Shuningdek, Fechner belgilarining korrelyatsiya koeffitsienti, ko'p martabali korrelyatsiya koeffitsienti (muvofiqlik koeffitsienti) tez-tez ishlatiladi. Dichotomous o'zgaruvchilar o'rtasidagi bog'liqlikni baholash uchun choralar mavjud.

Biroq, korrelyatsion tahlilning o'ziga xos xususiyatlari va metodikasi mavjud. Ushbu usulni faqatgina u yoki bu korrelyatsiya koeffitsientini hisoblash uchun zarur shartlar bajarilgan taqdirda qo'llash juda muhimdir. Korrelyatsion tahlil usuli nafaqat korrelyatsiya koeffitsientlarini hisoblashni, balki ularning ahamiyatini majburiy tekshirishni ham nazarda tutadi, bu statistik gipotezalarni sinash printsipiga, korrelyatsiya koeffitsientlarining oraliq baholarini tuzishga asoslangan. Soxta xulosalarga olib keladigan "yolg'on korrelyatsiya" (ложная корреляция) [1] holatlarida miqdoriy o'zgaruvchilar o'rtasidagi bog'liqlikni tahlil qilishda qisman korrelyatsiya koeffitsientlari hisoblab chiqiladi va tahlil qilinadi.

Agar ko'rsatkichlar o'rtasidagi aloqa qat'iy determinatsiyalangan bo'lmasa, u holda u korrelyatsion hisoblanadi. Korrelyatsion bog'lanish - bu shunday to'liqsiz bog'lanishki, unda omillarning har bir qiymatiga turli zamon va makon sharoitlarida natijaning har xil qiymatlari mos keladi. Bu holda omillar to'liq soni noma'lumdir.[2]

Korrelyatsion tahlil ikki vazifani - bog'liqlikning zichligini aniqlash va

omillarning natijaviy ko'rsatkichga ta'sirini miqdoriy baholashda keng qo'llaniladi va quyidagi jadvalga asosanib xulosalanadi.

(1-jadval)

Korrelyatsion nisbatning turli qiymatlarida aloqalar uzviyligini baholash

Nisbat miqdori	0,1-0,3	0,3-0,5	0,5-0,7	0,7-0,9	0,9-0,99
Aloqa uzviyligi	Kuchsiz	Sezilarisiz	Sezilarli	Yuqori	Ancha yuqori

To'g'ri chiziqli bog'lanishda korrelyatsion munosabat korrelyatsiya koeffitsienti deb ataladi va r harfi bilan belgilanadi. Korrelyatsion munosabat (korrelyatsiya koeffitsienti) 0 dan 1 gacha qiymat qabul qiladi. Agar $r = 0$, u holda ko'rsatkichlar o'rtasida aloqa mavjud emas, agar $r = 1$, u holda aloqa – funktsional, r manfiy miqdor qabul qilgan holda ko'rsatkichlar o'rtasidagi aloqa teskari ekanligidan dalolat beradi. Quyida berilgan mahsulot tannarxi va material sarf-xarajatlar aloqasi uzviylik jadvalidan kelib chiqib korrelyatsiya koeffitsientining omillar o'rtasidagi bog'liqlik darajasini aniqlash yo'li keltirilgan.

Zavod-	Birlik	Birlik			
	tannarx,	tlar, so'm, x_2	x^2	x^2	$x^2 * x^2$
	x_1		1	2	1 1
1	254	56	64516	3136	14224
2	230	50	52900	2500	11500
3	241	54	58081	2916	13014
4	251	56	63001	3136	14056
5	264	60	69696	3600	15840
6	270	62	72900	3844	16740
$n=6$	$x_1 = 1510$	$x_1 = 338$	$\sum x^2 = 381094$	$\sum x^2 = 19132$	$\sum x^2 * \sum x^2 =$
			1	2	85374
					1 2

Hisoblash natijasi ko'rsatadiki, mahsulot birligining tannarxi 98% moddiy xarajatlariga bog'liq, boshqa omillar ulushiga esa uning darajasi o'zgarishining 2%i to'g'rikeladi.

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MAIN PRIORITIES OF ECONOMIC COOPERATION IN THE MODERN WORLD AND THE DEVELOPMENT OF ACCOUNTING

Abstract: The article describes the main features of international economic integration. Consideration of the activities of international organizations.

Keywords: free trade zone, Western Europe, market, economy.

The modern world economy is not only the aggregate and interdependence of national economies. Another of its cuts are integration complexes that include national economies of several states and are distinguished by a more developed mutual division of labor, the rapprochement and mutual adaptation of economic mechanisms, a more intricate interweaving of capital, and the implementation of an agreed interstate economic policy. The formation of integration groupings has received a special dimension in recent years. Currently, more than 85 regional trade economic agreements and arrangements operate in the world, within which more than 60% of world trade is carried out.

There are several main types of integration associations. This is a free trade area, a customs union, a common market, an economic union. The free trade zone (FTA) represents a group of two or more countries in which duties and other restrictive measures in mutual trade are eliminated in relation to goods originating from these countries. In the case of countries that do not participate in the agreement, each participating state of the free trade zone conducts an independent trade policy.

The customs union, as well as the FTA, includes two or more countries that have abolished customs duties and fees and other restrictive measures in mutual trade. But, unlike the FTA, the member states of the customs union conduct a common customs policy with respect to third countries (not members of the union), applying to them the same duties and other measures to regulate trade.

June 24, 1994 on the island of Corfu, the Agreement on Cooperation and Partnership between the EU and Russia was signed (entered into force on February 1, 1996). In the Treaty of Rome it was noted that within the framework of the EU a common (single) market is created, representing the space of «four freedoms» - freedom of movement of goods, capital, services and labor.

The first step in the formation of the EU was a gradual, three-stage (from 1959 to 1968), the abolition of customs duties in trade between the «six» countries of the EU and the creation of a customs union. In relation to third countries outside the EU, customs tariff of the EU. Then, as the new countries

joined the EU, customs duties were abolished in trade between the founding states of the EU and new members.

The Customs Union intensified the mutual trade of the EU member states, which now accounts for an average of more than 60% of their total foreign trade (Belgium, Luxembourg, the Netherlands, Ireland, Portugal - more than 70%). However, after the elimination of mutual customs duties on borders between the countries of the Community, there were still cases of such inspection and control, and other costly formalities. The differences in standards and technical norms in various states (in the field of health care, environmental protection, consumer protection, etc.) continued to impede free trade. The common market arises when the customs union is complemented by the elimination of barriers between countries, not only in mutual trade, but also on the way of the movement of labor and capital.

The Economic Union proposes, in addition to all the integration measures listed above, the implementation by the participating countries of a single economic policy, the creation of a system of interstate regulation of socioeconomic processes.

In practice, the boundaries between these types of integration associations are very conditional and their development can go on ascending - from the FTA to the economic union. The integration economic complex in Western Europe reached the greatest degree of maturity, where in 1957 the European Economic Community (EEC) was created. The agreement on its formation was signed in Rome by the Federal Republic of Germany, France, Italy, Belgium, the Netherlands and Luxembourg. Since 1967, the EEC has general governing bodies and a single budget with two other European integration associations - the European Coal and Steel Community (ECSC) and the European Atomic Energy Community (Euratom). Interstate integration was officially called the European Community - the EU (often used as an informal synonym: the European Community). At the same time, the agreements on the establishment of the EEC (or Common Market), ECSC and Euratom remained in force. In 1973, Great Britain, Denmark and Ireland joined the EU, in 1981 Greece, in 1986 Spain and Portugal, in 1995 Austria, Finland and Sweden. Since November 1, 1993, after the entry into force of the Maastricht Treaty, the European Community has officially become known as the European Union (EU). Now the EU includes 15 states of Western Europe with a population of more than 370 million people. The EU accounts for more than 20% of world GDP and more than 40% of world exports. This regional grouping is much closer to an economic, political and currency union than any inter-state association of the modern world.

The EU has special trade and economic agreements with many countries in the world. For example, according to the so-called Lomé Conventions (the first of which was signed in 1975) virtually all products from 70 countries in Africa, the Caribbean and the Pacific received duty-free access to the EU market.

Similar agreements exist with 12 countries of the Mediterranean basin. In addition, there is the EU Customs Union with Turkey and Cyprus. In the years 1991-1995, nine called European agreements were signed with the countries of Central and Eastern Europe. Six of them (with Bulgaria, Czech Republic, Hungary, Poland, Romania and Slovakia) are already in force¹⁹, three (with Lithuania, Latvia and Estonia) are awaiting ratification. The tenth agreement with Slovenia is being prepared. European agreements cover both political and economic issues. In particular, since January 1, 1995, customs barriers have been lifted for all goods imported into the EU from the signatory countries of Central and Eastern Europe (with the exception of textiles, for which this was done by the end of 1997).

Several dozens of integration groups of different types exist in developing countries. Examples include the Andean Group (Bolivia, Venezuela, Colombia, Peru, Ecuador), the Common Market of the Southern Cone (MERCOSUR) (Argentina, Brazil, Paraguay and Uruguay), 24 the Association of Southeast Asian Nations (ASEAN Indonesia, Malaysia, Thailand, the Philippines, Singapore, Brunei, Viet Nam, Laos, Cambodia and Myanmar), the Economic Community of West African States (ECOWAS) (16 countries), the Southern African Development Community (SADC) (12 countries) and others.

The spreading fad of the creation of economic unions can lead to the fact that in the future involvement in one of them will increasingly determine the effectiveness of national economies and the world status of states. Sometimes it is even feared that the future world economy can be divided into a small number of trade groups, closed primarily to themselves and leading endless economic wars among themselves. But this is an extreme point of view. The high degree of internationalization of economic life will not allow the new blocs to close in their «shell». It is true, however, that in such a scenario, the choice for countries outside the groupings will be small - either to hope for obtaining the status of the most favored nation according to certain types of goods, or to try to join the nearest regional community, or create your own trading zone (but such opportunities do not exist in all regions).

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PROJECT-BASED LEARNING (PBL): ENGAGING STUDENTS THROUGH REAL-WORLD CHALLENGES

Abstract. *The article is about Project-Based Learning (PBL) which is a teaching strategy that engages students in solving real-world problems, fostering critical thinking, problem-solving, and teamwork skills. Key components of PBL include driving questions, clear learning objectives, collaboration, and the use of technology. Projects culminate in tangible artifacts demonstrating students' learning. The article explains how PBL enhances academic performance and soft skills, particularly in STEM education, but presents challenges like time management and alignment with curriculum standards.*

Keywords: *Project-Based Learning, Critical Thinking, Problem-Solving, Collaboration, Educational Technology*

One progressive teaching strategy called project-based learning (PBL) is intended to fully engage pupils in solving problems from the real world. Along with improving their comprehension, this approach sharpens critical thinking, problem-solving, and teamwork abilities (Thomas, 2000). The primary objective of PBL is to provide an environment in which students may use their knowledge and abilities in real-world situations, therefore preparing them for success in both their academic and professional lives (Musa et al., 2012).

Through projects emphasizing critical thinking, problem-solving, and teamwork—essential abilities in contemporary education—PBL engages students (Thomas, 2000). By giving students real-world assignments, PBL fosters deep learning and builds the soft skills required for success in school and the workforce (Musa et al., 2012).

PBL is distinguished from conventional teaching techniques by a number of fundamental components. Among them include the development of artifacts, scientific methods, cooperation, driving questions, and explicit learning objectives. A key component of PBL, driving questions direct the learning process and concentrate student projects. They are designed to be difficult, open-ended, and relevant to topics in real world that students find important (Markula & Aksela, 2021). A leading inquiry in a science class would be, "How can we develop a sustainable water filtration system for our community?" Students are encouraged to investigate scientific concepts and put what they have learned into practice (Hasni et al., 2016). Because driving questions provide students a clear goal and ground the project in practical situations, they are crucial. Deeper research and ongoing investigation are encouraged by them.

A leading inquiry in a history lesson would be, "What were the primary elements that contributed to the fall of the Roman Empire, and how can knowing these aspects help avoid similar collapses in current civilizations?" To develop thorough answers to these concerns, a great deal of study, critical thought, and group debate are required (Blumenfeld et al., 1991).

In PBL, learning objectives need to be clearly stated and in line with the curriculum to guarantee that students acquire both necessary skills and subject matter. Many times, these objectives involve knowledge particular to the topic and more general skills like cooperation and critical thinking (Thomas, 2000). One PBL course on renewable energy, for instance, may educate students about various energy sources and promote collaboration. Projects are kept focused and educationally relevant by learning objectives, which also help students remain on track and accomplish the intended results (Markula & Aksela, 201).

PBL in STEM education stresses including students in scientific procedures like questioning, investigating, and reporting findings. Students who do these exercises learn scientific ideas and procedures more thoroughly (Pedaste et al., 2015). In a biology project, for example, one may organize experiments to see how various fertilizers affect plant development, therefore promoting scientific investigation and useful problem-solving abilities (Novak & Krajcik, 2020). Because projects often need cooperation, communication skills, conflict resolution, and the capacity to use other viewpoints are all fostered by collaboration in PBL (Blumenfeld et al., 1991). For example, a history project would have students collaborate on a multimedia presentation on a historical event, which would need task division, resource sharing, and cooperative synthesis of the results (Bestelmeyer et al., 2015).

Because technology offers means for research, teamwork, and presentation, it is essential to PBL. Computers, software, and internet resources all improve and increase the interaction of the learning process (Krajcik & Shin, 2014). Students may, for instance, utilize Google Classroom to exchange papers, work together on a project, and get instant feedback (Iftakhar, 2016).

Production of concrete artifacts that show students' learning and comprehension is the pinnacle of PBL. These artifacts might be models, presentations, reports, or digital goods (Blumenfeld et al., 1991). A chemistry project may, for example, provide a thorough report on the environmental effects of plastic waste along with a model of a suggested recycling method (Sahin, 2013).

According to research, PBL improves critical thinking, presenting questions, and teamwork abilities and results in higher academic performance than conventional education (Sasson et al., 2018). Furthermore improving interpersonal and intrapersonal skills is Kaldi et al. (2011). In tests of critical thinking and problem-solving, for instance, primary pupils in PBL environments do better than their counterparts in regular classrooms (Kaldi et al., 2011). PBL

courses with a STEM emphasis help high school students become much better at planning and carrying out scientific experiments (Pedaste et al., 2015).

Implementing PBL, nevertheless, may be difficult. Project organization, time management, and enough support provision may be difficult for teachers (Tamim & Grant, 2013). PBL lessons may be designed and implemented by instructors with the aid of professional development and resources (Han et al., 2015). Furthermore improving the quality of PBL is teacher cooperation as well as that with outside partners (Aksela & Haatainen, 2019). For example, PBL was designed and facilitated more successfully by Finnish teachers who took part in professional development programs (Aksela & Haatainen, 2019).

Another difficulty is to make sure PBL complies with curricular standards and standardized testing. Time for project-based activities may be difficult to allot since teachers may feel under pressure to cover a lot of material fast (Han et al., 2015). This may be addressed by creating PBL lessons that include necessary material and are in line with curricular requirements (Tamim & Grant, 2013). In order to teach important ideas and engage students in practical applications, a math teacher can, for example, create a PBL unit on geometry that entails creating and constructing a model playground. All things considered, PBL gives students chances to interact extensively with the material, hone critical soft skills, and use what they have learned in real-world situations. Through the integration of practical problems, technology, and teamwork, PBL equips students for the complexity of contemporary learning and work settings.

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FEATURES OF THE USE OF IFRS IN THE PRACTICE OF CORPORATE GOVERNANCE OF UZBEK ENTERPRISES

Abstract: *The article examines the features of using international financial reporting standards (IFRS) in the practice of corporate governance of Uzbek enterprises. Recently, this problem has become very relevant, as more and more companies implement or plan to implement the formation of reports under IFRS in order to attract foreign investment. The main tasks facing companies in the transition to IFRS, approaches to the process of preparing reports taking into account the Uzbek specifics, as well as the main stages of work associated with such a transition are considered.*

Keywords: *NAS (National Accounting Standard), IFRS (International Financial Reporting Standards), accounting process, chart of accounts, mapping.*

Introduction. The Government of the Republic of Uzbekistan is currently implementing large-scale reforms in the political, economic and social spheres, actively working to attract foreign direct investment to the country's economy, and creating conditions for the effective work of foreign investors. One of the most important conditions for effectively attracting such investments into the activities of Uzbek enterprises is increasing the transparency of corporate governance practices through the introduction of generally accepted international financial reporting standards. For the effective integration of the country into the global economy, the Government is pursuing an active policy to implement International Financial Reporting Standards (IFRS) [3], which is designed to ensure transparency and trust of international partners in the activities of enterprises of the corporate sector of the Republic.

In this regard, it is of great interest to study the experience of implementing IFRS requirements in the corporate governance system of Uzbek enterprises. Thus, in [1,2] the main measures aimed at introducing IFRS into the activities of joint-stock companies, commercial banks, insurance organizations and legal entities included in the category of large taxpayers are indicated.

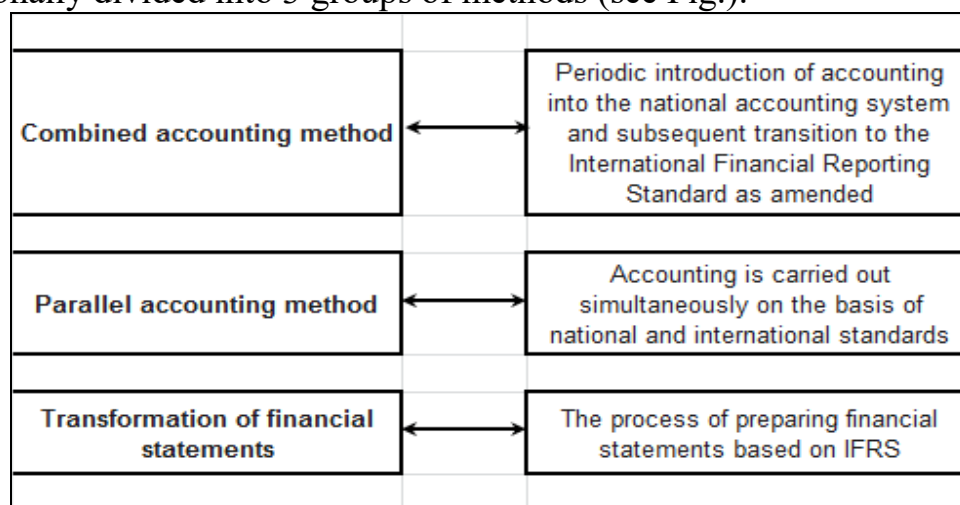
Thus, it becomes obvious that the state has taken a clear course on transferring the corporate governance system of large enterprises and companies to management according to international standards. These measures are also due to the fact that the preparation of reports in accordance with IFRS is extremely important for a company that already cooperates with foreign counterparties or is going to establish such interaction. After all, it is on the basis

of the submitted financial reports that an opinion will be formed about the reliability and stability of the company's operations and its development prospects. The transformation of reports prepared according to the national standard into reports according to IFRS is necessary in cases where the enterprise plans to attract additional funds and investments by placing its securities on the stock exchange.

Studying the experience of European countries in implementing IFRS and a systematic approach to problems in this process are important issues in the transition to the process of accounting and financial reporting in accordance with IFRS in business entities operating in our country. In this regard, the following main areas can be identified as the main tasks for businesses in the transition to international financial reporting standards [4,5]:

- formation of a system of accounting and financial reporting standards that provides users of financial statements with information, primarily transparent information for investors;
- ensuring the linkage of the accounting system in business entities with the main trends of the international accounting system;
- development of methodological procedures using effective aspects of international accounting models.

The process of preparing reports of Uzbek enterprises under IFRS can be conditionally divided into 3 groups of methods (see Fig.).



The most common method of accounting among Uzbek enterprises today is parallel accounting — parallel (simultaneous) accounting both in accordance with local legislation and in accordance with IFRS. Parallel accounting is carried out by converting the enterprise's accounting data into the IFRS reporting format. There are two types of conversion: full and step-by-step.

Full conversion means working with accounting software to record all business transactions.

Step-by-step conversion is used in companies that keep records manually. In this case, computerization is applied separately for each area of work: when

accounting for non-current assets, inventories, settlements, determining financial results and other areas of accounting.

Although the use of parallel accounting is more costly for the enterprise, in our opinion, it is a reasonable measure on the part of management for the following reasons:

- almost complete lack of qualified and certified personnel in IFRS at enterprises;
- the need for mandatory accounting in accordance with NAS No. 21 (no one has canceled it);
- the need to maintain tax reporting in accordance with the requirements of the Tax Code - it has not yet been amended and provisions concerning IFRS have been made;
- the current absence of a central national body that should be responsible for managing the implementation and subsequent implementation of IFRS and ensuring the resolution of controversial issues that arise during the harmonization of the local accounting system with the requirements of IFRS.

For these reasons, the management of enterprises is forced to hire audit companies that carry out the "transfer" of accounting information to IFRS. This, of course, requires additional costs, but at the same time, it allows enterprises to maintain accounting and reporting according to local standards, and at the same time comply with the Government's requirement to provide reporting in accordance with IFRS.

In this regard, the following main stages of work can be identified that Uzbek enterprises will have to carry out as part of the transition to IFRS.

Stage 1. Creation of an information and technical base for the introduction of accounting under IFRS. Within the framework of this stage, a corporate accounting policy in accordance with IFRS should be developed, a personnel reserve should be formed by conducting trainings among current employees or recruiting the necessary specialists, and an information base should be prepared by taking an inventory of assets and liabilities, analyzing business transactions for accounting under IFRS.

Stage 2. Development of the accounting system itself in accordance with IFRS. At this stage, a corporate chart of accounts for IFRS purposes should be developed, including analytical accounting accounts. Internal control procedures for the correctness of reporting under IFRS should be developed, and work should begin on setting up and testing the existing information system for various accounting areas - transactional, transformation and consolidation blocks.

Stage 3. Implementation of a trial implementation of accounting and reporting under international standards. The purpose of this stage is to identify errors and discrepancies in the system, make adjustments to the accounting policy, chart of accounts, and accounting methods. The experience of implementing IFRS in corporate governance practice in Uzbekistan shows the importance and

necessity of the gradual implementation of reporting standards in the practice of companies.

The use of IFRS allows for the maximum effect in the corporate governance system, ensuring the transparency of financial reporting, which helps attract investment in the activities of Uzbek companies, is designed to significantly facilitate relationships with foreign investors and contribute to an increase in the number of joint projects due to generally accepted rules for the formation of current financial statements.

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AUTOMATION OF ANALYTICAL PROCESSES IN CORPORATE FINANCE, PROBLEMS AND CHALLENGES

Abstract: *The article considers issues related to the prospects for automating analysis processes in the corporate management system. The use of modern IT technologies, such as automation of financial analysis processes in combination with machine learning and artificial intelligence, allows companies to collect and process significant amounts of information, which leads to more accurate and informed financial decisions. The key aspects and prospects for automating analytical processes in corporate finance are considered, the main problematic issues and challenges associated with the automation of such processes are identified.*

Keywords: *automation, corporate finance, financial analysis, machine learning, artificial intelligence (ai), big data, digitalization, data security, financial reporting, cybersecurity.*

Introduction: Modern digital technologies are rapidly changing the landscape of corporate finance and credit analysis. Automation of the processes of analysis and assessment of the creditworthiness of enterprises opens up new opportunities for increasing the efficiency of financial management, improving the accuracy of forecasting and optimizing business processes. This aspect of the use of information technology in corporate finance is one of the most important trends in the digital transformation of business. The use of digital technologies to automate the process of financial analysis using big data analysis, machine learning and artificial intelligence (AI) allows companies to collect and process huge amounts of information. In turn, the automation of analytical processes in business allows for more efficient, accurate and informed financial decisions. This paper discusses the key aspects and prospects for automating analytical processes in corporate finance. Research in this area shows that the use of digital technologies in the analysis of financial data opens up new horizons for forecasting key performance indicators of a company, such as profitability, profit and liquidity [1,2]. In particular, machine learning algorithms can automatically identify hidden patterns in data and predict changes in financial flows with high accuracy, which allows improving capital management, optimizing investment strategies and reducing financial risks. In addition, the use of artificial intelligence (AI) and big data also plays a significant role in financial analytics. By integrating data from various sources and processing it using automated systems or AI, companies can more accurately predict market

trends, identify hidden risks and determine the best moments for investment. These technologies significantly [3-6] reduce the time for analysis and minimize human errors, which in turn increases the company's competitiveness.

It should be noted that the automation of analytical processes and its implementation in the processes of processing financial data and reporting can significantly increase the efficiency and effectiveness of management decisions, which is especially important in the context of constantly changing market conditions and strict regulatory requirements. This, in turn, leads to increased confidence on the part of investors and other stakeholders in the current corporate governance system of the enterprise.

At the same time, despite the obvious advantages, the automation of the analysis process in corporate finance, risk assessment and creditworthiness faces the need to solve a number of problematic issues and challenges. The introduction of digital technologies requires significant investments in IT infrastructure and personnel training. Moreover, data security and privacy issues remain important, especially in the context of growing cyber threats.

Main part: Let us highlight the main problematic issues in the field of digitalization and automation of financial reporting analysis

1. Lack of a single data standard: In the process of digitalization of financial reporting, one of the key problems is the lack of unified data standards. Companies use different formats and structures to present financial information, which complicates automatic analysis and processing of data. This leads to additional integration costs and can create errors in data interpretation.

2. Limited interoperability of systems - there are various systems and platforms for automating financial reporting, and their integration can be difficult due to incompatibility of data formats, protocols and architectural solutions. Limited interoperability hinders the effective exchange of data between different departments and companies, and slows down the process of implementing digital technologies.

3. Data security issues: With the increase in the volume of data and its automatic processing, the risk of cyberattacks and leaks of confidential information increases. Data protection and ensuring its privacy remains a serious problem, especially in the context of using cloud technologies and remote access.

4. Resistance to changes in digitalization and lack of skills: The implementation of digital technologies requires significant changes in corporate culture and work processes. Resistance to change on the part of employees, as well as a shortage of specialists with the necessary skills and competencies, slow down the process of digitalization and automation of financial reporting analysis.

5. The issue of developing a common methodology for analyzing the financial condition of a company from the point of view of studying the dynamics of changes in its financial indicators, their "historical" analysis, and

obtaining the values of a complex indicator remains important. In this case, a complex indicator (CI) should be considered as a weighted sum of normalized values of the main financial ratios that characterize the state of the company. Such an indicator should combine several financial indicators into one numerical value for more convenient comparison with a similar indicator in other companies for the purpose of conducting a comparative analysis for making investment decisions.

Conclusion: The benefits that automation brings significantly exceed the costs in terms of reducing the labor and time costs of management for collecting, analyzing and preparing information for decision-making. It allows companies to more effectively manage their financial resources, reduce operating costs and minimize risks, which ultimately increases their competitiveness in the market.

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WAYS TO FINANCE INVESTMENT PROJECTS BASED ON THE GREEN ECONOMY

Abstract. *This article indicates an assessment of the level of development and structure of green financing, as well as the identification of factors determining its development, taking into account the latest trends in the global economy. Furthermore, it analyzes the state and trends of the green financing market, identifies obstacles to the development of green financial instruments and suggests directions for solving emerging problems. The article highlights the need to stimulate the use of green financing instruments, the development of a legal framework in the field of sustainable development, which will ensure the harmonization of policies and standards for green financing not only at the national but also at the global level.*

Keywords: *green financing, sustainable development, green bonds, green loans, green investments.*

As the severity of global warming caused by climate change has emerged as a key issue in world politics and economy, many developed countries have made efforts to respond actively to climate change. As part of these response efforts many advanced countries have established and implemented mid-to-long-term greenhouse gas reduction policies through the international gas reduction agreement and the establishment of national energy reduction goals. In addition, the green life practice movement, which seeks to promote economic development by utilizing green technology as a new growth engine and achieve low-carbon and eco-friendly environments in the daily lives of economic entities, is also actively developing.

While it is virtually difficult to achieve the goals of economic growth and environmental conservation simultaneously under traditional economic growth theory, it is possible to promote eco-friendly economic growth through the introduction of a new growth paradigm called green growth, a low-carbon focused growth strategy through the development of green technology.

The increase in social welfare through low carbonization and green industrialization can be explained economically. Specifically, it is possible to increase the welfare of society as a whole by protecting the environment and emphasizing green growth through factors such as improving the quality of life through environmental conservation, economic incentives and social environmental protection motivation. For example, let us look at the case where you want to use solar power at home. Despite the considerable installation and maintenance costs pointed out, the first reason to use renewable energy is the

desire to live in a healthy environment beyond economic benefits and losses due to individual environmental preferences. It means that personal desires exist inherently. The second reason is the pursuit of economic benefits by economic entities with renewable energy.

In other words, as resources become scarce due to the depletion of natural resources, the price of energy such as oil is rising rapidly, so there is a strong economic incentive to reduce energy-related costs, including electricity bills, with renewable energy at home. In reality, installing these energy consumption reduction facilities and establishing a system for efficient use has a significant impact on housing prices. The last reason is social environmental protection motivation (social influence). The importance of environmental conservation is emerging as an international topic through the Kyoto Protocol in 1997 and the Copenhagen Conference in 2009. Therefore, in addition to the environmental protection efforts, individual economic entities can also make green growth efforts, thereby improving national prestige through improving the national image and seeking to increase the welfare of the entire nation.

Among of them, green financing especially plays an important role in the global financial system for achieving the UN Sustainable Development Goals, adopted in 2015 in the interests of future generations to ensure sustainable development of humanity based on the implementation of three key components: economic growth, social integration of society and environmental protection.

The American economist Richard Sandor first used the term “green financing” in 1992 in a course given at Columbia University. In his opinion, green financing, which primarily provides for the financing of projects that prevent climate change, could become the main driving mechanism for reducing greenhouse gas emissions into the atmosphere and the transition to more sustainable and environmentally friendly economic growth.

Various instruments are used to finance green projects, among which are green bonds, green funds, green loans, green investment programs, green accounts and green insurance products. Each of them has its own advantages and disadvantages and are usable for finance different types of green projects.

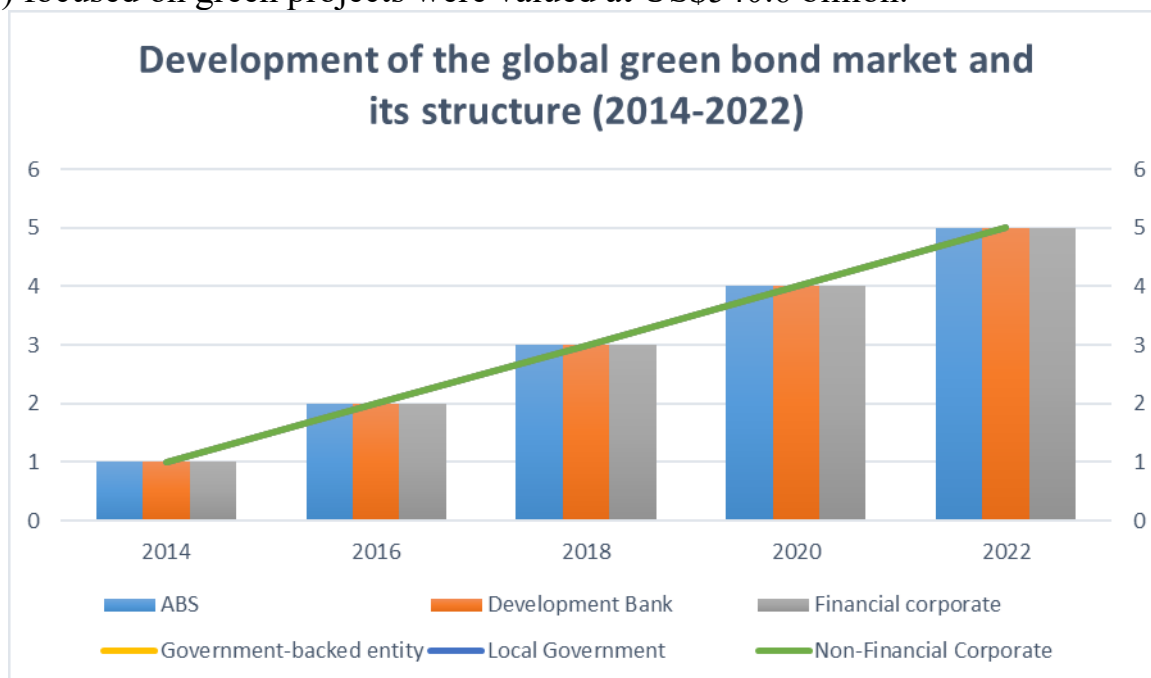
However, despite the fact that green financing is a promising and important tool for achieving sustainable development, it has its limitations. They are high costs, limiting its availability for small and medium-sized enterprises; the lack of transparent standards for green investments, causing problems with assessing the effectiveness of green projects; difficulties in taking into account all the environmental and social consequences of projects.

A significant event in the field of green financing was the launch of the Finance Initiative of the United Nations Environment Programme (UNEP) at the UN Conference on Environment and Development, held in 1992. However, during the 1990s, there was no significant greening of financial markets.

The concept of “green financing” was formed in the West at the beginning of the 21st century due to the realization by scientists and politicians that business should not only make a profit, but also be responsible to society for the state of the environment. In the modern world, much attention is paid to the concept of low-carbon development, aimed at reducing greenhouse gas emissions and overcoming the consequences of climate change while simultaneously achieving the Sustainable Development Goals.

In 2017, the European Commission defined green finance as “investments that promote environmental sustainability and generate economic growth. It includes investments in projects that reduce greenhouse gas emissions and combat climate change, as well as projects to preserve biodiversity and ensure sustainable resource management”. According to the EC, green finance should be a tool to achieve the goals of the Paris Agreement on climate change and to promote sustainable development and the transition to a low-carbon economy. It can also contribute to the development of new technologies, increase the competitiveness of companies and create jobs.

Over the past decade, global finance for green projects has increased more than 100 in the world. The share of green finance in total financing has been steadily increasing: in 2012 it was about 0.1%, in 2021 it was more than 4%. According to research conducted by The City UK and BNP Paribas, global loans through green bonds, loans, and equity financing through initial public offerings (IPOs) focused on green projects were valued at US\$540.6 billion.



In 2021, green finance volumes continued to grow despite the adverse economic conditions associated with the COVID-19 pandemic.

In order to make green finance more accessible and effective, unified standards for green investments must be developed, stricter requirements for companies and projects must be established, and greater transparency and accountability must be ensured.

One of the main instruments that is used to finance green projects is green bonds. Green bonds are a type of debt instrument specifically designed to finance projects that have a positive environmental or social impact. They are similar to traditional bonds in terms of structure and risk-return profile, but differ in how they allocate proceeds to support environmental goals. By issuing green bonds, issuers can demonstrate their commitment to environmental responsibility while reaching a growing pool of investors interested in sustainable finance. Investors benefit from green bonds by diversifying their portfolios, enhancing their reputation, and making investments that align with their values. The environment benefits from green bonds by providing more funding for projects that mitigate climate change, conserve natural resources, or improve social welfare.

The Green Bond Principles are intended to support bond issuers in their efforts to finance environmentally sound and sustainable projects that promote the transition to a carbon-neutral economy and contribute to environmental protection. Bonds issued under the Green Bond Principles must transparently communicate that the project qualifies as green in addition to providing an investment opportunity. The Green Bond Principles significantly improve the transparency of bonds by requiring bond issuers to report on the use of green bond proceeds, thereby enabling issuers to determine whether the proceeds are being used for environmental projects, while also raising awareness of the expected impact of environmental projects.

The scale of the green transition in Uzbekistan requires a significant increase in private financing to fill the existing financing gap. The disproportionately large role of the state in Uzbekistan's economy and the underdevelopment of the domestic capital market are significant constraints and require diversification of sources of financing for the green transition. Since 2021, Uzbekistan has made green bonds a central part of its strategy to fill the financing gap and mobilize new sources of capital for its green infrastructure projects.

In order to make green finance more accessible and effective, unified standards for green investments must be developed, stricter requirements for companies and projects must be established, and greater transparency and accountability must be ensured.

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ECOLOGICAL STATE OF GRAY MEADOW SOILS AND MEASURES FOR THEIR IMPROVEMENT

Abstract: *This article investigates the environmental status of irrigated gray meadow soils and proposes strategies to enhance their productivity. Gray meadow soils are prevalent in agricultural regions worldwide and play a crucial role in supporting crop growth and ecosystem functions. However, intensive agricultural practices, improper land management, and environmental degradation have led to soil degradation and decreased productivity in these areas. Through a comprehensive review of existing literature and field studies, this article examines the current environmental status of irrigated gray meadow soils, including factors such as soil pH, nutrient levels, organic matter content, and soil structure. Additionally, the article explores various approaches to improving soil productivity, including soil conservation measures, sustainable irrigation practices, organic soil amendments, and agro forestry techniques. By implementing these strategies, farmers and land managers can mitigate soil degradation, enhance soil fertility, and promote sustainable agricultural production on irrigated gray meadow soils.*

Keywords: *Irrigated gray meadow soils, Environmental status, Soil productivity, Soil conservation, Sustainable agriculture, Soil fertility, Agro forestry, Soil management.*

INTRODUCTION

Development of solutions to problems related to consistent acceleration of agricultural production, rational use of the land fund, productivity of each irrigated hectare, and its economic efficiency is of great importance. The land intensively used in the agriculture of Uzbekistan is mainly irrigated land and is equal to 4.28 million hectares. These lands are truly the Golden Fund of our Republic and more than 95% of gross agricultural products are grown on them.

Irrigated gray meadow soils are critical components of agricultural ecosystems, particularly in regions where irrigation is essential for crop production. These soils, characterized by their unique composition and properties, play a vital role in supporting agricultural productivity and maintaining ecosystem stability [1]. However, the environmental status of irrigated gray meadow soils is often compromised due to intensive agricultural practices, improper land management, and environmental degradation [2]. As a

result, soil degradation, nutrient depletion, and declining productivity have become significant concerns in these areas.

Understanding the environmental status of irrigated gray meadow soils is essential for implementing effective strategies to improve soil health and productivity. Factors such as soil pH, nutrient levels, organic matter content, and soil structure influence soil fertility and overall productivity [3]. Furthermore, the interaction between soil and water management practices, including irrigation methods and drainage systems, significantly impacts soil health and ecosystem dynamics [4].

In recent years, there has been growing interest in developing sustainable approaches to enhance the productivity of irrigated gray meadow soils while minimizing environmental impacts. Sustainable soil management practices, including soil conservation measures, crop rotation, and organic soil amendments, can help mitigate soil degradation and promote long-term soil health [5]. Additionally, the integration of agro forestry techniques, such as alley cropping and windbreaks, can enhance soil fertility, conserve water, and improve ecosystem resilience [6].

This article aims to provide an overview of the environmental status of irrigated gray meadow soils and explore various strategies to increase their productivity in a sustainable manner. By reviewing existing literature and incorporating field studies, we seek to identify key challenges and opportunities for improving soil health and agricultural sustainability in irrigated gray meadow soil ecosystems.

MATERIALS AND METHODS

Environmental Status of Irrigated Gray Meadow Soils:

Irrigated gray meadow soils are characterized by their unique properties, including high clay content, neutral to slightly alkaline pH, and moderate levels of organic matter [1]. However, intensive agricultural practices such as excessive tillage, monocropping, and overuse of chemical fertilizers and pesticides have led to soil degradation and declining productivity in these areas [2]. Soil erosion, compaction, and nutrient depletion are among the primary challenges affecting the environmental status of irrigated gray meadow soils [3].

Soil Degradation and Nutrient Depletion:

Soil erosion is a significant issue in irrigated gray meadow soils, particularly in regions with steep slopes or inadequate soil conservation measures [4]. Erosion leads to loss of topsoil, organic matter, and essential nutrients, reducing soil fertility and productivity over time. Furthermore, intensive irrigation practices can exacerbate soil salinization and water logging, further impairing soil health and crop yields [5].

Strategies to Increase Soil Productivity:

To address the environmental challenges facing irrigated gray meadow soils and enhance their productivity, several strategies can be employed. Soil conservation measures such as contour plowing, terracing, and cover cropping

help prevent soil erosion, improve water infiltration, and maintain soil structure [6]. Additionally, crop rotation and diversified cropping systems can reduce pest and disease pressure, enhance nutrient cycling, and improve overall soil health [7].

Sustainable Soil Management Practices:

Adopting sustainable soil management practices is crucial for optimizing soil productivity and environmental sustainability in irrigated gray meadow soils. Integrated nutrient management, which combines organic and inorganic fertilizers with soil amendments such as compost and manure, helps replenish soil nutrients and enhance microbial activity [8]. No-till or reduced tillage systems minimize soil disturbance, preserve soil structure, and promote carbon sequestration, contributing to long-term soil health and productivity [9].

Role of Agro forestry and Green Manure:

Agro forestry systems, such as alley cropping and windbreaks, offer additional benefits for improving soil fertility and ecosystem resilience in irrigated gray meadow soils [10]. Trees and shrubs provide shade, reduce wind and water erosion, and contribute organic matter to the soil through leaf litter and root turnover. Green manure crops, such as legumes and cover crops, fix nitrogen, improve soil structure, and suppress weeds, enhancing soil fertility and reducing the need for external inputs [11].

Addressing the environmental challenges facing irrigated gray meadow soils requires a multifaceted approach that integrates soil conservation measures, sustainable soil management practices, and agro forestry techniques. By adopting these strategies, farmers and land managers can improve soil health, enhance productivity, and promote environmental sustainability in irrigated gray meadow soil ecosystems.

RESULT AND DISCUSSIONS

The environmental status of irrigated gray meadow soils is influenced by various factors, including soil composition, land management practices, and climatic conditions. These soils typically have high clay content and are prone to compaction and erosion, leading to decreased soil fertility and productivity. Additionally, intensive agricultural practices such as excessive tillage and monocropping exacerbate soil degradation, further compromising environmental sustainability [6].

Soil erosion is a significant concern in irrigated gray meadow soils, particularly in regions with steep slopes or inadequate soil conservation measures. Erosion not only leads to loss of topsoil and organic matter but also results in nutrient depletion and reduced water-holding capacity [3]. This can negatively impact crop yields and exacerbate environmental degradation in affected areas.

To address these challenges and enhance the productivity of irrigated gray meadow soils, various strategies can be implemented. Soil conservation measures such as contour plowing, terracing, and cover cropping help mitigate

erosion, improve soil structure, and enhance water infiltration [5]. These practices can reduce soil loss and promote soil health, ultimately contributing to increased agricultural productivity and environmental sustainability.

Furthermore, agro forestry systems offer promising opportunities for improving the environmental status of irrigated gray meadow soils. Agro forestry practices such as alley cropping and windbreaks provide multiple benefits, including erosion control, soil moisture retention, and biodiversity conservation. Trees and shrubs contribute organic matter to the soil, improve soil structure, and enhance overall ecosystem resilience.

Overall, addressing the environmental challenges facing irrigated gray meadow soils requires a multifaceted approach that integrates soil conservation measures, sustainable nutrient management practices, and agro forestry techniques. By adopting these strategies, farmers can improve soil health, increase agricultural productivity, and promote environmental sustainability in irrigated gray meadow soil ecosystems.

CONCLUSION

In conclusion, the environmental status of irrigated gray meadow soils presents a multifaceted challenge that requires comprehensive strategies to address soil degradation and enhance productivity sustainably. Through the synthesis of various soil management practices and innovative approaches, it is evident that significant strides can be made in mitigating erosion, restoring soil fertility, and promoting environmental sustainability.

Firstly, soil conservation measures such as contour plowing, terracing, and cover cropping have demonstrated their effectiveness in reducing soil erosion and improving soil structure. By implementing these practices, farmers can minimize soil loss, enhance water retention capacity, and protect against the adverse effects of erosion, ultimately leading to more resilient and productive soil ecosystems.

Furthermore, integrated nutrient management strategies play a pivotal role in optimizing soil fertility and promoting sustainable agricultural practices. The judicious use of organic and inorganic fertilizers, coupled with soil amendments like compost and manure, helps replenish essential nutrients, improve soil health, and support microbial activity. By adopting these practices, farmers can enhance nutrient cycling, minimize nutrient leaching, and foster long-term soil productivity.

In addition to soil conservation and nutrient management, the integration of agroforestry systems offers promising avenues for improving the environmental status of irrigated gray meadow soils. Agro forestry practices such as alley cropping and windbreaks contribute to erosion control, soil moisture retention, and biodiversity conservation. Moreover, trees and shrubs in agro forestry systems provide organic matter to the soil, enhance nutrient cycling, and promote soil structure, thereby enhancing overall ecosystem resilience and productivity.

However, it is essential to recognize that the successful implementation of these strategies requires a holistic approach that considers local conditions, socio-economic factors, and stakeholder engagement. Effective extension services, farmer training programs, and policy support are crucial for disseminating knowledge and encouraging adoption of sustainable soil management practices.

Moving forward, continued research and innovation are necessary to develop tailored solutions that address the specific challenges facing irrigated gray meadow soils in diverse agroecological contexts. Collaborative efforts between scientists, policymakers, farmers, and other stakeholders are essential to ensure the successful implementation and scaling-up of sustainable soil management practices.

In conclusion, by adopting a multifaceted approach that integrates soil conservation, nutrient management, and agro forestry practices, it is possible to enhance the environmental status of irrigated gray meadow soils and increase their productivity sustainably. This not only benefits farmers by improving crop yields and livelihoods but also contributes to broader goals of environmental conservation and food security.

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SUV SIFATINING YIG'INDI KO'RSATKICHLARINI TAHLIL QILISH

Annotatsiya: Ushbu maqolada siz iste'mol qilinadigan ichimlik suvi uchun standart talablar va standartlarni ta'minlash va ichimlik suvi bilan bog'liq muammolarni hal qilishda amalga oshirilayotgan islohotlar to'g'risida kerakli ma'lumotlarni olishingiz mumkin.

Kalit so'zlar: Suv, ichimlik suvi sifati, organoleptik usullar, pH ko'rsatkichi, suvning mikrobial parchalanishi, suvning qattiqligi.

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ANALYSIS OF AGGREGATE WATER QUALITY INDICATORS

Annotation: In this article, you can get the necessary information about the ongoing reforms in ensuring standard requirements and standards for drinking water consumption, as well as solutions to problems related to drinking water.

Keywords: water, drinking water quality, organoleptic methods, pH indicator, microbial disturbance of water, water hardness.

Suv – Yer sharida eng ko'p tarqalgan va eng muhim kimyoviy birikmalardan biri hisoblandi. Suv yer sharida 4 milyard yil oldin paydo bo'lgan degan ilmiy xulosalar ham mavjud. Tirik organizmlar uchun bebaho hayotiy ne'mat hisoblanadigan suv uch xil ko'rinish (suyuq, bug' va qattiq-qor, muz holatlar) da tabiatda mavjud bo'ladi. Yerda dastlab hosil bo'lgan suv moddasi bug' (gaz) holida bo'lgan. Yer sayyorasining uzoq geologik shakllanish davrlari mobaynida boshqa barcha tabiiy unsurlar va omillar bilan bevosita uzviy bog'liqlikda suvning sifat-miqdor ko'rsatkichlari o'zgargan va asta- sekinlik bilan hozirgi ko'rinishlarga kelgan. Suvning 3 xil holatda bo'la olish xususiyati tufayli yerda “suvli qobiq” - “suv muhiti” (gidrosfera) mavjuddir [1].

Oziq-ovqat mahsulotlari tayyorlashda ichimlik suvidan foydalaniladi. Korxonalarning ichimlik suvi bilan ta'minoti shahar vodoprovod tarmog'i orqali amalga oshiriladi. Bunday imkoniyat bo'lmagan holda davlat sanitariya va epidemiologiya nazorati tashkilotlari ruxsatiga binoan mahalliy suv manbalaridan (asosan, artezian quduqlar suvidan) foydalaniladi. Oddiy

quduqlar, kanal va ariqlar, ko'llar suviga ko'ra chuqur qatlamlardan olingan artezian quduqlarining suvi ancha tozaroq, unda kamroq bakteriyalar va aralashmalar mavjud bo'lishi mumkin [2].

Aholini sifatli ichimlik suvi bilan ta'minlash va shu yerdagi aholining salomatlik ko'rsatkichlari, ko'pgina epidemik kasalliklarni bartaraf qilinishi, aholi yashash joylarini obodonlashtirilishi va turar-joy binolarining sanitar kamfortini ta'minlash masalalari bilan chambarchas bog'liqdir. Suvning salomatlik omili ekanligiga ta'rif berilganda uning asosiy 3 ta xususiyatiga ya'ni suvning fiziologik, gigiyenik hamda epidemiologik ahamiyatiga e'tibor qaratish lozim.

Odamning kun mobaynida ichish uchun suvga bo'lgan talabi 2,2-2,5 litrni tashkil etadi. Suv juda ko'p kasalliklarni uzatuvchi va tarqatuvchi omil sifatida muhim o'rinni egallaydi, jumladan vabo, tif, paratif, ichburug', gepatit, brutsellyoz hamda ayrim turdagi invazion kasalliklar (rishta) ning tarqatuvchisidir. Bunday holat juda ko'p mikroorganizmlarning suv muhitida uzoq muddatlarda (bir necha kundan bir necha oygacha) yashay olishi bilangina bog'liq bo'lmay, balki ular suv muhitida o'zlarining virulentligini ham to'liq saqlay oladilar. Ayniqsa issiq iqlim sharoitida buning ahamiyati juda muhim, chunki bunday sharoitda mikroorganizmlar va ayniqsa, patogen mikroblar juda uzoq muddatlarga yashay oladilar. Shuning uchun suv muhiti yuqumli kasalliklarning tarqalishida boshqa mamlakatlar qatorida bizning Respublikada ham juda muhim omil bo'lib hisoblanadi[1].

Toza ichimlik suvlari ikkita asosiy organoleptik ko'rsatkichlarda farq qiladi - hid va ta'm.

Suvning hidini xona haroratida yoki usti soat oynasi bilan yopiq kolbada 60°C haroratgacha qizdirib, bilib olish mumkin. Suvning hidi qanday ekanini tushunarli tarzda yozib qo'yiladi: xlor bor yo'qligi — xlor hidiga qarab; yer hidi nam tuproq hidiga qarab; fenol hidi; neft hidi; dorixona hidi; vodorod sulfid hidi; qo'lansa hidi; chirigan xashak hidi va boshqa hidlar.

Hidni bilib olish shartlari. Tajriba ishlari hech qanday hidi yo'q xonada o'tkazilishi lozim. Tajriba o'tkazilayotgan xonada chekish, ovqatlanish, atir-upa, pardozi vositalaridan va boshqa hidli narsalardan foydalanish mumkin emas. Tahlilni olib boruvchilar tumov yoki biror allergik kasalligi bilan og'rigan bo'lmasliklari kerak. O'tkir hidli oqava suvlarni tajribadan oldin bir necha marta suyultirish va qancha suyultirilganini hidning miqdoriy qiymatini hisoblashda e'tiborga olinishi kerak. Hidni qanaqa ekanini bilish ishi bir soatdan uzoqqa cho'zilmasligi kerak, aks holda kishining hid sezish xususiyati tez so'nib qoladi.

Chuchuk suv tarkibiga qarab ikki katta guruhga bo'linadi: oddiy suv va mineral suvlar, ya'ni foydali noorganik tarkibiy qismlarga boy bo'lgan suv. Bundan tashqari, har bir guruh ichida suv geologik va geografik sabablarga ko'ra juda ko'p tarkibga ega. Bu tabiiy kelib chiqadigan suvlarning tasnifi, ammo odamlar tomonidan ataylab yaratilgan sun'iy suvlar mavjud: sun'iy mineral suv,

distillangan suv, shuningdek, u yoki bu tarkibiy qism bilan to'yingan maxsus suvlar[3].

Ichimlik suvlari sifatining bir qancha muhim ko'rsatkichlari mavjud bo'lib, bular: pH ko'rsatkichi, suvning qattiqlik va organoleptik ko'rsatkichi. pH ko'rsatkichi - vodorod ionlarining konsentratsiyasi bilan bog'liq va bizga suvning kislotali yoki ishqorli xususiyatlari haqida ma'lumot beradi. pH ko'rsatkichi - 7 dan kam - kislotali muhit; pH ko'rsatkichi - 7 -neytral muhit; pH ko'rsatkichi - 7 dan yuqori - gidroksidi muhit. Kalsiy va magniy ionlari tarkibidagi suvning qattiqligi suvning muhim xususiyatidir[3].

Eksperimental qism.

Ichimlik suvlarining organoleptik tahlili. Suvning organoleptik xususiyatlari deganda uning hidi, rangi, ta'mi va tiniqligi tushuniladi. Eng tejamkor tahlil usullaridan biri albatta organoleptik usul hisoblanadi.

Ichimlik suvlarini identifikatsiya qilish uchun uchta guruh ko'rsatkichlar taqdim etiladi. Bular: 1) organoleptik; 2) fizik-kimyoviy; 3) mikrobiologik. Ichimlik suvlarini organoleptik baholashda ball tizimini tatbiq etish joriy qilingan. Ball sistemasini joriy etishda degustatorlarning fikrlarini komissiya xulosasi orqali tahlil qilish: bu borada:

1. Degustatorlarga sezgi organlariga qo'yilgan talabni o'rganish;
2. Degustatsion komissiya ekspertlarini tashkil etish;
3. Organoleptik tahlilni to'g'ri baholash uchun ichimlik suvlar namunalarini to'g'ri tanlay olish;

Inson organizmidagi sezgi organlari va aniqlanadigan ko'rsatkichlarga qarab, organoleptik usullarni quyidagi kichik guruhlariga ajratish mumkin: - ko'rish usuli - (vizual usul) – ob'ektning ko'rinishi, rangini ko'rish yordamida idrok etishga asoslangan usul. Tashqi ko'rinish-bu shakl, tuzilishi va birlamchi holatni o'z ichiga oladi. Ko'rish usuli yordamida inson ob'ekt to'g'risida 70-80% ma'lumotga ega bo'la oladi.

- hid bilish usuli - mahsulotdan chiqayotgan hidlarni sezish va ajratish orqali mahsulot to'g'risida sifatini baholashga qaratilgan.

- ta'm bilish- deyarli barcha oziq – ovqat mahsulotlari va ichimlik suvlarini tatib ko'rish orqali sifatiga baho berish mumkin.

Yuqoridagi ma'lumotlarga asoslanib 2 xil namuna olindi:

1-namuna: Xlorlangan oddiy ichimlik suvi.

2-namuna: Qadoqlangan gazlanmagan ichimlik suvi.

100 ml o'lchamlarda kolbalarga solingan 2 xil namunalar avvalambor rang xususiyati bo'yicha tahlil qilindi. Xlorlangan oddiy ichimlik suvi solingan 1-namuna va qadoqlangan gazlanmagan ichimlik suvi 2-namuna quyosh yorug'ligida vizual kuzatildi. Rang xususiyatlari 1-namunada 2-namunaga qaraganda biroz noshaffoflikni qayd etdi.

Ta'm bo'yicha ko'rsatkich ham degustator tomonidan tahlil qilinganda xlor ta'mi me'yordan baland ekanligi aniqlandi. Aslida ta'msiz natijaga erishilishi kerak edi. Demak, xlorlash jarayonida standart talablari bo'yicha

chetlashish holati kuzatilgan. Hid bo'yicha ko'rsatkichlarda ikkala namunada ham normal holat qayd etildi.

Xulosa. Umumiy xulosa o'rnida shuni ta'kidlab o'tishimiz kerakki, insoniyat tomonidan iste'mol qilinadigan ichimlik suvlarining sifat va xavfsizlik ko'rsatkichlariga alohida e'tibor qaratilishi lozim. Chunki insoniyat sog'-salomat bo'lishligi 80% ichimlik suvi, iste'mol qilinadigan oziq-ovqat mahsuloti sifati hamda atmosfera havosi tarkibiga bog'liqligini aholimizning barcha qatlamlariga yanada keng targ'ib qilishimiz kerak.

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GLOBALLASHUV SHAROITIDA TALABALARINING SIFATLI TA'LIM Olishini TASHKIL ETISH

Annotatsiya : maqolada O'zbekiston Respublikasida globallashuv va mehnat bozori talablari sharoitida sifatli oliy ta'lim berish masalalari ko'rib chiqilgan. Mualliflar talabalar o'rtasida tanqidiy fikrlash va madaniyatlararo kompetentsiyani rivojlantirishdagi rolini ta'kidlab, muammoli ta'lim, amaliy tadqiqotlar usuli va boshqalar kabi usullarni aniqlaydilar.

Kalit so'zlar: globallashuv; mehnat bozori; o'qitish usullari; tanqidiy fikrlash.

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ORGANIZATION OF HIGH-QUALITY EDUCATION OF ITS STUDENTS IN THE CONTEXT OF GLOBALIZATION

Abstract: The article addresses the provision of quality higher education amidst globalization and labor market demands in the Republic of Uzbekistan. The authors identify methods such as Problem-Based Learning, Case Study Method, among others, emphasizing their role in fostering critical thinking and intercultural competence among students.

Keywords: globalization; labor market; teaching methods; critical thinking;

Kirish: globallashuv va ilm-fan va texnologiyalarning jadal rivojlanishi sharoitida sifatli ta'limni ta'minlash dunyoda barqaror o'sish va raqobat qobiliyatini oshirishga intilayotgan bu har qanday mamlakat uchun eng muhim vazifalardan biridir. O'zbekiston Respublikasi xalqaro jarayonlarning faol ishtirokchisi sifatida mehnat bozorining zamonaviy talablariga javob beradigan yuqori malakali mutaxassislarni tayyorlash maqsadida oliy ta'limning islohoti va ilg'or tizimiga ham katta e'tibor qaratmoqda.

Dolzarbliigi: O'zbekistonda talabalarning sifatli ta'limini global tashkil etish sharoitida quyidagi sabablarga ko'ra dolzarblik kuzatilmoqda:

Dunyo ta'limli muhiti va integratsiya: o'zbekistonlik bitiruvchilar rahbarlarining global mehnat bozorida muvaffaqiyat qozonishi va ularning raqobatbardoshligini ta'minlash uchun ta'lim dasturlari va standartlarini ilg'or jahon amaliyotlari bilan uyg'unlashtirish zarur [1, 2].

Inson kapitalini rivojlantirish: sifatli ta'lim inson kapitalini rivojlantirishning asosiy omili bo'lib, u o'z navbatida mamlakatning iqtisodiy o'sishi va innovatsion rivojlanishiga yordam beradi [3, 4].

Tez o'zgaruvchan sharoitlarga moslashish: tezkor texnologik o'zgarishlar va global raqobat sharoitida talabalarning malakasini ta'minlash, yangi sharoitlarga tezda moslashish va o'z malakalarini doimiy ravishda oshirish kerak [5, 6].

Xalqaro hamkorlik: fan, texnologiya va innovatsiyalar bo'yicha xalqaro hamkorlik tomonidan yaratilgan ta'lim sifatini oshirish, bu usul va tajriba almashish uchun yangi imkoniyatlar ochadi [7, 8].

Ushbu omillarni inobatga olgan holda, Respublika Oliy ta'lim tizimida O'zbekistonning ta'lim sifatini oshirish va xalqaro standartlarga muvofiqligiga qaratilgan innovatsion yondashuv va islohotlarni faol joriy etmoqda.

Ishning maqsad: globallashtirish, mehnat bozorining zamonaviy zamonaviy talablari va xalqaro standart sharoitida O'zbekiston Respublikasidagi talabalar uchun sifatli oliy ta'limni ta'minlash.

Vazifalar: jahon mehnat bozorida o'zbek bitiruvchilarining raqobatbardoshligini oshirish uchun ta'lim dasturlarini integratsiyalashuvi va jahon ta'lim makoniga muvofiqligi.

Sifatli ta'lim orqali inson kapitalini rivojlantirish mamlakatning iqtisodiy o'sishi va innovatsion rivojlanishining omili sifatida.

Doimiy malaka oshirish orqali talabalarni tez o'zgaruvchan sharoitlarga va texnologiya o'zgarishlariga moslashtirish imkoniyati.

Oliy ta'lim sohasida ilg'or texnika va tajriba almashish uchun fan, texnologiya va innovatsiyalar bo'yicha xalqaro hamkorlikni kengaytirish.

Tadqiqot usullari: Standartlar va dasturlarni ishlab chiqish tahlili (manba: "Oliy ta'lim ta'lim dasturlarini ishlab chiqish va yangilash bo'yicha uslubiy tavsiyalar").

Bitiruvchilarning kompetentsiyalarini baholash

Mehnat bozorini tahlil qilish

Ish beruvchilarning bitiruvchilarning malakalariga bo'lgan talabni aniqlash

O'zbekistonda globallashtirish sharoitida talabalarning sifatli ta'limini tashkil etish sohasidagi tadqiqot maqsadlari, vazifalari va usullari bo'yicha natijalar va yechimlarini ko'rib chiqish mo'mkin.

Manbalarga tayanib, globallashtirish sharoitida talabalarning sifatli ta'limini tashkil qilish uchun ishlatilishi mumkin bo'lgan ba'zi pedagogik usullar:

Muammoga asoslangan ta'lim (Problem-Based Learning, PBL) : PBL talabalarning mustaqil ishga undaydi va tanqidiy fikrlashni rivojlantirishga

yordam beradi. Ushbu usul ilmiy muammolarni hal qilishga qaratilgan va boshqa usullar bilan birlashtirilishi mumkin, masalan, Case-stady va chuqur, muammoga asoslangan ta'limni shakllantiruvchi insho (PBL).

Keys-stadi usuli: keys-stadi usuli u muammoli vaziyatlarni hal qilish, real hayotga yaqinlashish uchun amaliy ko'nikmalarni rivojlantirishga undaydi. Case usuli talabalarning fikrlash ijodkorligini, intellektual qarorlarida moslashuvchanlikni shakllantiradi va yumshoq ko'nikmalarni rivojlantirishga yordam beradi.

Loyihaga yo'naltirilgan ta'lim (loyihaga asoslangan ta'lim, PBL) : Ptbl ham muammolarni hal qilishga qaratilgan va uni PBL turi sifatida ko'rish mumkin. Bu ilmiy muammolarni hal qilishga qaratilgan loyiha ustida ishlashni o'z ichiga oladi.

Inverted class: Inverted class har kuni har bir sinfdagi har bir o'quvchini o'z ichiga oladi. Ushbu usul o'quv jarayonini faollashtirishi va talabalarning motivatsiyasini qo'llab-quvvatlashi mumkin.

Aralash ta'lim (aralash ta'lim) : aralash ta'lim an'anaviy sinf shakllarini maxsus texnologiyalardan foydalangan holda o'qitish manbalari bilan birlashtiradi. Ushbu usul, ayniqsa globallashuv va axborot texnologiyalarining rivojlanishi sharoitida o'qitish sifatini oshirishi mumkin.

Madaniyatlararo ta'lim: madaniyatlararo ta'lim talabalarga tez o'zgaruvchan sharoitlarga moslashishga va malakani o'zgartirish orqali texnologiyalarni o'zgartirishga yordam beradi. Ushbu usul talabalar o'rtasida madaniyatlararo kompetentsiya va global hamkorlikni rivojlantirishga yordam beradi.

Virtual harakatchanlik: talabalar uchun virtual harakatchanlik fan, texnologiya va innovatsiyalar bo'yicha xalqaro hamkorlikni kengaytirishi mumkin. Ushbu usul oliy ta'limda oldingi usullar va tajribalar almashinuviga yordam berishi mumkin.

Onlayn hamkorlik: onlayn hamkorlik, ayniqsa globallashuv va axborot texnologiyalarining rivojlanishi sharoitida ta'lim sifatini oshirishi mumkin. Ushbu usul tosh ko'nikmalarini rivojlantirishga va katta hajmdagi ma'lumotlarni qayta ishlash qobiliyatiga hissa qo'shishi mumkin.

Xulosa: zamonaviy pedagogik tadqiqotlar va ilg'or amaliyotlarga asoslangan ushbu usullar tanqidiy fikrlashni, muammolarni hal qilish ko'nikmalarini, madaniyatlararo kompetentsiyani rivojlantirishga va talabalar o'rtasida global hamkorlikni ta'minlashga yordam beradi. Zamonaviy pedagogik tadqiqotlar va ilg'or amaliyotlarga asoslangan ushbu usullar tanqidiy fikrlashni, muammolarni hal qilish ko'nikmalarini, madaniyatlararo kompetentsiyani rivojlantirishga va talabalar o'rtasida global hamkorlikni ta'minlashga yordam beradi.

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PEDAGOGLARDA KASBIY EMOTSIONAL ZO‘RIQISHLARNI OLDINI OLISHNING PEDAGOGIK-PSIXOLOGIK TOMONLARI

***Annotatsiya:** Ushbu maqolada pedagoglarning kasbiy faoliyati davomida kelib chiqadigan kasbiy emotsional zo‘riqishlarini qanday qilib oldini olish va bartaraf etish mumkinligi haqida fikr yuritilgan.*

***Kalit so‘zlar:** Pedagog, kasbiy zo‘riqish, stress, profilaktika, emotsiya, A.M.Bakovikov, kommunikatsiya, A.B.Lenova, Ye.S.Jarikov, stressor, Hans Seyle, eustress, distress, kreativ, reglament.*

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PEDAGOGICAL AND PSYCHOLOGICAL ASPECTS OF PREVENTING PROFESSIONAL EMOTIONAL TENSION IN TEACHERS

***Annotation:** This article discusses how to prevent and eliminate professional and emotional stress that occurs during the professional activity of pedagogues.*

***Key words:** Pedagogue, occupational stress, stress, prevention, emotion, A.M. Bakovikov, communication, A.B. Lenova, Ye.S. Zharikov, stressor, Hans Seyle, eustress, distress, creative, regulation.*

Pedagoglik kasbi eng sharaflı kasblardan biri, chunki u har bir kasb egasiga, u xoh quruvchi bo‘lsin, xoh hokim, barchasining qo‘liga qalam tutib yozishni o‘rgatgan, harf tanitgan. Pedagog o‘quvchiga nafaqat ta‘lim, balki tarbiya ham beradi. Bu kasb faxrli kasblardan bo‘lish bilan bir qatorda, faoliyati davomida o‘ziga xos qiyinchiliklarga duch keladi. Buning natijasida kasbiy emotsional zo‘riqishlar kelib chiqadi. Keling, bu haqida so‘z yuritishdan oldin, Pedagog kim? Pedagoglik kasbi tarixi haqida va uning bugungi kundagi pozitsiya va vazifalari to‘g‘risida qisqacha ma‘lumotlar bilan tanishamiz.

Pedagog – yunon tilidan tarjima qilganda “παῖς” (paida) — bola, “ἄγω” (gogos)— yetaklovchi, ya’ni “bola yetaklovchi” degan ma’noni anglatadi.⁹ Qadimgi Yunonistonda o‘z xo‘jayinlarining bolalarini sayr qildirgan, ehtiyot qilgan tarbiyachini pedagog deb atashgan. Keyinchalik bu atama kengayib, maxsus bilimlarni egallagan mutaxassislarga nisbatan qo‘llanila boshlagan. Ularning ta‘lim-tarbiya borasidagi faoliyati va to‘plagan tajribalari asosida

⁹ X.Ibragimov, Sh.Abdullayeva. “Pedagogika nazariyasi” darslik. Toshkent-2008

“Pedagogika” fani vujudga kelgan. Bugungi kunda pedagog sifatida pedagogika mutaxassisi, bolalar va yoshlarni tarbiyalash va o‘qitish bilan shug‘ullanuvchi, shu soha bo‘yicha maxsus tayyorgarlikka ega bo‘lgan shaxs nazarda tutiladi.

Endi esa yuqoridagi “O‘qituvchi-pedagog o‘z faoliyatida duch kelishi mumkin bo‘lgan vaziyatlar va uning oqibatida vujudga kelishi mumkin bo‘lgan zo‘riqishlar va ularni oldini olish” haqida mavzumizni bayon qilsak. O‘qituvchi o‘z faoliyati davomida nafaqat o‘quvchilar bilan, balki o‘z hamkasblari va ta’lim muassasasi rahbarlari bilan ish olib boradi. Har bir kasbda bo‘lgani singari pedagoglarda ham kasbiy zo‘riqishlar bo‘lishi tabiiy hol. Keling shu o‘rinda kasbiy zo‘riqish va uning turlarini izohlasak. Kasbiy zo‘riqish bu ish faoliyati bilan bog‘liq zo‘riqish bo‘lib, xodimning kasbiy faoliyati bilan bog‘liq salbiy emotsional holati hamda ekstremal omillarga duch kelganda yuzaga keladigan noxush his-tuyg‘ularidir. Kasbiy zo‘riqishlar bugungi kunda “Kasbiy stress” deb ham ataladi. A.B.Lenova kasbiy stressni shunday turlarga ajratadi:¹⁰

- Axborotli stress;
- Hissiy stress;
- Kommunikativ stress.

Endi “Axborot stressi”ga qisqacha to‘xtalib o‘tamiz. Axborot stressi bu tashqi muhitdan olingan har xil, haddan tashqari ko‘p miqdordagi ma’lumotlar natijasida insonda yuzaga keladigan zo‘riqishlardir. Bunday stress quyidagi sabablar natijasida kelib chiqishi mumkin:

- Axborotning haddan tashqari ko‘payishi;
- Pedagog o‘ziga berilgan vazifalarni vaqtida bajara olmasa;
- Dars jarayonini olib borish uchun o‘quv qo‘llanmalarining yetishmasligi natijasida yuzaga keladi.

Bunday stressni oldini olish uchun quyidagilarga diqqatimizni qaratishimiz lozim:

- Pedagog o‘z ishlarini vaqtga nisbatan to‘g‘ri taqsimlashi kerak;
- Pedagog o‘z faniga doir yangiliklar bilan tanishib borish bilan bir qatorda, qiziqarli faktlar to‘plab o‘quvchida fanga nisbatan ko‘proq qiziqish uyg‘otish kerak;
- Pedagog imkon qadar har sohadan xabardor bo‘lishi, zamon bilan hamnafas bo‘lishi lozim;
- Berilgan topshiriqlarni o‘z vaqtida bajarishi zarur.

Hissiy stress deganda, inson biror-bir voqeadan qattiq ta’sirlanishi, shuning oqibatida noxush his-tuyg‘ular girdobida qolishi nazarda tutiladi. Bunday stressga quyidagilar sabab bo‘lishi mumkin:

- O‘quvchilar tomonidan o‘qituvchining faniga bo‘lgan qiziqishning sustligi;
- Darsdagi kelishmovchilik yuzasidan kelib chiqadigan g‘azablanish tuyg‘usi;

¹⁰ Sh.E.Yakubova. “Pozitiv dunyoqarashni shakllantirishga oid ma’naviy pedagogik merosning mazmun-mohiyati”. Buxoro-2022

- Nohaqlik ortidan yuzaga keladigan aybdorlik hissi;
- Ishdagi hamkasblar bilan qarama-qarshilik;
- Tahqirlashga duch kelganda;
- Ta'lim muassasasi rahbariyati bilan ziddiyatlar mavjud bo'lishi natijasida hissiy stress vujudga keladi.

Pedagog hissiy stressdan saqlanish uchun quyidagilarga amal qilsa, bu stress bilan bog'liq muammolar nisbatan o'z yechimini topgan bo'ladi:

- Pedagog doim pozitiv fikrlashi darkor;
- O'qituvchi o'z fanining haqiqiy mutaxassisi bo'lishi kerak;
- Pedagog hamma voqealardan ham ta'sirlanib, hissiyotlarga berilmasligi zarur.

Xulosa o'rnida shuni aytishimiz mumkinki, kasbiy emotsional zo'riqishlar har bir kasbda, shu jumladan pedagoglik kasbida ham odat tusiga kirgan tabiiy jarayondir. Avvalambor, pedagoglarni bunday holatlarga tushirmaslikka va pedagog sifatida o'zimiz tushmaslikka harakat qilishimiz zarur, agar pedagoglar bunday vaziyatlarga duch kelgan vaqtida ham o'zlarini yo'qotmagan holda, ustalik bilan vaziyatdan chiqa bilishlari kerak. Bunda, albatta, pedagoglar uchun yaqin insonlari, ya'ni oilasi va yon-atrofdagilar, hamkasblar, ta'lim muassasasi rahbariyatining ko'magi hamda o'quvchilarning ustozga bo'lgan hurmati katta ahamiyat kasb etadi. Agarda pedagoglarda kasbiy emotsional zo'riqishlar vaqtida bartaraf qilinsa, pedagogik-psixologik profilaktik ishlar amalga oshirilsa pedagoglarning ma'naviy hayotida pozitivlikka erishgan bo'lamiz.

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THE ROLE OF FAMILY ENTREPRENEURSHIP IN REDUCING POVERTY IN THE URTACHIRCHIK DISTRICT OF THE TASHKENT REGION

***Annotation.** This article examines the characteristics of family business development in Urtachirchik district. This article explores the role and importance of family entrepreneurship in reducing poverty in the Urtachirchik District of Tashkent region. The article also analyzes achievements and problems in the field of family business in the region, as well as the experiences of developed countries.*

***Key words:** Family business, poverty, production, fish and poultry farming, family, mini-farm, taxes, payment, salary.*

The role and importance of family entrepreneurship in reducing poverty in the Urtachirchik District of the Tashkent region is enormous. Measures are being taken in the district to reduce. Including in reducing poverty, much attention is paid to the development of family entrepreneurship.

In recent years, the role of family enterprises in the development of sectors of the economy of Uzbekistan has been increasing. As of January 1, 2022, there are 52,906 family enterprises operating in our republic (Table 1). Business is developing most actively in the Samarkand and Fergana and Surkhandarya regions - the largest number of such enterprises operate there. Syrdarya region ranks last in the number of family enterprises.

Table 1
Number of family businesses in Uzbekistan, 2022 y

№	Region	Number
1	Samarkand region	9 176
2	Fergana region	5 808
3	Surkhandarya region	5 445
4	Khorezm region	4 699
5	Tashkent region	4659
6	Kashkadarya region	4 281
7	Navoi region	4 012
8	Tashkent city	3 494
9	Bukhara region	3 317
10	Andijan region	2 947
11	Republic of Karakalpakstan	1 940
12	Jizzakh region	1 695
13	Namangan region	1 179
14	Syrdarya region	352
	total	52 906

The formation of a market economy involves solving many economic problems, among which the development of entrepreneurial activity occupies an important place, and the family is involved in these processes.

Currently, family business is becoming one of the types of entrepreneurial activity formed at the intersection of two social institutions: family and business.

At its core, family entrepreneurship is a type of small business. The main features of family entrepreneurship are: the use of family property and financial resources as initial capital, as well as raising borrowed funds secured by family property; use of labor of family members in economic activities; consumer principle in economic activity, i.e. production for own needs and for the market.

Family entrepreneurship can operate in various fields. The experience of various countries shows that family businesses have more than 200 types of activities. These are small wholesale and retail trade, consumer services, small restaurant business, transport services for the population, farming, rental of cultural, household and household equipment, minor repairs and construction of housing, dachas, garages, utility and cultural buildings, accounting and auditing, folk crafts. Within the household, it is possible to organize intellectual work for specialists, scientists and young people who own computer equipment.

The interaction of the business structure with family connections provides a high level of motivation for entrepreneurial activity, ensures the sustainability of the family business and its organizational unity. The particular

importance of family business is expressed in the possibility of involving family members with limited employment opportunities who cannot find work in other areas of activity.

In developed countries, family businesses play a key role in economic growth and job creation. In the United States, for example, more than 80% of all enterprises are family-owned, they provide about 60% of total employment and create about 80% of new jobs. In Great Britain, family businesses make up 75% of all firms in the country, producing about 50% of the national product; family businesses employ half of the country's population. In EU countries, family firms make up 85 percent. Moreover, among small enterprises family enterprises predominate (68%), i.e. they constitute the economically active part of small businesses.

In 2023, the population of Urta-Chirchik district will be provided with preferential loans at a rate of 14% per annum as part of family business development programs. For those who want to engage in family business, certain work activities aimed at generating income, and expand the type of activity, loans will be issued for up to three years, including a grace period of three to six months.

Those wishing to specialize in livestock farming (cattle, sheep, goats), fish farming and poultry farming (egg production) - for a period of up to three years, including a grace period of up to one year. Priority will be given to those who aim to create mini-farms for breeding from 10 to 50 heads of pedigree livestock (cattle, sheep, goats) imported from abroad.

The families who decide to try their hand at gardening, viticulture and lemon growing, as well as those in need of purchasing greenhouses, agricultural machinery and equipment, will be provided with loans for up to seven years, including a grace period of up to three years.

The members of the Association "Khunarmand" ("Craftsman") can count on receiving preferential loans for a period of up to three years and for replenishing working capital for a period of up to 18 months. The preferential loans are given for the purchase of equipment, spare parts and raw materials, the creation of centers for the development of handicrafts, "Master-Apprentice" schools), the construction of house-museums and workshops or the acquisition of buildings and structures for these purposes.

The loans will be allocated based on the recommendation of the assistant to the head of the district (city) on issues of entrepreneurship development, ensuring employment and reducing poverty in the mahalla (block of houses or flats). When allocating funds, priority will be given to projects aimed at ensuring self-employment of citizens included in the "iron notebook", "women's notebook" and "youth notebook" (these are lists of low-income people in need of social protection and support for citizens), gainful employment or provision of their employment by permanent work (job creation). At the same

time, the provision of loans will not be a basis for excluding citizens from these lists.

The results of the study showed that to accelerate the development of family entrepreneurship in the Urta-Chirchik region and increase its efficiency, the following measures are most appropriate:

- Identification in each region of the district of priority areas for the development of family entrepreneurship, taking into account local conditions to strengthen state support for this area;
- expanding financial support for family businesses through public and private banks, special funds and various government programs;
- creation of specialized targeted programs in the banking sector for lending to family businesses;
- providing property support to family businesses through financial leasing;
- promoting the innovative orientation of family businesses in order to produce and process new and competitive products, developing incentives and benefits that encourage entrepreneurs to switch to the production of innovative types of products, promoting the introduction of modern technologies and innovations in family businesses;
- full assistance from the state in expanding the investment potential of remittances from labor migrants, involving them in public and private projects on a mutually beneficial basis;
- creation of specialized services for conducting research in the field of family entrepreneurship;
- increasing the efficiency of business centers and business incubators in the regions, attracting economic educational institutions to conduct courses on organizing family businesses, trainings with the participation of the most successful family entrepreneurs, organizing internships to exchange experiences among family business representatives;
- increasing the efficiency of information and consulting centers in order to provide more complete and accessible information support for family entrepreneurship;
- introduction into the practice of recording the activities of family enterprises according to the range of indicators adopted in statistical reports on small businesses.

A significant part of the listed activities, developed on the basis of scientific research, studying the experience of foreign countries, the characteristics of domestic family businesses, and public opinions on ways to improve them, are already being implemented and are beginning to bring results.

As of May 1, 2022, 5,130 family enterprises were registered in the Tashkent region, of which 4,659 are operating.

In total, in 2022, 782 family enterprises operated in the Urtachirchik district, of which 215 enterprises are located in the city of Nurafshan, 567 in the district (Table 2).

The 30% of family enterprises in the district work in industry, 21% in agriculture, the rest work in the service and transport sectors.

Table 2

Number of operating family businesses, by regions of Tashkent region

№	Districts and cities	Number of family businesses
1	Nurafshon city	215
2	Almalyk city	89
3	Angren city	129
4	Bekabad city	57
5	Akhangaran city	82
6	Chirchik city	56
7	Yangiyul city	99
8	Akkurgan district	197
9	Akhangaran district	90
10	Bekabad district	71
11	Bostanlyk district	431
12	Buka district	73
13	Kuyichirchik district	58
14	Zangiata district	421
15	Yukorichirchik district	393
16	Kibray district	325
17	Parkent district	396
18	Pskent district	48
19	Urtachirchik district	567
20	Chinaz district	126
21	Yangiyul district	324
22	Tashkent district	412

In conclusion, it should be emphasized that growth is observed in all sectors of the economy of the Urtachirchik region. In particular, it is clear that the role of family businesses is increasing every year.

The growth of the role of family businesses is especially great as a result of reforms in the agricultural sector and the service sector, which occupies a large place in the economy of the region. As a result, the region's agriculture moved towards intensive development. Despite the achievements in the region, there are also problems. The examples of this are land shortage and investment, declining productivity, etc.

The current state of development of the service network, which occupies an extremely important place in a free market economy, cannot be called satisfactory. Such types of services as tourism, bank loans, insurance, auditing, and consulting do not have good indicators.

Based on the above conclusions, it can be stated that with the effective use of the geographical location, the economic potential and other opportunities of the region, further development of the region's economy is possible by attracting foreign and domestic investment.

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SOCIO-ECONOMIC GEOGRAPHICAL FACTORS INFLUENCING THE LEVEL OF POVERTY

Abstract

This article examines the economic-geographical factors that cause poverty and their characteristics and their impact on poverty.

Key words: Poverty, natural-geographic factors, social-economic geographic factors, inflation, climate change.

It is impossible to study the problem of poverty without identifying a number of factors that affect its origin and spread. Today there are many classifications of the causes of poverty. Some researchers distinguish between social, cultural, and political causes, while others identify primary and secondary causes.

It is known that the poverty level is the main indicator used in assessing the problem of poverty and in social programs aimed at reducing it. It represents the number of people with cash incomes below the subsistence level, determined on the basis of data on the distribution of the population by the level of per capita cash income. The subsistence minimum is an indicator of the volume and structure of consumption of the most important material goods and services at the minimum acceptable level, ensuring the conditions for maintaining the active physical condition of adults, the social and physical development of children and adolescents. The amount of the subsistence minimum at the regional level is determined by executive authorities, based on local consumption characteristics and resource capabilities [2]. The extreme poverty level is also used to characterize the scale of poverty - this is the share of the population with cash incomes below half the subsistence minimum.

Another criterion for assessing the level of poverty of the population is the poverty depth index, which is the distance at which the poor population is in relation to the poverty line.

With an increase in the distance below the poverty line at which the poor population is, the poverty depth index increases. It is believed that for a

population whose per capita income slightly exceeds the subsistence minimum, the poverty depth index takes on a zero value [6].

A number of factors influence the high or low level of poverty in countries and their regions.

It is appropriate to study the factors influencing poverty into two main groups (10).

The first group includes geographical factors affecting poverty. In turn, they are divided into two groups: natural and socio-economic.

The second group includes non-geographical factors affecting poverty, including economic, political, socio-medical, education and skills, as well as religious-philosophical and psychological factors.

Among the factors affecting poverty, socio-economic geographical factors remain relevant today. Because these factors have a great impact on increasing or decreasing the level of poverty.

It is appropriate to study socio-economic geographical factors in turn into three subgroups.

Socio-economic geographical factors include disadvantage of economic-geographical location, bordering of settlements with high economic competence and rich areas, uneven distribution of resources, characteristics of consumption, differences between cities and villages, underdevelopment of industrial sectors, agriculture network problems, poor condition of transport infrastructure form the first subgroup and are of particular importance.

The second subgroup of demographic indicators includes the geographical distribution of the population, high natural population growth and rapid population growth, single-parent families with many children, families with a high dependency burden, an increase in the number of disabled people, and the development of false urbanization.

We can observe that the role of regional-geographical factors belonging to the third subgroup is increasing in recent years. This subgroup includes uneven development of productive forces, large differences in the economic potential of regions, depressed economic and mono-economic regions, subsidized regions with low economic potential, regions dependent on centralized supply of food and resources. Also, factors such as the state of economic development of regions also affect poverty.

In the first subgroup, the economic and geographical disadvantage of the regions has a significant negative impact on the level of poverty.

To describe the economic-geographical position of the region, its geographic location close to the main transport routes, fuel, raw material bases, industrial enterprises, agricultural facilities, and the centers of creation and distribution of innovative technologies. , it is necessary to take into account that the economic-geographical position of the regions may change over time.

If the economic-geographic location of the region can be used, this situation will lead to a decrease in the level of poverty. Otherwise, the number of

poor people will be high. Also, the economic competence of settlements is in rich and high regions, bordering capitals and big cities, and the level of sustainable development of regions also affects poverty. The reason is that if the economic competence of the region is high and it borders the capital and big cities, the residents of this region can be provided with work due to the proximity of these regions. This, in turn, increases the income of families and increases their financial capabilities.

What is more, the borders of the regions with countries with developed economy and lack of labor resources also serve to improve the living conditions of the population. The reason is that unemployed people can go to work in these countries and have the opportunity to increase their income. An example of this is the less developed European countries such as Bulgaria, Moldova, Romania, and Albania. People living in the border regions with Kazakhstan, especially in the Tashkent region, where there is a need for labor migration in Uzbekistan, are taking advantage of this opportunity.

The effect of uneven distribution of resources on the development of poverty has been studied by scientists since ancient times. The state of providing the region with land, water, mineral raw materials, biological and recreational resources determines the level of this problem. A region that is resource-rich and well-endowed has a low rate of poverty.

It has been proven in practice that the disparity between cities and villages creates the problem of poverty. In many regions, large or medium-sized cities have a well-developed infrastructure, a large number of industrial and service facilities and, accordingly, a sufficient number of jobs, high wages and living standards, and a relatively small number of urban poor. On the contrary, the lack or non-existence of such opportunities in rural areas leads to a large number of poor people. In many countries of the world, including Uzbekistan, the problem of poverty in rural areas is more acute than in urban areas. To be more specific, the poverty rate is lower in highly urbanized regions.

Industry occupies a very large place in the country's economy and population employment. The issue of developing industry and solving the problem of unemployment through it has been in the constant focus of the President of the Republic of Uzbekistan Sh.M. Mirziyoyev.

It has been scientifically proven that the underdevelopment or non-existence of industrial sectors in the regions has a significant negative impact on poverty. Because industrial enterprises are the locomotive of the economy of any country or region. It is industrial enterprises that provide employment to the population and improve their living conditions. On the basis of diversification of industry, it will be possible to provide employment to many people, and it will be possible to completely eliminate the problem of poverty in the region.

It should be noted that Uzbekistan is located in the center of the Eurasian continent, far from the oceans, far from developed countries (EU countries, the USA and Canada, Japan, the Republic of Korea, Singapore, etc.), and industrial

processing and production of finished products. No matter what raw materials or components are imported from foreign markets, logistics costs (for import and export) are high. Therefore, we should, first of all, pay attention to sectors based on the local raw material base on the one hand, and on the other hand, which are in high demand in the local market. Also, it will be necessary to develop innovative industries based on new advanced technologies, based on opportunities, and this will increase the number of jobs.

It is necessary to ensure a wider connection between industrial capacities and the internal needs of the national economy. In order to increase jobs and thereby reduce poverty, attracting both domestic and foreign investments for the development of industries such as housing complex, energy complex, textile industry, building materials industry, electrical engineering, radio electronics, precision engineering, robotics it is necessary to do. However, solving the issues of support and development of industries with their own raw material base, which make the greatest contribution to creating added value and ensuring employment of the population, remains relevant today.

Agriculture is one of the main branches of our country's economy. The reason is that most of the country's population is employed in this field. Favorable natural and climatic conditions of Uzbekistan, selfless and hardworking people, well-thought-out strategy of our country in this regard serve the rapid development of the agricultural sector: the beautiful, tasty, ecologically clean fruits of our country are grown on our land, they are world famous. is very popular in the markets.

In the years of independence of Uzbekistan, large-scale changes and quality changes in agriculture, optimization of arable land and a comprehensive policy on zoning of agricultural crops were implemented not only to increase productivity, but also to increase production made it possible to significantly increase the level, and through this, the population's standard of living is being somewhat improved.

According to the Food and Agriculture Organization of the United Nations (FAO), more than three-quarters of the world's poor live in rural areas. Most of the population's income depends on agriculture. However, employment opportunities in rural areas are often unstable, informal, poorly paid and can even be dangerous.

Poverty and hunger cannot be eradicated until the disparity in opportunities and working conditions in rural areas is eliminated. FAO is working to create decent employment in agriculture and non-agriculture sectors, including supporting responsible investment in agriculture and food systems and through inclusive policy dialogue.

FAO influences global, regional and national processes on key issues such as youth employment, migration, child labour, jobs that maintain or restore environmental quality, working conditions and the availability of data and evidence. FAO actively supports governments in developing policies, strategies

and programs for decent employment in rural areas, with a focus on vulnerable population groups, particularly youth, women, migrants and children. To achieve this goal, FAO works with other UN agencies, civil society, producer organizations, academia and the private sector. Therefore, poverty can be reduced through the development of agriculture in the regions, effective use of modern technologies, implementation of "Smart agriculture" and "Sustainable agriculture". Without doubt, it is necessary to take into account problems such as drought and soil degradation caused by climate change.

Free economic zones have a great role in reducing poverty by providing employment to the population. Today, more than 4,000 free economic zones (400 free trade zones, as many research and production parks, more than 300 export-production parks, 100 zones of special direction) are operating in the world.

A free economic zone is a specially designated area with clearly defined administrative borders and a separate legal order, which is created in Uzbekistan in order to attract domestic and foreign capital, promising technology and management experience for the rapid socio-economic development of regions.

In recent years, considerable work has been carried out in Uzbekistan to liberalize and modernize the economy, to produce competitive products and to employ the unemployed population.

Particular importance was paid to ensuring the rights and legal interests of investors, and ensuring the investment attractiveness of our country in all aspects.

It is evident that the activities of free economic zones (FEZ) are important in attracting investments, creating a favorable environment and conditions for investors. Based on world experience, establishment of FEZ was started in Uzbekistan during the years of independence. Countries such as Italy, China, Egypt, Croatia, UAE, South Korea, Serbia, Colombia are the leaders in the number of FEZs in the world.

It is known that in 1996, the Law "On Free Economic Zones" was adopted in Uzbekistan. This law defined the status of free economic zones, the order of organization, the guarantee of the rights and interests of legal entities, customs, currency, tax procedures and other important regulations in these zones [1].

On December 2, 2008, the Decree of the President of the Republic of Uzbekistan on the establishment of the free economic zone of the Navoi region was adopted, and it went down in history as the first FEZ established in our country. With this document, separate customs and tax regimes, a simplified procedure for the entry, stay and exit of non-resident citizens of the Republic of Uzbekistan, as well as obtaining permits for the implementation of labor activities, were introduced in the territory of the FEZ.

Later, "Angren" and "Jizzakh" special industrial zones were established. Free economic zones make a significant contribution to attracting foreign

investments in the regions, increasing their export capacity, and providing employment to the people there, and raising their lifestyle.

In order to create the necessary conditions for this sector, 24 free economic zones and more than 400 small industrial zones were established in recent years, more than 15 trillion soums were allocated to their infrastructure.

SEZs established in our republic can be divided into 4 groups based on their scope of activity. These are industries, pharmaceuticals, agriculture and tourism.

In our country, several billion dollars of financial resources have been allocated to turn industries such as textiles, chemistry, building materials, leather, pharmaceuticals, electrical engineering into "drivers".

As a result, in recent years, the number of industrial enterprises has increased 4 times to over 100,000, and the volume of production has increased by 2 times.

This has a positive effect on the development of these regions. In particular, new industries such as construction materials, automobile industry, food industry, which did not exist before, have appeared in many regions.

Large-scale metal processing projects are being implemented in Samarkand, Syrdarya, Namangan and other regions.

In the last three years, the volume of production in the chemical industry has increased by 1.5 times, and exports by 2 times.

Textile and tailoring enterprises are of great importance in providing employment to the population, especially in ensuring the employment of women.

According to the results of the research, the lack of infrastructure development in the regions also affects the level of poverty. For example, poorly developed or non-existent roads, telecommunication networks, sewage facilities, gas, water and electricity supply, schools, kindergartens and medical facilities have a significant negative impact. This can lead to slower output growth, less productive employment, lower investment, fewer jobs, lower living standards and increased poverty.

The condition of the transport infrastructure has a special effect on poverty. As we know, transport is important for the economic and social development of regions and helps countries to regional and global cooperation and support the economy.

Historically, the development of the country's transport sector has been an indicator of its economic prosperity and success.

Small business is of great importance in reducing poverty and developing the economy of regions. Small business and private entrepreneurship are especially important in the development of industry, agriculture, trade and services. Due to the ability to quickly change his field of activity and specialization, he has the opportunity to actively absorb science and technology innovations. Small business and private entrepreneurship contribute to the

development of a competitive environment, thereby reducing the degree of monopolization of the economy, and it is one of the main directions of the formation of owners. Its small size is the reason for its popularity, and therefore this form of entrepreneurship comes in handy when creating new jobs.

The share of small business entities in total employment in Uzbekistan in 2023 was 74.1%. This indicator shows that the importance of small business in providing employment to the population in Uzbekistan is increasing.

- Demographic indicators and the lifestyle and condition of the population belonging to the second subgroup are of particular importance. For example, reduced working capacity due to factors such as poor health, chronic illness or disability increases the risk of falling into poverty, thereby reducing the likelihood of earning a normal income and limiting economic independence. Psychological diseases or disorders (apathy, depression, etc.) also have a significant impact on economic activity.

- Access to education and vocational skills has a significant impact on the poverty rate. According to the World Bank, the development of education contributes to economic growth, an increase in the volume of national production and introduced innovations, and the formation of social responsibility. Groups at risk of falling into poverty are always found among illiterate population groups who do not have higher education, do not have the required specializations and qualifications.

- Undoubtedly, unemployment is the main factor in the formation of poverty both in the region and in the country as a whole. Unemployment stimulates the development of crime, the scale of hidden employment and informal work, which, as a rule, leads to a violation of statistical data on the real state of living of the population.

- Our state should maintain economic stability, increase the size of GDP, ensure employment and income of the population, and most importantly, alleviate the budget deficit by exporting the products produced in the industrial and agricultural sectors in the enterprises operating in the regions, and thereby increase the employment of the population and improve their living conditions. is one of the most important tasks in the day.

- We would like to make the following suggestions for the implementation of these works:

- diversification of industry and agriculture and thereby launching new industries;

- the construction industry is one of the areas with great opportunities for maintaining economic stability, and the full implementation of foreign experience in the further development of this area;

- to increase the production of import-substituting products, to increase the number of new jobs and to develop the "import-free economy" system;

- development of measures for effective use of farms and people's homesteads, systematic organization of crop planting, and increase in the volume of production, and increase the volume of preferential loans to them;
- using all available opportunities to increase exports while fully satisfying domestic demand in our country and moving to the principle "Each enterprise must export its products";
- to increase the volume of production by 10 times, paying great attention to sectors such as beekeeping, ostrich breeding, and cocoon breeding, to fully utilize the opportunities of forestry;
- to further encourage full transition to drip irrigation and other innovative systems in agriculture to save water;
- further development of both domestic and international tourism in compliance with quarantine rules;
- to increase the share of services in the gross domestic product by attracting foreign investments in the development of all service areas, including insurance, consulting, engineering, auditing, evaluation services;
- the implementation of the Islamic financial system and thereby increasing business entities and new jobs;
- providing comprehensive support to small business entities and increasing their share in the gross domestic product from 74% to 80-85%;
- to increase the number of free economic zones (currently 24 are operating) to 50 in order to increase economic stability. Effective use of existing economic opportunities and resources through the establishment of free economic zones, especially in the fields of education, medicine, logistics, and service provision;
- attracting unemployed citizens to temporary or permanent activities in areas of high demand during the crisis;
- development of a system of social security guarantees, including unemployment insurance and workers' compensation;
- allocating interest-free loans to the organization of activities for remote work;
- development of employment mechanisms for graduates of higher education institutions;
- revitalizing promotional activities and providing them with business consulting services in order to form entrepreneurial skills among the population;
- formation of entrepreneurship skills and stimulation of social innovations in order to reduce the level of poverty among the population. Expanding propaganda for the development and implementation of entrepreneurship lessons and social innovations for the population through mass media (television, radio, official Internet publications, official channels on social networks);

- further development of measures aimed at providing employment, education, vocational training, career orientation of our women and thereby increasing their financial capabilities;

As a result of these measures, we will maintain economic stability, provide employment to millions of our citizens, increase their income, and drastically reduce the level of poverty.

In addition, tax and credit holidays for business entities, tax incentives, cancellation of rent payments for state property for a certain period, moratorium on tax and other inspections until the end of the year, and tax debts for enterprises that are in a difficult economic situation. important measures such as suspension of penalty calculation for

In conclusion, it should be noted that the scientific study of the economic and geographical factors that have a negative impact on poverty and the practical application of its results are of great importance in the comprehensive fight against poverty and the elimination of poverty. Moreover, identifying and analyzing economic-geographical factors and their impact on the level of poverty will serve to eliminate this problem.

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O'ZBEKISTONDA MONOPOLIYAGA QARSHI KURASHISH

***Annotatsiya:** Ushbu maqolada, mamlakatimizdagi monopoliyaga qarshi kurashishning raqobat muhitini shakllantirish yo'llari, monopol faoliyatni oldini olish shu bilan birgalikda O'zbekistonda raqobat muhitini shakllantirish jarayonidagi istiqbollarini ko'rib chiqish haqidagi ma'lumotlar berilgan.*

***Kalit so'zlar:** raqobat muhiti, bozor, monopoliya, monopoliyaga qarshi kurashish, kichik biznes va xususiy tadbirkorlik, soliq tizimi.*

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ANTITRUST IN UZBEKISTAN

***Annotation:** this article provides information on ways to form a competitive environment of antitrust in our country, prevention of monopolistic activity, and at the same time consider the prospects for the formation of a competitive environment in Uzbekistan.*

***Key words:** competitive environment, market, monopoly, fight against monopoly, small business and private entrepreneurship, tax system.*

Bugungi vaqtda yurtboshimiz tomonidan olib borilayotgan keng ko'lamli islohotlar asosida tadbirkorlarimiz ham raqobatbardosh mahsulotlar ishlab chiqarishmoqda. Buning zahirida bozor iqtisodiyoti sezilarli darajada rivojlandi. Jahon bozoriga o'zbek brendi ostida juda ko'p mahsulotlar eksport qilinib sotilmoqda. Shuni aytib o'tish joizki, bunday natijalarga erishish uchun albatta arzon, sifatli va raqobatbardosh mahsulotlari ishlab chiqarish bilan erishishimiz mumkin. Raqobatbardosh mahsulotlar albatta bozorni rivojlantiradi. Hammamizga ma'lumki, har bir sohada sog'lom raqobatga amal qilinishi natijadorlikni ta'minlashga xizmat qiladi.

O'zbekistonda raqobat muhitini shakllantirish hamda uning istiqboldagi yo'nalishlarini belgilash uchun eng avvalo bozorning hozirgi vaqtdagi real

holatini o'rganish, uni tahlil qilish juda muhim bo'lgan omillardan biri hisoblanadi. Mamlakatimizda raqobat muhiti hozirgi kunda ancha rivojlangan bo'lib, uning shakllanishi uchun barcha tashkiliy-huquqiy shart-sharoitlar yaratilgandir. Shu bilan bir qatorda, ayrim tizimlarda monopollashishni ko'rishimiz ham mumkin.

Monopol faoliyatni oldini olish hamda qonunbuzarliklarga yo'l qo'ymaslik uchun eng avvalo qaysi tarmoqlarning monopollashganligini yoki bozorda ustunlik mavqeini egallab turganligini bilishimiz zarur. Shu maqsadda hozirgi kunda respublikamizda ko'pgina xorij davlatlaridan farqli ravishda monopolist korxonalar davlat reestri yuritib kelinmoqda.

Mamlakatimizda raqobat muhiti bugungi kunga kelib qay darajada rivojlanganligini ushbu reestrda yuzaga kelayotgan o'zgarishlar va boshqa bir qator ko'rsatkichlar orqali bilib olishimiz ham mumkin. Raqobatni rivojlantirish hamda kichik va xususiy tadbirkorlikni rivojlantirish masalasiga qaratilgan bir qator chora-tadbirlarning amalga oshirilishi orqali bu borada juda katta yutuqlarga erishildi.

Kichik biznes va xususiy tadbirkorlikning rivojlanishi, monopolist korxonalarga raqobatchi bo'lgan yangi xo'jalik yurituvchi subyektlarning tashkil etilishi hamda ular tomonidan raqobatbardosh tovar (ish, xizmat)lar ishlab chiqarilishi natijasida tovar bozorida o'z ustunlik mavqeini yo'qotgan monopolist korxonalar - Monopolist korxonalar davlat reestri ro'yxatidan chiqarildi.

Hozirgi vaqtga kelib, respublikada nodavlat mulkning har xil shakllarini rivojlantirish uchun barcha zarur huquqiy va iqtisodiy shart-sharoitlar yaratilgan. Respublika iqtisodiyotning turli tarmoqlarida yaratilayotgan mahsulotning kattagina qismi kichik biznes va xususiy tadbirkorlik subyektlari hissasiga to'g'ri kelmoqda. Bu yutuqlar mamlakatimizda olib borilgan iqtisodiyotni erkinlashtirish siyosati hamda hukumatimiz tomonidan aniq chora-tadbirlar tizimi ishlab chiqilganligining samarasidandir.

Respublikamizda davlat tomonidan qo'llab-quvvatlanayotgan tadbirkorlik subyektlari juda tez sur'atlarda rivojlanib bormoqda. Davlat tomonidan tadbirkorlik subyektlariga soliq va boshqa imtiyozlarning berilishi hamda ularni qo'llab-quvvatlovchi turli institutlarning tashkil qilinishi shular sirasiga kiradi. Jumladan, xo'jalik yurituvchi subyektlarning soliq yukini kamaytirish bo'yicha bir qancha ijobiy ishlar ham amalga oshirilmoqda, O'zbekistonda aholi va tadbirkorlarning soliq yukini kamaytirish rejalashtirilmoqda. Bu haqda Yangi O'zbekistonning 2022–2026 yillarga mo'ljallangan taraqqiyot strategiyasini 2022-yilda amalga oshirish bo'yicha —Yo'l xaritasida nazarda tutilgan. Loyihaga ko'ra, aholi va tadbirkorlik subyektlariga soliq yukini kamaytirish bo'yicha chora-tadbirlar ishlab chiqildi hamda korxonalarning mol-mulk solig'i stavkasini 2 foizdan 1,5 foizga kamaytirish belgilandi.

Shuningdek, Respublika bo'yicha qo'shimcha 200 ta sanoat zonalarini tashkil etish rejalashtirilmoqda. Bunda:

- sanoat zonalarining har biriga kamida 15 ta korxonani joylashtirish;
- elektr, tabiiy gaz, suv tarmoqlari va yo'l infratuzilmasi yetkazib berishni to'liq Davlat byudjeti mablag'lari hisobidan amalga oshirish (buning uchun 2022 yilda 1,5 trln. so'm ajratish).

Bularning barchasi kichik va xususiy biznesni izchil rivojlantirish uchun kuchli rag'batlantiruvchi omillar yaratadi.

Respublikada faoliyat yuritayotgan kichik biznes subyektlari tomonidan ishlab chiqarilgan mahsulot (ish, xizmat)larning yalpi ichki mahsulotdagi ulushi ham yildan yilga ortib bormoqda. Kichik biznes va xususiy tadbirkorlikning roli va o'rnini tobora mustahkamlanib borayotganining o'zi iqtisodiyotimizning tarkibida bo'layotgan ijobiy o'zgarishlardan dalolat bermoqda.

Xulosa qilib aytganda, soliq mexanizmini takomillashtirish, uni to'lash intizomiga qattiq rioya qilish, soliq qonunbuzarligiga yo'l qo'ymaslik, soliq to'lovchilar va soliq organlari xodimlarining ma'naviyatini yuksaltirish korxonalarning monopoliyaga qarshi faoliyatning raqobat muhitini shakllantirishning institutsional jihatlaridan samarali foydalanishni ta'minlashda muhim omillardan biri hisoblanadi.

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METHODS USED IN ONION SELECTION

Abstract: *The research methods used in onion selection are highlighted in the article.*

Key words: *onion, vegetable, introduction, hybrid, productivity, method, selection.*

Enter. Onion (*Allium cepa* L.) is a vegetable that is widespread in many countries and occupies an important place in the national economy. It is rich in vitamins and minerals and is of great importance for human health. One of the main goals of breeders is to create new varieties, increase productivity and ensure resistance to diseases through onion selection. This article considers the main methods and methods used in onion selection, analyzes their practical importance.

1. Genetic and selection characteristics of onion.

Genetic characteristics of onions play an important role in the selection process. Onion is a diploid plant with 8 pairs of chromosomes. The genetic diversity of onion serves as the main resource for the creation of high-yield and high-quality products that are adaptable to different climatic conditions. Through genetic diversity, it is possible to improve plant growth period, yield, disease resistance and other characteristics.

2. Methods used in onion selection.

2.1 Traditional selection methods. Traditional selection methods have been used since ancient times. Their main types are:

- **Selection:** In this method, breeders create new varieties by selecting onions with good characteristics. In the process of selection, factors such as general onion quality, productivity, disease resistance, and growth rate are taken into account. This method is mainly used to preserve and improve the natural diversity of onions.

- **Artificial Pollination:** New genetic combinations are created by artificial pollination of onion varieties. With the help of artificial pollination, new hybrids can be created, which often have higher yields and improved quality indicators. This method is effective in improving the quality of new generations.

2.2 Heterosis selection (Hybridization). Through heterosis selection, a new generation is created using different genetic types or cultivars to create new hybrid varieties. Hybrids often have higher yields, improved quality and disease resistance. This method:

- Hybridization: New hybrid varieties are created by crossing offspring from different genetic sources. Hybrids often have high yield and good quality indicators using the heterosis effect.

- Backcross: It is done in order to preserve desired characteristics by crossbreeding newly created hybrids with re-varieties. This method helps to further improve the genetic characteristics of new generations.

2.3 *Genetic modification and biotechnology.* Modern technologies are used to improve onion varieties through genetic modification and biotechnology. These methods are:

- Genetic engineering: With the help of genetic engineering, it is possible to create varieties with new characteristics by making changes to the genetic material of onions. For example, creating disease-resistant or water-saving varieties.

- Biotechnology: It is possible to obtain new generations by multiplying, regenerating, and carrying out genetic manipulations of plant cells in laboratory conditions. Through this method, it is possible to create new varieties and improve their quality.

- Molecular markers: The genetic characteristics of plants can be determined with the help of molecular markers. This method is used to speed up the selection process and get more accurate results.

2.4 *Ecological and phenotypic selection.*

- Phenotypic Selection: Selection based on the appearance and physical characteristics of plants. With the help of phenotypic selection, it is possible to determine characteristics such as onion growth rate, productivity and resistance to diseases.

- Ecological Breeding: Testing the adaptability of onions in different climatic and soil conditions. By this method, it is possible to choose varieties of onions that are suitable for ecological conditions.

3. **Practical significance and results of Onion Breeding**

Creation of new varieties through onion selection plays an important role in increasing productivity, improving quality and ensuring resistance to diseases. High yield and good quality varieties are economically beneficial because the cost of improving product quality and fighting diseases is reduced. Also, new varieties adapt to climatic conditions and ensure continuous production.

Summary. Onion breeding is developed through genetic and biotechnological methods and helps to create new varieties with high yield, good quality and disease resistance characteristics. In the future, the selection process will continue to evolve with the help of genetic research and modern technology.

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RISK FACTORS FOR MYOCARDIAL INFARCTION IN YOUNG PEOPLE IN ANDIJAN REGION

Annotation.

In the 21st century, the number of some diseases, including cardiovascular diseases, is changing. Risk factors are increasing in young people. It should be noted that there are no effective measures for the primary prevention of cardiovascular disease in young patients, and the use of resources is limited because they are mainly aimed at elderly patients. It is used to determine the further diagnostic path of objective diagnosis and examination of the patient in traditional cardiovascular diseases. In young patients with chest pain, certain caution regarding traditional and non-traditional risk factors makes the doctor to monitor the patient's condition in more detail. Timely help significantly improves the prognosis of patients and preserves their ability to work, which is especially important for young patients. All these characteristics require a strict approach in identifying young patients. Thus, the problem of cardiovascular diseases in young patients is urgent at present.

Key words: cardiovascular diseases, traditional, working capacity, young patients.

Introduction

Heart failure (HF) is one of the most inconvenient complications of cardiovascular disease (CVD). Among the adult population, the prevalence of the disease is 1-2%, significantly increased by the age of the patients. The prevalence of the disease among people over 70 years of age is more than 10%. The main causes of CVD are coroner heart disease (CHD) and arterial hypertension, and a combination of them occurs in approximately half of patients. This leads to the need to improve the provision of assistance to people with this pathology. It is very effective to prevent patients with acute myocardial infarction (MI) from appearing through adequate treatment and rehabilitation of cardiovascular disease in a timely manner. At the same time, despite a well-developed system of treatment and rehabilitation, not everyone can prevent acute coronary pathology, including complications [1].

Traditional CVD RFs in Young Adults Smoking acts synergistically with hypertension, diabetes mellitus (DM) and dyslipidemia, increasing the risk of CVD, causing vasoregulatory dysfunction, increased inflammation (increased levels of leukocytes in the blood, C-reactive protein and inflammatory

cytokines), contributing to the formation of a proatherogenic lipid profile. It should be noted that combustible tobacco products, in addition to cigarettes, also increase the risk of CVD. [2-3]

Obesity. The high prevalence of overweight and obesity, the main components of MS, among children and adults increases the risk of health complications. According to the World Health Organization, the overall prevalence of obesity worldwide has almost tripled since 1975. In 2016, 39% of adults aged 18 years and older were overweight, 13% were obese. Obesity is associated with a high incidence of well-known cardiovascular risk factors: dyslipidemia, hypertension, and diabetes. It has been shown that the existence of a continuum associated with these conditions, when pathological processes begin as a result of the action of several risk factors, leads to irreversible changes and cardiovascular complications through endothelial damage, vascular and myocardial remodeling, and leads to the progression of atherosclerosis. These changes can begin already in childhood and over time significantly increase the risk of CVD, including MI, in young people [5]. Dyslipidemias are quantitative changes in the concentration of total cholesterol, corresponding fractions, or triglycerides in plasma. Dyslipidemias can result from primary changes in lipoprotein metabolism caused by various genetic reasons (primary dyslipidemias) or as a consequence of exogenous factors or other pathologies (secondary dyslipidemias). Combined dyslipidemias are the result of the association of important epigenetic effects and environmental factors with CVD risk factors. [6].

Genetic predisposition. It should be noted that in most cases, genetic predisposition is only a prerequisite for the development of pathology under the influence of other environmental risk factors. Analysis of molecular genetic markers can increase the effectiveness of early disease prevention measures in their carriers, which will at least lead to a shift in the timing of the onset of the disease and reduce the severity of the course [7].

Psychoemotional factor. Stress (acute or chronic) can lead to MI, this is the most typical risk factor for the development of CVD in young women. The effect of stress, activating the sympathoadrenal system and inflammation, leads to endothelial dysfunction, changes in vascular reactivity, increased blood clotting and atherogenesis.

Hyperhomocysteinemia. Research conducted over the past two decades highlights hyperhomocysteinemia as a major factor contributing to the development of atherosclerotic vascular diseases. The study found that hyperhomocysteinemia is reliably associated with the presence of acute coronary syndrome and the severity of coronary artery stenosis in young patients under 35 years of age.

Conclusion
Myocardial infarction is considered a serious problem among the youth of Andijan. Doctors do not rely on acute coronary syndrome in this category of patients, it should be borne in mind that early awareness of the risks of

development helps in their further treatment, which reduces the likelihood of developing myocardial infarction and improves the condition of patients in this category. When myocardial infarction is limited at a young age, the consequences can be severe (psychological, physical, economic), therefore, with a decrease in the risk of recurring episode occurrence, focusing on the main etiological cause, proper and timely individually directed treatment of this disease is important. There are many traditional and non-traditional methods that have a successful treatment.

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ARCHITECTURAL TRENDS OF UZBEKISTAN IN THE PERIOD 1932-1990

Annotation: The article examines the influence of European styles on the architecture of Uzbekistan in the formation of new trends in the architecture of residential and public buildings. The use of national traditions and decorative elements is considered in detail. The analysis of the period under consideration is carried out, conditionally dividing it into two stages from 1932 to 1956 and 1960 to 1990. Each stage has been studied, which sharply differ in their architectural trends and styles. Attention is paid to solutions focused on the "restoration of historical heritage", exaggerated eclecticism, antique jewelry. The objects where the ideas are embodied have been studied in detail конструктивистов и функциональный рационализм современной архитектуры.

Keywords: Architectural styles, constructivism, Soviet avant-garde, eclecticism, modern modernism, national traditions, functional rationalism.

The study of the influence of European styles in the architecture of Central Asia dates back to 1868 to 1824. With the formation of the Union of Soviet Republics, the influence of the style called "Soviet avant-garde" is increasing, where modern constructivism is actively used. In 1932, Stalin banned constructivism in modern architecture. Instead of modern architecture focused on the fulfillment of functional tasks, a separate trend from Western architecture based on historical images is being formed. The Soviet government attached little importance to functional tasks, dimensions and planning solutions of architecture. It mainly attaches importance to facades facing the main streets, to the view from afar, to the main streets. Attention is paid to solutions focused on the "restoration of historical heritage", exaggerated eclecticism, antique jewelry. Since that time, the connection with European architecture has been severed. Architectural life is controlled by the authorities. The Union of Architects of the USSR and associations of architects in the republics were established. Under their leadership, the same planning schemes and integrated solutions will appear for all republics [5].

In the Soviet republics, government and theater buildings occupy an important place in architecture. The power and administrative buildings are built in the form of luxurious, symmetrical, monumental ensembles.

In the 1930s and 1950s, many administrative buildings, educational institutions and cultural palaces were built according to this scheme. The architecture of buildings and structures built in Uzbekistan pays attention to national traditions. The facades of the buildings include elements of national decoration.

The core of the Pedagogical Institute building, built in 1938 according to the project of architects A.Djmuida and E.Djmuida, is a four-storey building. The entrance part of the main facade is built in an eclectic style. A wide staircase leads to the entrance porch, on which there is a group of magnificent columns and statues. The monumental building of the Institute, built in the traditional architecture of the 1930s, occupied an area in the form of a semicircle.

In the 1920s, the construction of theaters in capitals and large cities began. The A.Navoi Theater in Tashkent was built in 1934 and completed in 1947 by architect Shchusev. At first, the project was decided in the neoclassical style with semicircular arches and statues. Then the arches turn into axial ones and oriental motifs are introduced.



The interiors of the halls are decorated by folk craftsmen of Khorezm, Bukhara, Samarkand, Ferghana using unique decorative elements of each school.

Art historians of the Soviet era called it "national in form and socialist in content" 1-2 -photo.

In 1950 – 1989, from the point of view of the history of architecture, Soviet architecture returned to the idea of Le Corbusier, Walter Gropius or L. Hilbersheimer and Ernst Mayr. The ideas of constructivists and the functional rationalism of modern architecture are being revived. 1- photo. Opera and Ballet Theatre. Tashkent. The 1935 project.

In the 1960s, the ideas of constructivists, functional rationalism, which is considered the leading style of the era in the history of modern architecture, were revived. During Stalin's time, the task was to master the "historical heritage", and now the task is to find rational ways of construction. Architect A.A. Balaev Opera and Ballet Theatre in Samarkand, built in 1964, is clearly visible. The spatial composition of the building is designed in this style. Concrete and glass are widely used in the rectangular building. The portal at the entrance is a portico supported by straight vertical columns laid in





rhythm. It is in this rhythm that the side facades are made on a flat surface 4- photo.

2- photo. Theatre. Tashkent. 1940-1947. Architect A. Shusev.

Rational design and standard construction will become the architectural and construction program of the twentieth century.

The motto of this period is focused on "Eliminating redundancy in design and construction." Their geometric shape and glazed facades demonstrate the openness of architecture, and the buildings are stark. 2- photo. Theatre. Tashkent. 1940-1947. Architect A. Shusev. they contrast with the previous architecture.

3- photo. Samarkand Opera and Ballet Theatre. 1964. Architect Balaev A.A.

4 - photo. The television tower in Tashkent. 1976-1984 years.

In 1976-1984, a 375-meter-high TV tower was built in Tashkent, resembling a space rocket 16 - photo. Functional style is becoming a trend that shows a new way of life in Uzbekistan [2]. The combination of folk art from various series and places of the Soviet era provides unique solutions for the construction of residential and public buildings. A special role protecting from the sun is called among experts the "hanging second facade". It was widely used at the factory to manufacture elements of national ornament using molds and was used in the architecture of Uzbekistan until the late 1980s as an element of facades in the architecture of residential and public buildings. Expressive fences built in 1974 at the Uzbekistan Hotel in Tashkent protect the hotel rooms located behind it from the sun [5].

National ornaments are widely used in the compositional solution and facades of both buildings. These architectural elements, in addition to forming a unique appearance of the building, protect the premises from the sun and are suitable for the climatic conditions of Uzbekistan. These buildings are part of a large-scale administrative public centers of the city (photos 5-6-7).



5- photo. Lenin Museum, Tashkent. 1970. Architect E. Rozanov. Fshstsh from the Internet



6- photo. Hotel Uzbekistan.1974
architect I. Merport et al.Photos from the



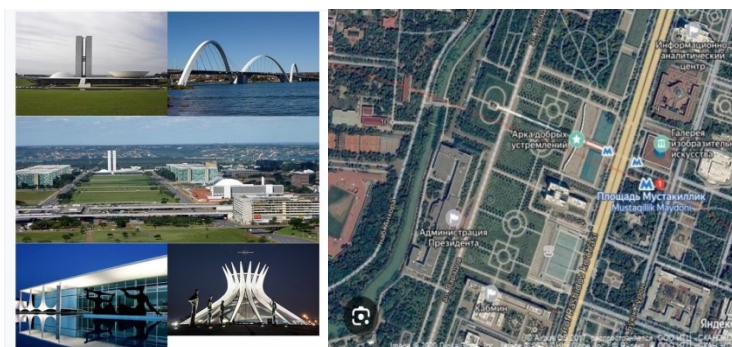
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7- photo. The Palace of Friendship.

Tashkent, 1982. E. Rozanov.

During this period, urban planning focused on the urban landscape was strongly developed in all republics. Inspired by the master plan of Brazilian cities, where large territories with architectural accents are being formed, they become mandatory elements of urban integrated planning.

Urban ensembles will consist of large spaces emphasizing the theatricality of public spaces reflecting the life of a socialist society. With an eye to the future, the division of transport streets and the organization of pedestrian zones will be developed. This trend is being implemented in all major cities and capitals. The territory of the central government in Uzbekistan is also formed on the basis of these traditions [6]



8-photo. From left to right: the building of the National Congress of Brazil; The Yucelin Kubitschek Bridge; The Monumental Arrow; The Alvarado Palace; the Cathedral with the Cathedral; Architect O. Niemeyer. 1960. Taken from the Internet. 9-photo. Aerial view of Independence Square. Taken from the Internet. фото - 10. The painting. View of the administrative complex in Tashkent from the western side. Architect Tursunov F.Y. archive. Retrieved from the Internet

The debate. In the early stages, until the 1950s, the architectural traditions of Central Asia were preserved mainly in private low-rise residential buildings and buildings that were artistically not controlled by the state. Since the 1950s, urban ensembles have made up large spaces, emphasizing the theatricality of the life of a socialist society. This trend is being implemented in all major cities of the republic and the capital.

In the 1960s, the ideas of constructivists and the functional rationalism of modern architecture were revived. Their geometric shape and glazed facades show the openness of architecture, and the buildings are solved in tension with the previous architecture. During this period, fences formed from national ornaments adapted to the climatic conditions of Uzbekistan became widespread in the architecture of residential buildings and public buildings until the end of the 1980s. The constant development of new construction technologies and artistic solutions for structural structures are important in the formation of three-dimensional, compositional representations of the architecture of large public buildings being erected in our republic in the future.

One of the main principles of the development of architecture in our republic is the creation of new directions for the use of forms and decorative elements of national traditions in the tectonic structure of structural solutions of buildings and structures, spatial solutions of interiors.

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RAISING A YOUNG GENERATION WITH HIGH INTELLECTUAL POTENTIAL

Abstract: *In this article, an opinion is expressed about the education of the young generation, which meets the requirements of market relations, has a clear goal, and has a high intellectual potential.*

Keywords : *education, training, school, manners, morals, intellectual potential, personnel issue, field, system.*

From the beginning of the years of independence, the first President of our country paid the main attention to the issue of personnel, assuming that the achievement of economic independence will not happen overnight. Therefore, he issued the laws "On Education" and "On the National Program of Personnel Training", which are the legal basis of personnel training.

The announcement of the "State National Program for the Development of School Education in 2004-2009" provided the material and technical base of our schools in our republic - buildings, educational equipment and staff, as well as new regulatory documents for the educational process - the state. The creation of educational standards and curricula is an important event. More than 9,000 secondary schools across the country were rebuilt and reconstructed on the basis of a new project. A lot of money was spent on it. It is natural to ask why it was necessary to spend money on it. The reason for this is the opinion of the first President of our country that "Our children should be strong, smart and healthy." Our country's attention to education has begun to bear fruit.

Many foreigners recognize the state policy implemented in the education system of the Republic of Uzbekistan. The practical proof of this was on February 17-18, 2012 in Tashkent in which representatives of the UN, Asian Development Bank (ADB), World Bank, Islamic Development Bank and representatives of 48 countries of the world such as Great Britain, Germany, Italy, USA, Japan, Russia, South Korea participated. An international conference on the topic "Education of a highly educated and intellectually developed generation is an important condition for the country's sustainable development and modernization " is dedicated to the study of Uzbekistan's experience in creating a national model of perfect education of the young generation .

It is noteworthy that Uzbekistan ranks second among 141 countries in terms of attention to the education sector.

The opinion expressed by our first President, "A country with healthy children will be powerful, and the children of a powerful nation will be healthy" remains the basis of the state policy currently being carried out in the social sphere. Because food, family, and education have the same role in increasing intellectual potential.

If we remember the criteria of human perfection, only our children who are physically healthy, mentally mature, and have high intellectual potential will determine the future of Uzbekistan.

In order to raise a physically healthy generation, a national model of mother and child health protection was formed in the health care system. "Healthy mother - healthy child" program is being implemented. Over the past ten years, more than 750 million US dollars have been allocated to modernize treatment and preventive facilities and equip them with the most modern equipment.

During the years of independence, maternal mortality in Uzbekistan decreased by 3.1 times and infant mortality by 3.2 times. As a result of the implementation of the "Mother and Child Screening" program, births of children with birth defects have decreased by 1.8 times since 2000.

It is no coincidence that Uzbekistan is among the ten countries that care the most about children's health in the world.

Factors of intellectual health (level of mental maturity) depend on components such as generation, nutrition, teacher skills, generation, nutrition is the responsibility of the family.

The teachers working in the education system are responsible for teacher skills.

The teacher's task is not only to teach, but also to make every student understand and understand the content and purpose of the reforms being carried out in our country.

current reforms:

- Technical and technological re-equipment of production processes;
- Implementation of a savings system in every sector;
- Use of energy-efficient techniques and technologies;
- Introduction of information and communication technologies in every field;
- Use of new pedagogical and information technologies in the educational system.

The above-mentioned issues - education of a young generation with a high intellectual potential, who meets the requirements of market relations, set a clear goal in front of them, were taken as the basis for choosing this topic as a pedagogical problem.

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KO'CHKI HAQIDA UMUMIY TUSHUNCHALAR, KELIB CHIQISH SABABLARI

***Annotatsiya.** Ushbu maqolada ko'chki haqida umumiy tushunchalar berilgan hamda ko'chki sodir bo'lishini oldini olish bo'yicha bajarilishi lozim bo'lgan chora-tadbirlar keltirib o'tilgan.*

***Kalit so'z:** ko'chki, ko'chki xavfi, yer surilishi, ko'chki zonasi, tog' jinslari.*

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GENERAL CONCEPTS ABOUT AVALANCHE, REASONS FOR ORIGIN

***Abstract.** This article provides a general understanding of landslides and measures to be taken to prevent landslides.*

***Key words:** landslide, landslide hazard, landslide, landslide zone, rocks.*

Ko'chki - tabiiy tushdagi favquloddavaziyat turlaridan biri bo'lib, uni o'rganish, baholash, bashorat qilish va undan aholini va xalq xo'jaligi obyektlarini muhofaza qilish mamlakat iqtisodini ko'tarishda muhim hisoblanadi. Dengiz, ko'l, soylar va tog' yon bag'irlarida joylashgan bo'sh tog' jinslari ustki qismining yer ustki va ostki suvlari hamda o'zining og'irlik kuchi ta'sirida pastga qarab harakat qilish xodisasi ko'chki deyiladi.

Respublikamizning tog'li, tog'oldi, daryo bo'ylari hududlarida yashaydigan aholi va xalq xo'jaligi obyektlariga katta xavf tug'diradigan tabiiy ofatlardan biri yer kuchishidir. Ko'chki sodir bo'lishi mumkin bo'lgan hududlarga Toshkent, Andijon, Farg'ona, Samarqand, Surxondaryo, Qashqadaryo, shuningdek, Jizzax va Namangan viloyatlarining ayrim tumanlari kiradi. Har yili respublikamizda 150-250 ta ko'chki hodisasidir bo'ladi.

Ko'chkilar tog' yonbag'rini suv yuvishi natijasida qiyalikning oshishi, shamollar ta'sirida yoki yog'inlar va yer osti suvlaridan namlanishi oqibatida jinslar mustahkamligining susayishi, seysmik tebranishlar ta'siri hamda joyning geologik sharoitini hisobga olmay inson tomonidan olib borilgan xo'jalik faoliyati ta'siridan sodir bo'lishi mumkin. Ko'chkilarning 90% tog'larda, 1000-1700 m balandlikda ro'y beradi.



Tik tushgan va jarli tog' yonbag'irlarida, daryo vodiylarida va dengiz qirg'oqlarida asosan, shamol uchirib ketishi (nurash), yer usti va yer osti suvlari faoliyati ta'sirida tog' jinslarining bo'shashishi hisobiga katta massalar va tog' jinslarining uzilib, ag'darilib tushishi o'pirilish deb ataladi.

Ko'chkilar xalq xo'jaligiga katta zarar keltiradi. Shuningdek, imorat va inshoot, yo'l, yer osti kommunikatsiyasi, to'g'on, tunnel va ko'priklar mustahkamligining susayishiga yoki butunlay buzilishiga sabab bo'ladi.

Ko'chki hodisasi ma'lum bir sharoitlarda sodir bo'ladi, ya'ni jins o'z joyidan siljish uchun yonbag'ir usti tikroq, jins qatlamlari qalin bo'lishi, atmosfera yog'inining mavsumiy yoki yillik miqdori ko'p bo'lishi, suv o'tkazuvchan yoki o'tkazmaydigan qatlamlar qat-qat bo'lishi lozim. Yomg'ir va qor suvlari yonbag'irlikdagi soz tuproq, qum ohaktosh kabi jinslarga shimilib, ularni yumshatadi va og'irlashtiradi. Suv o'tkazmaydigan qatlamda grunt suvlari nishabligi bo'yicha pastga qarab harakat qila boshlaydi va jinslarning tabiiy yopishqoqligini susaytiradi, natijada jinslarni yonbag'irlikda ushlab turuvchi kuch qiymati uni pastga siljitadigan kuchga nisbatan keskin kamayadi va pastga qarab ko'chish hodisasi sodir bo'ladi.

Ko'chki tanasi suriladigan massani tashkil qilib, uning ustki qismining reliefi past - balandlikdan iborat bo'ladi. Ko'chki tanasining bosh qismi yonbag'irlikdagi uzilish yoriqlari bilan chegaralanadi, uning hajmi asosan ko'chuvchan massaning qalinligiga va tarqalgan maydoniga bog'liq bo'lib, ba'zan bir necha million kub metrni tashkil etadi. Ko'chki tanasining eng quyi qismi ko'chki tili deyiladi. Ayrim hollarda ko'chki tilining old qismida surilish massasi, ko'chki hodisasining takrorlanishi natijasida pog'onasimon maydonlar – ko'chki supalari hosil bo'ladi. Suriladigan massaning yuqori qismida yoriqlar paydobo'ladi, u yillar o'tishi bilan kengayib, chuqurlashib, ko'payib boradi va

ko'chki tanasi shu yerdan boshlanadi. Ba'zi bir olimlar uni uzilish devori deb ham ataydilar. Uning balandligi bir necha metr dan bir necha o'n metrgacha, uzunligi yuz metrgacha borishi mumkin. Yonbag'irlikdan jinslarning pastga siljishidan hosil bo'lgan yuza ko'chki yuzasi deb ataladi. Ko'chki yuzasining reliefi asosan to'lqinsimon, yoysimon, tekis, o'nqir- cho'nqir bo'ladi. Ko'chki jarayonining kuchayishiga odamlarning faoliyati ham katta ta'sir etadi. Masalan, yonbag'irdagi yerlarni haydash, daraxtlarni qirqish, oqava suvlarni oqizish, vodoprovod va kanalizatsiya tarmoqlaridan suv chiqishi natijasida jinslarning ivishi, og'ir imorat va inshootlar, kotlovanlar qurilishi va h.k.

Ko'chki zonasida quyidagi ishlar bajarish man etiladi:

1. yonbag'irlikni qirqish va tekislash;
2. imorat va inshootlar qurish;
3. portlatish ishlari;
4. kon qazish;
5. og'ir yukli transportning katta tezlikda harakat qilishi;
6. daraxtlarni rejasiz qirqish;
7. yerlarni sug'orish;
8. oqava va buloq suvlarini oqizish;

Yuqorida qayd qilingan chora – tadbirlarning mustahkamligini oshirish hamda ko'chki hodisasini ma'lum bir davrga to'xtatib turish uchun bajariladi. Aktiv choralarga yonbag'irliklardagi ko'chkiga moyil bo'lgan tog' jinslarining harakatini to'xtatish maqsadida inshootlar qurish, tog' jinslarining mustahkamligini oshirish uchun maxsus chora tadbirlar ko'rish kiradi.

Bunday chora- tadbirlar ko'rish to'rt guruhga bo'linadi:

1. ko'chkini keltirib chikaradigan sabablarni aniqlash va yo'q qilish;
2. ko'chkiga moyil bo'lgan jinslarni ushlab turadigan inshootlar qurish;
3. jinslarning ko'chishga qarshiligini kuchaytirish uchun ularning mustahkamligini sun'iy yo'l bilan oshirish;
4. ko'chuvchan massani yonbag'irlikdan butunlay olib tashlash.

Ko'chki xavfi bo'lgan hududlarda yashovchi aholi nimalarni bilishi kerak.

Bu hududda yashovchi aholini o'z xonadoni ko'chki ostida qolish qolmasligini bilishi kerak.

-xavfli maydonlarda yashash uchun imorat hamda, to'xtab turish joylarini qurish mumkin emas.

-mahalliy boshqaruv organlarinng ko'chki xavfi sodir bo'lishi va xavfsiz joyga ko'chish haqidagi ko'rsatmalariga e'tibor bering.

-ko'chki xavfi haqida ogohlantirish olgandan so'ng reja asosida mas'ul shaxslar ko'rsatmasi bilan xarakat qiling, elektr energiya, gaz va suvtarmoqlarini berkiting.

-ko'chki sodir bo'lgandan keyin yashash joyingizdagi yuqorida ko'rsatilgan tarmoqlarni yaxshilab ko'zdan kechiring. mustahkamligiga shubha qilsangiz darhol xonadan chiqib keting.

-katta moddiy zarar yetganda yordam so‘rab mahalliy boshqaruv organlariga murojaat eting.

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PROBLEMS ARISING IN THE TEACHING OF PHILOSOPHY TO STUDENTS IN THE TECHNICAL DIRECTION

***Abstract:** This article discusses the problems that arise in teaching philosophy to technical students. The author pointed out several problems arising from the nature of the science of philosophy and tried to provide solutions based on scientific analysis.*

***Key words:** social sciences, philosophy, student interest, motivation, interactive methods, pedagogical approach*

Philosophy is one of the oldest and most important branches of human knowledge, which studies the foundations of human thought, values, and logical analysis. The science of philosophy has been important in different times and cultures. Today, the teaching of philosophy in the world undergoes many changes and each country has its own methods, directions and traditions.

Philosophy, first of all, helps people to broaden their outlook on life, develop their logical thinking and critical analysis skills. Teaching philosophy allows students to analyze problems more deeply, make moral and spiritual decisions, and participate in dialogue between different cultures and beliefs.

Research object and applied methods. Conducting research on the topic of current problems of teaching philosophy requires the study of various aspects of this field. The object and subject of the research is very important.

Research object: The process of teaching philosophy, that is, philosophy education in educational institutions, students' philosophical knowledge, methods, tools and educational methods of studying philosophy.

Research subject: The main problems in teaching philosophy, for example: methodical and methodological problems in teaching philosophy, the formation and development of philosophical thinking, the integration of philosophy with modern educational strategies, the knowledge and professional training of teachers about philosophy, the ability of students to learn philosophy problems in mastering.

This is done in order to conduct research, improve the effectiveness of teaching philosophy, develop new teaching methods, and expand philosophical knowledge.

Discussion and results. The science of philosophy has always been aimed at expanding the range of knowledge and understanding of mankind, answering moral challenges, and helping to solve the main problems of society. However, there are a number of actual problems in the process of teaching philosophy.

These problems are not only for specific countries or regions, but also exist in many educational systems in the world.

In many countries, philosophy is given less importance than other subjects, such as science or mathematics. Usually, philosophy classes are removed or minimized from the compulsory education program. This leads to forgetting the importance of such science for mankind. Failure to study philosophy can lead to poor logical thinking and critical analysis skills for students.

Philosophy is often based on theoretical knowledge, which makes it difficult to engage students in practical activities. Interactive and practical methodologies are insufficiently used in current educational systems, which is an important obstacle in encouraging students to think philosophically. It is necessary to use modern methods (discussion, group work, problem solving) in schools and universities.

Cultural and social conditions also play an important role in the teaching of philosophy. In some cases, traditional or religious values may prevent the teaching of philosophy. Conflicts can cause difficulties, for example, in developing open-mindedness and logically analyzing problems in a social context.

The qualification of philosophy teachers is also one of the urgent problems. Philosophers can often lack modern thinking and pedagogical methods. Therefore, they may be less able to effectively teach students their thoughts and ideas. In order to improve their skills, teachers need to master modern educational methods and delve deeply into the history of philosophy.

Today's young people are studying in an environment that depends on fast technologies, social networks and other problems. In addition, the subject of philosophy often requires vague and complex concepts, which can lead to a decrease in interest among students. It is important to introduce students to theoretical knowledge as well as practical examples and philosophical problems in life.

Teaching philosophy is full of current problems, but there are also opportunities to solve these problems. Education systems can make philosophy teaching more effective by using comprehensive and hands-on teaching methods, improving teacher skills, and stimulating student interest. Teaching philosophy not only improves students' intellectual and logical maturity, but also has a positive effect on the development of society.

Today, philosophy is taught among the main social sciences in various countries. In European countries, philosophy is taught mainly through areas such as logic, ethics, and existence. Students often study modern philosophy, ancient Greek philosophy, and the history of Western philosophy.

In Asia, especially in China and India, the science of philosophy is traditionally closely related to religious and cultural values. Philosophies such as

Confucius and Laozi, as well as religious philosophies such as Hinduism and Buddhism, are taught at many universities.

Teaching philosophy is also important in Uzbekistan itself. Uzbek philosophy developed under the influence of Eastern philosophy and includes values related to historical and cultural heritage.

In modern times, new trends are emerging in the teaching of philosophy. Through online educational platforms, philosophy courses, international conferences and seminars provide students with wider opportunities. At the same time, philosophical thoughts and discussions are actively held in social networks for public acceptance and discussion.

The teaching of philosophy in the world is an important process of researching human thoughts and feelings, enriched by various cultures and traditions. This process is of great importance not only for knowledge, but also for the moral development of mankind. Continuing education of philosophy in all regions plays an important role in giving future generations the ability to think freely and logically.

It is known that the use of innovations and advanced foreign experiences in the process of teaching philosophy in the higher educational institutions of our country is one of the urgent issues of today. First of all, what is new in science? What is innovation in science? it is necessary to answer the questions. In today's practice, there are differences between the words novelty and innovation. Innovation is considered the latest achievements, knowledge, methods in this science. These achievements, knowledge, and methods become innovations when applied in practice.

Today's very relevant issues of teaching philosophy to technical students are as follows:

- Lack of motivation: As a result of Sheikhis experience and observations, it can be said that technical students have very little interest and motivation in social sciences. And in recent years, this is even more evident. They often consider these subjects useless in their professional activities and practice. Therefore, it is necessary to convey the importance of social studies to students using new methods aimed at increasing motivation in classes.

A number of effective methods can be used to increase motivation in technical students of social sciences. For example, teaching social studies to students in connection with practical examples, involving them in solving real-life social problems, can have a positive effect. Encouraging students to actively participate through group discussions and role-playing games can significantly change their attitudes toward social studies.

The Thread Linking technique can also work well. Explaining to students the connection between technology and social sciences will increase their interest in these subjects. For example, the social aspects of technology, the impact of information technology on society, etc.

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THE APPROACH OF CONCURRENT PURSUIT IN A SECOND-ORDER DIFFERENTIAL GAME STRATEGY

Abstract. In this work is considered a differential game of the second order, when control functions of the players satisfies geometric constraints. The proposed method substantiates the parallel approach strategy in this differential game of the second order. The new sufficient solvability conditions are obtained for problem of the pursuit.

Keywords. Differential game, geometric constraint, evader, pursuer, strategy of the parallel pursuit, acceleration.

Let **P** and **E** objects with opposite aim be given in the space $\mathbf{R}^n$ and their movements based on the following differential equations and initial conditions

$$\mathbf{P}: \ddot{x} = u, \quad x_1 - kx_0 = 0, \quad |u| \leq \alpha, \quad (1)$$

$$\mathbf{E}: \ddot{y} = v, \quad y_1 - ky_0 = 0, \quad |v| \leq \beta, \quad (2)$$

where $x, y, u, v \in \mathbf{R}^n$; x – a position of **P** object in the space $\mathbf{R}^n$, $x_0 = x(0)$, $x_1 = \dot{x}(0)$ – its initial position and velocity respectively at $t = 0$; u – being a controlled acceleration of the pursuer, mapping $u: [0, \infty) \rightarrow \mathbf{R}^n$ and it is chosen as a measurable function with respect to time; we denote a set of all measurable functions $u(\cdot)$ such that satisfies the condition $|u| \leq \alpha$ by U . y – a position of **E** object in the space $\mathbf{R}^n$, $y_0 = y(0)$, $y_1 = \dot{y}(0)$ – its initial position and velocity respectively at $t = 0$; v – being a controlled acceleration of the evader, mapping $v: [0, \infty) \rightarrow \mathbf{R}^n$ and it is chosen as a measurable function with respect to time; we denote a set of all measurable functions $v(\cdot)$ such that satisfies the condition $|v| \leq \beta$ by V .

Definition 1. For a trio of $(x_0, x_1, u(\cdot)), u(\cdot) \in U$, the solution of the equation (1), that is, $x(t) = x_0 + x_1 t + \int_0^t \int_0^s u(\tau) d\tau ds$ is called a trajectory of the pursuer on interval $t \geq 0$.

Definition 2. For a trio of $(y_0, y_1, v(\cdot))$, $v(\cdot) \in V$, the solution of the equation (2), that is, $y(t) = y_0 + y_1 t + \int_0^t \int_0^s v(\tau) d\tau ds$ is called a trajectory of the evader on interval $t \geq 0$.

Definition 3. The pursuit problem for the differential game (1) - (2) is called to be solved if there exists such control function $u^*(\cdot) \in U$ of the pursuer for any control function $v(\cdot) \in V$ of the evader and the following equality is carried out at some finite time t^*

$$x(t^*) = y(t^*). \quad (3)$$

Definition 4. For the problem (1)-(2), time T is called a guaranteed pursuit time if it is equal to an upper boundary of all the finite values of pursuit time t^* satisfying the equality (3).

Definition 5. For the differential game (1) - (2), the following function is called Π -strategy of the pursuer ([3]-[4]):

$$u(v) = v - \lambda(v, \xi_0), \quad (4)$$

where $\xi_0 = \frac{z_0}{|z_0|}$, $\lambda(v, \xi_0) = (v, \xi_0) + \sqrt{(v, \xi_0)^2 + \alpha^2 - |v|^2}$,

(v, ξ_0) is a scalar multiplication of vectors v and ξ_0 in the space R^n .

Property 1. If $\alpha \geq \beta$, then a function $\lambda(v, \xi_0)$ is continuous, nonnegative and defined for all v such that satisfies the inequality $|v| \leq \beta$.

Property 2. If $\alpha \geq \beta$, then the following inequality is true for the function $\lambda(v, \xi_0)$:

$$\alpha - |v| \leq \lambda(v, \xi_0) \leq \alpha + |v|.$$

Theorem. If one of the following conditions holds for the second order differential game (1) - (2), that is, 1. $\alpha = \beta$ and $k < 0$; or 2. $\alpha > \beta$ and $k \in R$, then by virtue of strategy (4) a guaranteed pursuit time becomes as follows

$$T = \begin{cases} (|z_0|k + \sqrt{|z_0|^2 k^2 + 2|z_0|(\alpha - \beta)}) / (\alpha - \beta), & \text{agar } k \neq 0 \text{ va } \alpha > \beta, \\ -1/k, & \text{agar } k < 0 \text{ va } \alpha = \beta, \\ \sqrt{2|z_0|} / (\alpha - \beta), & \text{agar } k = 0 \text{ va } \alpha > \beta. \end{cases}$$

Proof. Suppose, let the pursuer choose the strategy in the form (4) when the evader chooses any control function $v(\cdot) \in V$. Then, according to the equations

(1)– (2), we have the following Caratheodory's equation:

$$\ddot{z}(t) = \lambda(v(t), \xi_0), \quad \dot{z}(0) = z_0$$

Thus the following solution will be found by the given initial conditions

$$z(t) = z_0(kt + 1) - \xi_0 \int_0^t \int_0^s \lambda(v(\tau), \xi_0) d\tau ds$$

or

$$|z(t)| = |z_0|(kt + 1) - \int_0^t \int_0^s \left((v(\tau), \xi_0) + \sqrt{(v(\tau), \xi_0)^2 + \alpha^2 - |v(\tau)|^2} \right) d\tau ds.$$

According to the properties 1- 2, we will form the following inequalities

$$|z(t)| \leq |z_0|(kt + 1) - \int_0^t \int_0^s (\alpha - |v(\tau)|) d\tau ds \Rightarrow$$

$$|z(t)| \leq |z_0|(kt + 1) + t^2(\beta - \alpha)/2.$$

If we say $f(t, a, k, \alpha, \beta) = a(kt + 1) - \frac{t^2}{2}(\alpha - \beta)$, $a = |z_0|$ (5), then we will check its properties

1. Let be $\alpha = \beta$.

1.1. If $k > 0$, then the function $f(t, a, k, \alpha, \beta) = a(kt + 1)$ is always continuous and isn't equal to zero.

1.2. If $k = 0$, then the function $f(t, a, k, \alpha, \beta) = |z_0|$ is a linear function (Fig-2).

1.3. If $k < 0$, then the function (6) is decreasing and it equals to zero at $t^* = -\frac{1}{k}$ 2.

Let be $\alpha > \beta$. 2.1. If $k > 0$, then the function (6) is equal to zero at

$$T = \left(|z_0|k + \sqrt{|z_0|^2 k^2 + 2|z_0|(\alpha - \beta)} \right) / (\alpha - \beta).$$

In this case, a maximal time of unapproach is equal to $t_0 = |z_0|k / (\alpha - \beta)$ and therefore, a maximal distance between them equals to $f(t_0) = (2|z_0|(\alpha - \beta) + |z_0|^2 k^2) / 2(\alpha - \beta)$.

2.2. If $k < 0$, then the function (6) decreases monotonically, and this function turns to zero at time T as in the case.

2.3. If $k = 0$, then the function (6) becomes in the form

$$f(t, a, k, \alpha, \beta) = a - \frac{t^2}{2}(\alpha - \beta) \text{ and the pursuit time equals to the followin:}$$

$$T = \sqrt{\frac{2|z_0|}{\alpha - \beta}}$$

In conclusion, the relation (3) is true at some time t^* according to the inequality $|z(t)| \leq |z_0|(kt + 1) + t^2(\beta - \alpha)/2$ and properties of (5), and it is determined that a relation $t^* \leq T$ is correct, i.e., the pursuit problem is solved. Proved.

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THE EFFECT OF BIOFUNGICIDES BASED ON RHIZOBACTERIA ON ROSES

Annotation: *In this article, the complex action biofungicide based on Bacillus subtilis bacteria and the study of the mechanism of its antagonistic activity against the causative agent of root rot disease, as well as the justification of its effectiveness, are defined as the following tasks.*

Key words. *Rhizobacter, biofungicide, biological control, Baccillis subtilis, rhizosphere microorganisms, biological efficiency, biopreparation, working solution.*

Relevance of the topic. The need for food security is becoming increasingly urgent as the world's population, which is currently close to 7 billion, is expected to increase to almost 10 billion or more in the next 50 years [1]. Approved by Decree No. PF-6159 of the President of the Republic of Uzbekistan dated February 3, 2021 "On the further development of the system of knowledge and innovation in agriculture and the provision of modern services" "In 2021-2025 in agriculture in the concept of priority development of the system of knowledge and innovations" "Effective use of land and water resources, increasing the productivity of agricultural crops, creation of new varieties, selection, development of seed production and nursery, introduction of scientific achievements into production, republic It is determined that the development of science based on conceptual directions such as specialization of regions for the cultivation of certain agricultural crops and food products is an urgent task.

Rhizosphere microflora. Microflora can be defined as a set of microbial genomes in a certain habitat (Bulgarelli et al. 2013). The root system is surrounded by a zone of high biological activity, that is, the rhizosphere, where many interactions between the plant and microorganisms have a strong influence on the development of the host plant cell. does (Singh et al. 2004). Therefore, the diversity of rhizosphere microorganisms is necessary to maintain the biochemical processes occurring in cells in the soil ecosystem.

Microorganism colonies living in the rhizosphere consist of several species that contain beneficial properties that affect the development of plants and make them free from phytopathogens. These microorganisms include not only plant mycorrhizal fungi, nitrogen-fixing bacteria, biocontrol agents and

growth-promoting rhizobacteria (PGPR), but also harmful microorganisms as plant pathogens in the soil (Mendes et al. 2013). Colonization of this complex microflora population takes place under the influence of different amounts and types of organic compounds - exudates - released by plant roots (Haichar et al. 2008; Pérez-Jaramillo et al. 2015). Root exudate varies among plant species, varies along the root axis, and also varies in response to nutritional status, stress, and phytopathogen damage (Neumann 2007). Compounds released by roots can determine microflora composition by activating or reducing rhizosphere association microorganisms (Doornbos and Van Loon 2012). Therefore, the enrichment of specific microflora populations is related to the composition and amount of root exudates (Foster 1986; Gomez et al. 2001; Berg et al. 2002;).

Before the preliminary experiments, the research was divided into two parts based on field and laboratory experiments. Laboratory experiments were carried out in the phytopathology laboratory of the Andijan Agricultural and Agrotechnological Institute. The field experiments were carried out in the area where a rose (Rose.L) belonging to the private entrepreneur Ibrahim Rahimov, who belongs to the Chirtak neighborhood of the Izboskan district, is being cared for. This area is 1.6 hectares, and varieties of roses "Chernaya Magiya", "Papilon", "Salvidor" are grown in the area. An area of 1,700 m² was selected for field experiments during the research. In the selected field, the variety of rose (Rose.L) "Chernaya magiya" was selected for experiments. To observe soil microflora, 3 different periods were chosen: April-May, June, July, October-November. The following media were used to grow the strains used in the study.

Placed in an orderly manner in options and returns in the field of experience. The returns in the study area were analyzed into 3 returns, and all options were compared to options 1 and 2.

1- return				2- return				3- return			
1	2	3	4	1	2	3	4	1	2	3	4
Control	Fitosporin	Fitosporin + <i>Bacillus subtilis</i>	<i>Bacillus subtilis</i>	Control	Fitosporin	Fitosporin + <i>Bacillus subtilis</i>	<i>Bacillus subtilis</i>	Control	Fitosporin	Fitosporin + <i>Bacillus subtilis</i>	<i>Bacillus subtilis</i>

B. subtilis has many direct and indirect mechanisms to increase plant growth and thus yield, including improving nutrient availability, plant growth hormone synthesis, and It plays a positive role in reducing stress in plant development through abiotic stress.

In *B. subtilis* nutrient availability improvement, many important plant nutrients, such as nitrogen, phosphorus, and iron, are in soluble forms that are

difficult for plants to assimilate in the soil, and therefore can be pre-fortified by rhizobacteria or transformed into soluble forms. participates in the further improvement of the demand for substances in the development of plants through teeth (Hayat et al. 2010). Plants, for example, cannot use atmospheric nitrogen directly, but depend on external assistance provided by microbial symbionts

Root, stem and leaf samples of diseased plants were taken, herbarium was prepared and mycological examination was carried out in laboratory conditions. The samples were first placed on special grids and washed in running water for two hours, and then the samples were washed in Tween 80 solution for 30 seconds, 0.5% sodium hypochlorite (NaOCl) for 30 seconds, 50% water and 50% alcohol (96%) for 30 seconds in sterile water for 1 minute. KDA was planted in nutrient medium and grown for 3-5 days in an artificial climate chamber at 25-26 0 C (pictures 3.2.2-, 3.2.3-, 3.2.4-, 3.2.5-).



Figure 3.2.1. Samples of fungal colonies grown on day 1

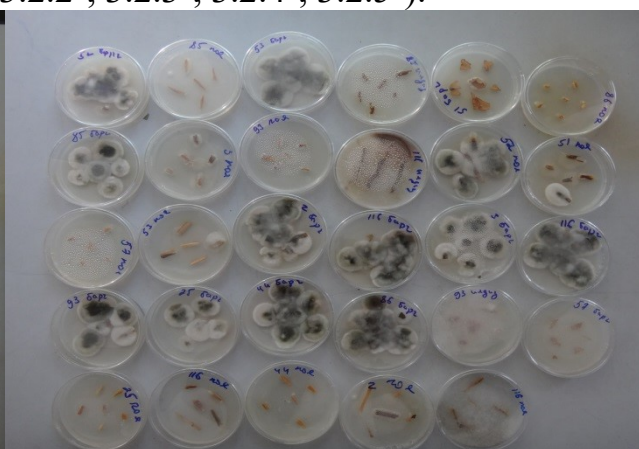


Figure 3.2.2. Samples of day 5 cultured fungal colonies

Limiting the development of phytopathogens based on biological methods and combating various biotic and abiotic factors of the environment is an important task of modern agrobiotechnology. It is known that biofungicides are a means of regulating plant ontogeny. Therefore, they are widely used in agriculture to increase the efficiency of agroecosystems and resistance to adverse environmental conditions.

Phytohormones synthesized by bacteria in biological preparations prepared on the basis of microorganisms have a number of advantages over chemical substances; they are relatively cheap, easy to use, safe for humans, animals and beneficial insects, do not have a mutagenic effect, are easily used in existing technologies for growing and protecting crops, do not have a negative impact on the environment.

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YANGI KONSTITUTSIYADA JINOYAT SODIR ETGANLIKDA GUMON QILINUVCHI VA AYIBLANUVCHINING HUQUQLARI KAFOLATLANISHI

Annotatsiya

Tarixiga nazar tashlar ekanmiz, farovon jamiyat qurishni orzu qilgan, inson qadri ustuvor bo'lgan, adolatli davlat qurishni o'z oldiga maqsad qilgan har qanday xalq, mashaqqatli va sharaflı yo'lini bosib o'tganiga guvoh bo'lamiz. Yurtimizda 2023-yil 30-aprel kuni bo'lib o'tgan umumxalq referendumida xalqimiz o'zining yuksak siyosiy ongi, huquqiy madaniyati va dunyoqarashini namoyon etishi bilan, yangi tahrirdagi O'zbekiston Respublikasi Konstitutsiyasi qabul qilindi. Yangi taxrirdagi O'zbekiston Respublikasi Konstitutsiyasi davlatchilik ijtimoiy-siyosiy, ijtimoiy-iqtisodiy va sud-xuquq sohalarini bundan keyin ham barqaror rivojlantirish uchun mustahkam zamin yaratdi. Bosh qomusimiz, jinsi, irqi, millati, dini, ijtimoiy kelib chiqishidan qat'i nazar, yurtimiz fuqarolari tengligining kafolatlanishini qayd etdi va zamonaviy demokratik taraqqiyot uchun zamin yaratdi.

Kalit so'zlar: xalq farovonligi, konstitutsiya, yangi O'zbekiston, tuzum, tartib o'rnatish, tashkil etish, ta'lim olish, jinoyatchi.

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GUARANTEE OF THE RIGHTS OF THE SUSPECT AND THE ACCUSED IN THE NEW CONSTITUTION

Abstract

Looking at our history, we see that any nation that dreams of building a prosperous society, values human dignity, and strives to build a just state has gone through a difficult and honorable path. In the national referendum held in our country on April 30, 2023, our people showed their high political consciousness, legal culture and worldview, and the new version of the Constitution of the Republic of Uzbekistan was adopted. The newly revised Constitution of the Republic of Uzbekistan created a solid foundation for the further sustainable development of the socio-political, socio-economic and legal spheres of statehood. Our head of state noted the guarantee of equality of

citizens of our country, regardless of gender, race, nationality, religion, social origin, and created the ground for modern democratic development.

Key words: public welfare, constitution, new Uzbekistan, system, establishment of order, organization, education, criminal.

“Konstitutsiya va qonun ustuvorligi – farovon hayot garovi” Sh.Mirziyoyev

KIRISH

Hozirgi vaqtda yer yuzidagi barcha davlatlar o'zlarining erkin siyosati, tili, davlat ramzlariga ega. Lekin ularning hammasi ham o'z konstitutsiyasiga ega emas. To'g'ri, ularda konstitutsiya o'rnini boshqa meyoriy-huquqiy hujjatlar bajarishi mumkin, konstitutsiya deb atalmish qat'iy belgilab qo'yilgan qonun-qoidalar majmuasiga ega emas. O'zining milliy ramzlari qatorida tilga olinadigan konstitutsiyaga bizning mamlakatimiz ham ega ekanligi chinakan quvonchdir. Baxtimiz qomusi hisoblanmish konstitutsiyamizda fuqarolarimizning davlat va jamiyat oldidagi huquq va burchlari milliy qadriyatlarimizdan kelib chiqqan holda dunyo hamjamiyati miqyosidagi xalqaro huquq meyorlari asosida belgilab berilgan. “Konstitutsiya” so'zi lotincha so'z bo'lib, “tuzum”, tartib o'rnatish”, “barpo etish”, “tashkil etish” degan ma'nolarni beradi. Insoniyat ongli hayot kechira boshlagach, tartib-qoidalarga, asta-sekin qonunlarga ehtiyoj paydo bo'la boshlagan. Taraqqiyotning o'ziga xos bosqichlaridan so'ng Yer yuzidagi davlatlarda asosiy qoida sifatida Konstitutsiya shakllanib borgan. “Konstitutsiya” atamasi qadimgi Rimda ma'lum bo'lgan (imperator Konstitutsiyasi deb atalgan qonun). Amir Temur “Tuzuklar”i Sharq va Osiyo mamlakatlari sivilizatsiyasiga xos alohida shakldagi konstitutsiyaviy hujjat xususiyatiga ega bo'lgan. U shariat qonunlari bilan bir qatorda Markaziy Osiyo mintaqasi xalqlari taqdiriga kuchli ta'sir o'tkazgan.

ADABIYOTLAR TAHLILI VA METODOLOGIYA

Yangi tahrirdagi Konstitutsiya Yangi O'zbekiston strategiyasini amalga oshirishning siyosiy-huquqiy asoslarini yaratib, milliy davlatchilik taraqqiyotining tarixiy muhim bosqichida davlat va jamiyatni yanada rivojlantirishning ustuvor yo'nalishlarini belgilab berdi. Referendum ko'p millatli buyuk xalqimizning birdamligi va hamjihatligi, suveren, demokratik, huquqiy, ijtimoiy va dunyoviy davlat qurishga qat'iy qaror qilganligining ishonchli ifodasi bo'ldi.

So'nggi yillarda xalqimiz yangi ulug'vor marralar sari ildam qadamlar tashlaganicha barcha to'siq va qiyinchiliklarni yengib o'tib, mohiyatan bir-birini taqozo etuvchi siyosiy, iqtisodiy, ijtimoiy va huquqiy sohalaridagi izchil islohotlarni amalga oshirmoqda. Bugun yangi O'zbekiston demokratik prinsiplar, inson huquq va erkinliklari borasida umume'tirof etilgan prinsip va normalarga asoslangan, bosh maqsadi xalq uchun erkin, obod hamda farovon hayot yaratib berishdan iborat bo'lgan davlatga aylandi. Shunday ezgu maqsadlardan biri aholining keng qatlami va saylovchilar xohish-irodasi bo'lmish konstitutsiyaviy islohotlarni amalga oshirishdan iborat bo'ldi. Negaki, davlat va jamiyatda tub o'zgarishlar ro'y berayotgan bir paytda tabiiy ravishda

Konstitutsiyaga jiddiy o'zgartishlar kiritish taqozo etiladi. Zero, har qanday demokratik islohotlar chin ma'noda xalqchil konstitutsiyaviy asosga ega bo'lsagina, yanada bardavom bo'ladi, ko'zlangan ezgu maqsadlarga erishadi.

Prezidentimiz joriy yilning 20 iyunida Konstitutsiyaviy komissiya a'zolari bilan uchrashuvda yangilangan Konstitutsiya mamlakatimizning uzoq muddatli taraqqiyot strategiyalari, umuman, yurtimiz va xalqimizning ertangi farovon hayoti uchun mustahkam huquqiy asos hamda ishonchli kafolat yaratishi lozim ekanini alohida ta'kidlab o'tgan edi. Bu ayni haqiqatdir. Zero, har qanday Konstitutsiya hayotiy bo'lishi lozim, ya'ni u mamlakatning ijtimoiy va huquqiy voqeliklariga, xalqning orzu-umidlari va kelajak istiqboliga, xususan, zamon talabiga mos kelishi kerak.

Davlatimiz rahbari yangilanayotgan Konstitutsiyamiz Xalq - qonunlarning yagona manbai va muallifidir hamda - barcha muhim qarorlar bevosita xalq bilan muloqot asosida va jamoatchilik fikrini hisobga olgan holda qabul qilinadi, degan tamoyillarga asoslangan holda ishlab chiqilsagina tom ma'noda xalqimiz xohish irodasining ifodasi haqiqiy xalq Konstitutsiyasi bo'lishini alohida ta'kidladilar.

Ushbu maqola sarlavhasidagi **yangi konstitutsiyada jinoyat sodir etganlikda gumon qilinuvchi va ayblanuvchining huquqlari kafolatlanishi** deb nomlanishi bejiz emas, yangilangan Konstitutsiyamizda nafaqat aholining farovon hayot kechirishi, yutr tinchligi va inson xuquqlari bo'yicha balki sud-huquq tizimini yanada isloh qilish, fuqarolarning huquq va erkinliklarini ishonchli himoya qilish kafolatlarini kuchaytirish chora-tadbirlari va gumon qilinuvchi va ayblanuvchini himoya huquqi bilan ta'minlashga oid qonunlarni qo'llash bo'yicha sud amaliyoti to'g'risida bir qator muhim o'zgarishlar amalga oshirildi. Ushbu o'zgarishlarning ba'zilariga to'xtalib o'tamiz.

1. Yangilangan konstitutsiyamizning VII bobi shaxsiy huquq va erkinliklar deb nomlangan bo'lib ushbu bobning 26-moddasida Insonning sha'ni va qadr-qimmati daxlsizdir. Hech narsa ularni kamsitish uchun asos bo'lishi mumkin emas. Hech kim qiynoqqa solinishi, zo'ravonlikka, boshqa shafqatsiz, g'ayriinsoniy yoki inson qadr-qimmatini kamsituvchi muomalaga yoxud jazoga duchor etilishi mumkin emas¹¹. Bundan ko'rinib turibiki har bir inson yoki jinoyat sodir etgan shaxs har qanday holatda ham qadr-qiyamati daxlsiz ekanligi va qiynoqqa solinishi mumkin emasligi qat'iyl belgilab qo'yildi.

2. Har kim erkinlik va shaxsiy daxlsizlik huquqiga ega. Hech kim qonunga asoslanmagan holda hibsga olinishi, ushlab turilishi, qamoqqa olinishi, qamoqda saqlanishi yoki uning ozodligi boshqacha tarzda cheklanishi mumkin emas. Hibsga olishga, qamoqqa olishga va qamoqda saqlashga faqat sudning qaroriga ko'ra yo'l qo'yiladi. Shaxs sudning qarorisiz qirq sakkiz soatdan ortiq muddat ushlab turilishi mumkin emas. Shaxsni ushlab chog'ida unga tushunarli tilda uning huquqlari va ushlab turilishi asoslari tushuntirilishi shart¹². Ushbu

¹¹ Yangi tahrirdagi O'zbekiston Respublikasi konstitutsiyasi 26- modda

¹² Yangi tahrirdagi O'zbekiston Respublikasi konstitutsiyasi 27- modda

konstitutsiyaviy qoidalar zahirida har bir shaxsning daxlsizlik huquqiga ega ekanligi, hech qaysi shaxs asoslanmagan holda hibsga olinmasligi va sud qarorisiz 48 soatdan ortiq muddat ushlab turilishi mumkin emasligini alohida e'tirof etilgan.

3. Jinoyat sodir etganlikda ayblanayotgan shaxs uning aybi qonunda nazarda tutilgan tartibda oshkora sud muhokamasi yo'li bilan isbotlanmaguncha va sudning qonuniy kuchga kirgan hukmi bilan aniqlanmaguncha aybsiz deb hisoblanadi. Ayblanuvchiga o'zini himoya qilish uchun barcha imkoniyatlar ta'minlanadi. Aybdorlikka oid barcha shubhalar, agar ularni bartaraf etish imkoniyatlari tugagan bo'lsa, gumon qilinuvchining, ayblanuvchining, sudlanuvchining yoki mahkumning foydasiga hal qilinishi kerak. Gumon qilinuvchi, ayblanuvchi yoki sudlanuvchi o'zining aybsizligini isbotlashi shart emas va istalgan vaqtda sukut saqlash huquqidan foydalanishi mumkin. Hech kim o'ziga va yaqin qarindoshlariga qarshi guvohlik berishga majbur emas. Agar shaxsning o'z aybini tan olganligi unga qarshi yagona dalil bo'lsa, u aybdor deb topilishi yoki jazoga tortilishi mumkin emas. Ozodlikdan mahrum etilgan shaxslar o'ziga nisbatan insoniy muomalada bo'linishi hamda inson shaxsiga xos bo'lgan sha'ni va qadr-qimmati hurmat qilinishi huquqiga ega. Shaxsning sudlanganligi va bundan kelib chiqadigan huquqiy oqibatlar uning qarindoshlari huquqlarini cheklash uchun asos bo'lishi mumkin emas¹³.

3. Har bir shaxs jinoyat protsessining har qanday bosqichida, shaxs ushlanganida esa uning harakatlanish erkinligi huquqi amalda cheklangan paytdan e'tiboran o'z tanloviga ko'ra advokat yordamidan foydalanish huquqiga ega. Gumon qilinuvchi, ayblanuvchi yoki sudlanuvchi ayblovning mohiyati va asoslari to'g'risida xabardor qilinish, unga qarshi yoki uning foydasiga guvohlik berayotgan shaxslarning so'roq qilinishini talab etish, tarjimon yordamidan foydalanish huquqiga ega. Huquqbuzarliklardan jabrlanganlarning huquqlari qonun bilan muhofaza qilinadi. Davlat jabrlanganlarga himoyalaniшни va odil sudlovdan foydalanishni ta'minlaydi, ularga yetkazilgan zararining o'rni qoplanishi uchun shart-sharoitlar yaratadi¹⁴.

4. Inson huquq va erkinliklari kafolatlari. Inson huquq va erkinliklarini ta'minlash – davlatning oliy majburiyati etib belgilandi. Inson va davlat organlari o'rtasidagi yuzaga keladigan noaniqliklar inson foydasiga talqin qilinishi, huquqiy ta'sir choralari qonuniy maqsadga erishish uchun yetarli va mutanosib bo'lishi kerakligi belgilanmoqda. Ushbu qoidalar inson huquqlari ustuvorligini ta'minlaydi, davlat idoralarining o'z vazifalarini inson huquqlariga rioya qilgan holda amalga oshirishda mas'uliyatini oshiradi hamda insonga me'yoridan ortiq huquqiy ta'sir choralari qo'llanilishining oldini oladi.

NATIJA VA MUHOKAMA

Konstitutsiyamiz hamisha yurtimizni, xalqimizni o'ta tahlikali vaziyatlarda yakka-yu yagona to'g'ri yo'lni topish va kelajakga ishonch bilan

¹³ Yangi tahrirdagi O'zbekiston Respublikasi konstitutsiyasi 28- modda

¹⁴ Yangi tahrirdagi O'zbekiston Respublikasi konstitutsiyasi 29- modda

qarashda asos bo'lib xizmat qilib kelmoqda desak mubolag'a bo'lmaydi. Bugun yangilangan Konstitutsiya to'g'risida uning ma'no mazmuni va ustuvor tamoyillari haqida gapirar ekanmiz, asosiy qonunimizda birinchi navbatda shaxs manfaatining davlat manfaatidan ustun etib belgilangani, inson uning huquq va erkinliklari eng oliy qadriyat sifatida muhrlab qo'yilganini yana bir marta asos qilib ko'rsatishimiz zarur. Aynan ana shu qat'iy talabni nafaqat qonunlarimiz va huquqiy meyyorlarimizda belgilab berish balki bu ustuvor prinsipni hayotimizga tadbiq qilish o'ta muhim ahamiyatga ega. Buning uchun barcha fuqarolarimiz hamda yoshlarimiz o'z huquq va burchlarini chuqur anglab olishi, huquqiy madaniyati va salohiyatini yanada oshirishi va mustahkamlashi lozim.

XULOSA

Yangilangan konstitutsiyada yurtimizdagi barchani insonlarni emin erkin yashashlari uchun barcha imkoniyatlar yaratilgan. O'z navbatida jinoyat sodir etganda ayiblanuvchi va gumonlanuvchi shaxslarning huquqlari va majburiyatlari alohida e'tirof etilganligi va tartibga solinganligi muxim ahamiyat kabs etdi.

Demak, Konstitutsiyamiz bosh qomusimiz jamiyatimiz taraqqiyoti va yurtimiz tinchligi xalqimiz faravonligi yolida xizmat qilishiga barchamiz ishonamiz.

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ANALYSIS OF THE EFFECT OF RADIATION ON THE HUMAN BODY

Abstract. *The effect of radiation on humans is related to damage to the human body exposed to radiation and damage to the genetic apparatus. Radiation enters the human body through the consumption of plant and animal products containing various radiations. Radionuclides can accumulate mainly in various places of the human body - the thyroid gland, liver, bone, and muscle tissues.*

Key words: *radionuclide, radiation effect, somatic effects, genetic effects, radioactive element, human organism.*

The effects of radiation on humans are generally divided into two categories. These are:

- 1) Somatic (bodily) - appears in the body of a person exposed to radiation.
- 2) Genetic - is associated with damage to the genetic apparatus, manifested in subsequent generations: these are manifested in the children, grandchildren and more distant descendants of the person exposed to radiation [1,2].

1 Table.

Effects of radiation effects on people	
Somatic effects	Genetic effects
Radiation diseases	Gene mutation
Regional radiation damage	Chromosome aberration
Leukemias	
Tumors of various organs	

There are finite difference (deterministic) and stochastic effects. The first occurs when the number of cells that die as a result of radiation, lose their ability to reproduce or function normally, reaches a critical value, and the functions of the affected organs are significantly impaired. Table 2 shows that the function of the affected organs depends on the severity of the disorder and the size of the radiation dose [3].

2 Table.

Effects of different doses of radiation on the human body	
Dose (amount of radiation) , Gr	Cause and effect of radiation exposure
$(0.7 - 2) 10^{-3}$	Annual dose from natural sources
0.05	The maximum permissible dose of occupational radiation per year
0.1	A doubling of the probability of a gene mutation
0.25	A single dose of reasonable risk in an emergency
1.0	A dose that causes acute radiation sickness
3-5	Without treatment, 50% of those affected will die within 1-2 months due to impaired bone marrow cell function.
10 - 50	Death occurs within 1-2 weeks, mainly due to damage to the gastrointestinal tract.
100	Death occurs after a few hours or days due to damage to the central nervous system

The whole population includes not only general healthy working employees, but also all people (children, elderly, etc.) Cosmic of rays intensity of the earth magnet area is also affected does North and southern poles the equator regions than more radiation takes Sea level medium in widths space of rays equivalent dose 4-5 km high space of rays about 10 % organize does Contemporary of airplanes height in flights space radiation the sea from the level one how many ten even high will be (Fig. 1). But, from the sound fast flying on airplanes flight during of speed significant difference because of passenger less to radiation subject [4].

Radionuclides accumulate unevenly in organs. In the process of metabolism in the human body, they exchange atoms of stable elements in various cell structures, biologically active compounds, which leads to high local doses [5-8].

The effect of radiation exposure can manifest itself in a completely different place exposed to radiation. Exceeding the dose of radiation causes the body's immunity to decrease and makes it prone to various diseases. Radiation also increases the likelihood of malignant tumors [9].

Radionuclides enter the body (respiratory and digestive organs), the most strongly irradiated organs, as well as the thyroid gland and liver. The doses absorbed in them are 1-3 times higher than in other organs and tissues. According to the ability to concentrate absorbed decomposition products, the main organs can be placed in the following order [10]:

thyroid > liver > skeleton > muscles

Thus, up to 30% of absorbed decay products, mainly radioisotopes of iodine, accumulate in the thyroid gland.

According to the concentration of radionuclides, the second place after the thyroid gland is the liver. The radiation dose received by this organ mainly depends on ^{99}Mo , ^{132}Te , ^{131}I , ^{132}I , ^{140}Ba , ^{140}La radionuclides [11].

Iodine isotopes deserve special attention among man-made radionuclides. They have high biological activity, are able to actively participate in the biological cycle and move along biological chains, one of whose links can be a person.

In recent years, the processes of interaction of ionizing radiation with tissues of the human body have been studied in detail. As a result, radiation safety standards are being developed that reflect the actual radiation effects in terms of harm to human health.

In conclusion, we can say that various radionuclides accumulate in different parts of the human body. Radionuclides accumulate mostly in the thyroid gland, liver, bones and muscles of the human body. Radionuclides enter the body mainly through consumption of irradiated plant and animal products. Changes and swellings appear in different parts of the body under the influence of radiation. Under the influence of this, the immunity of a person decreases, which leads to the appearance of various diseases, including thyroid cancer and breast cancer.

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TYPES OF NATURAL SOURCES OF RADIATION

Abstract. *The natural background of radiation (the amount of radiation in nature) is an integral factor of the environment, such as gravity and electromagnetic fields. All living organisms develop under the constant influence of natural radiation, and radiation plays an important role in the vital activity of living organisms. In addition, the quantitative value of radiation varies significantly in different parts of the world.*

Keywords: *Natural radiation background, radionuclide, uranium, radon, cosmogenic radionuclides, emanation.*

Natural radiation background land on the surface and in the depths, in the atmosphere, all alive of beings in organisms and in plants spread out is radiation space rays under the influence of and land of the shell radionuclides by is created .

Natural radiation sources by created of radiation less part space to the rays right will come. Primary and secondary space radiations from each other are different.

Primary space radiation-interstellar from space straight away land atmosphere entering high energetic particles is the flow.

Primary space of radiations most of them our in our galaxy star explosions and very new of the stars appear to be on time of matter eruption and radiation as a result appear will be Such galactic space of particles energy the sun flashes as a result appear to be of particles from energy much high will be [1,2,6-9]. Contains according to such of radiation almost 90% - ini protons, about 7 % α -particles, about 1 % neutrons , photons , electrons and light element nuclei organize does [1].

Galactic space rays interstellar from the environment when passed harvest will be Theirs average age 10^6 - 10^7 year Such long process different from sources coming space of rays to interfere possibility gives, of this as a result radiation isotropic will be Cosmic rays Earth atmosphere enter, own contained light element nuclei and protons land atmosphere the air atoms nuclei with will collide and slows down. As a result primary space rays almost the sea to the level reached doesn't go However, this collisions land to the surface reached going collision from energy come next nuclear changes cascade because of secondary space radiation cause emits [2].

Sea 45 km above sea level space rays basically primary from the rays organize finds 20-25 km high secondary space of rays maximum intensity

observed, secondary space rays energy of height decline with decreases and the sea level to a minimum is enough Tall mountainous regions population of space of rays to the greatest effect subject to will be [3] .

Cosmic of rays intensity of the earth magnet area is also affected does North and southern poles the equator regions than more radiation takes Sea level medium in widths space of rays equivalent dose 4-5 km high space of rays about 10 % organize does Contemporary of airplanes height in flights space radiation the sea from the level one how many ten even high will be (Fig. 1). But, from the sound fast flying on airplanes flight during of speed significant difference because of passenger less to radiation subject to will be [4].

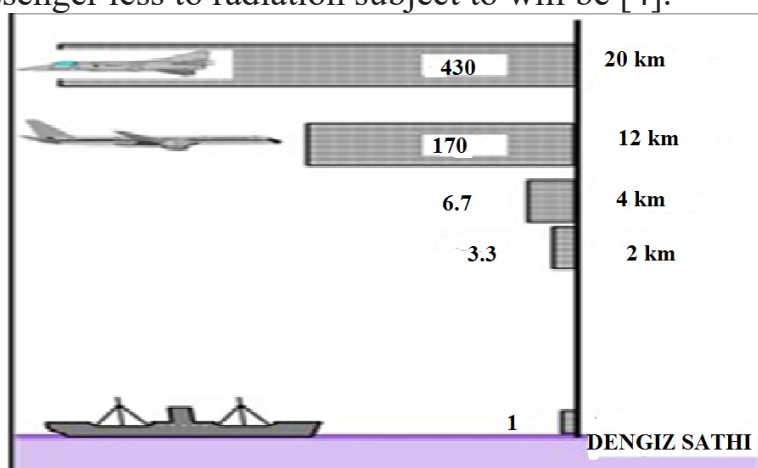


Figure 1. Cosmic rays intensity height increase with increased to go.

Earth of the shell radionuclides are both terrestrial and cosmogenic come exit can On the ground face giving natural radionuclides radioactive to families belongs to radionuclides and DI Mendeleev elements periodic of the system medium part of the elements to radionuclides is divided. Everything being in nature three radioactive family available: uranium-radium thorium and actinium [5]. of families each one radionuclides the chain harvest does then it is a nuclide of the previous one decay to the product becomes [6]. Theirs each in one initial radionuclide and final decay product (usually of lead stable of isotopes one) exists will be Har all three in the family decay from products one gas (from radon isotopes one) is called emanation.

Thorium of the family initial nuclear ^{232}Th , final decay product ^{208}Pb and emanation thoron ^{220}Rn to the Rn isotope belongs to will be Actinium of the family initial nuclear ^{235}U , final decay product ^{207}Pb and emanation action ^{219}Rn isotope belongs to will be Radon is his radioactive decay products with together population by land over radiation from sources removable annual individual equivalent radiation of the dose to about $\frac{3}{4}$ and all natural radiation from sources received dose by half right will come . Radon radioactive effect its α -radioactivity and radioactive volatile didn't happen decay products - Po, Bi and Pb with depends they are very difficulty with from the body is issued. breath get for biological dangerous isotope ^{218}Po is his decay product α - active isotopes and decay last product is lead [7].

But medicine and bolneology (bolneology this of cardiology one department of mineral waters come exit and physicist chemical properties , patients treatment and prevention in order to external and internal in use apply methods , of them to use medical instructions teaches), nerve and heart blood vein systems , breathing get and food digestion to do bodies , support movement system , gynecological diseases and metabolic diseases in the treatment of radon air , radon water and mud baths as well the air inhalation and emanation radon is wide in form used [8].

DI Mendeleev elements periodic of the system medium such as: ^{40}K , ^{48}Ca , ^{87}Rb , ^{96}Zr , ^{115}In , ^{138}La , ^{142}Ce , ^{144}Nd , ^{149}Nd , ^{147}Sm , ^{176}Lu radionuclides on our planet happen has been primary radiations harvest 12 elements that do own into takes [9].

Cosmogenic radionuclides basically space of radiation the atmosphere organize doer atoms nuclei with mutually effect as a result harvest will be Cosmogenic of radionuclides small one part space of radiation of the earth on the surface located atomic nuclei with mutually under the influence of harvest will be In general in fact , cosmogenic radionuclides emits radiation natural radiation sources to radiations irrelevant contribution they add On the ground background radiation level basically two radioactive family: earth of the shell natural radionuclides ^{40}K , ^{97}Rb and uranium-radium-thorium at the expense of is formed . of these elements concentration different in places changed stands and therefore for on the ground background radiation the level also changes. On the ground so places they have of the earth radiation level background from radiation much high will be Such from places one of Brazil Pocos de Caldas city nearby is located is there radiation level average 800 barabar from the indicator high and 250 mSv per year to enough.

Summary by doing in other words , radiation in nature occurring different radioactive of the elements harvest to be radiations and space rays under the influence of harvest will be Radiation everyone in the place in air , water , soil and in the mountains there is will be Radiation of the earth different in places differently will be , so places there is radiation very high will be cosmic rays under the influence of radiation harvest to be to the equator relatively at the poles stronger will be , that is space rays to the equator relatively to the poles more falls However natural of radiation space rays in effect harvest to be not worth it part organize.

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INCORPORATING NEUROSCIENCE INTO LANGUAGE TEACHING PROCESS

ABSTRACT: *The purpose of this research is to make a connection between neuroscience and foreign language instruction and acquisition, so it is devoted to considering summary of the language-related parts of the brain, theories of neuroplasticity, and various explanations of the crucial and sensitive phase ideas. The contributions neuroscience has made to the field of language teaching and learning will next be analysed, along with potential modifications and tools for use in foreign language classrooms. It was determined that neuroscience can be able to assist teachers in enhancing their methods and assisting students in learning.*

Keywords: *neuroscience, neuroeducation, foreign language, teaching methodologies.*

INTRODUCTION. It is essential to comprehend how the brain works in order to comprehend the process of acquiring a language. Language is not localized in one area of the human body, but rather involves a variety of structures spread throughout the encephalon, such as the articulatory system, the dorsal and ventral parts of the brain, or the right and left hemispheres. This is according to neuroscience. When considering the process of teaching a foreign language, the complexity of the language system mirrors the goal of developing the structures associated with language acquisition in each individual, with a focus on the utility of language. Neuroscience research is a necessary topic of discussion when understanding how the brain functions. We can have a different understanding of what it means to teach and, more specifically, learn a second language by using neuroscience studies. This research aims to analyze the potential of neuroscience as a tool to enhance pedagogical practice in foreign language classrooms, with the goal of enhancing teachers' approaches and facilitating students' learning. It is also hoped to investigate what neuroscience has to say about the process of acquiring a language through this methodology. Through the application of neuroscience's contributions, teachers can enhance their pedagogy and classroom management strategies, emphasizing the effectiveness and success of their teaching.

Over 100 billion neurons make up the structure of the human brain, claim Stiles and Jernigan (2010). These neurons are different in size, structure, and function from one another. They are brain cells that process information.

Neurons link with one another in order to form and process data. Electrical signals connect neurons and create points of contact, transferring information and establishing networks. A “neuro-functional scheme” is a term used to describe these networks, according to Sinani (2012). Genetic factors, such our propensity to cry as babies, may have an impact on the activation of these neurons. Genetic activation refers to our naturally occurring behaviors, which are the aspects of human function that are not acquired.

MATERIALS AND METHODS. During this research, qualitative and secondary data analysis were used to investigate the efficiency of implementing neuroscience in language teaching. According to previous researches, it is evident that further examples of neural-function schemes will rely on the environment's and/or the source's input. Genetic activation, which comes from our innate need and desire to communicate, and environmental activation, which arises from our need to enhance language in order to be realized. Friederici (2011) interprets this language network as follows: each domain is in charge of a single process, and these domains are connected to each other in order to convey a language at the conclusion of the processes. The main language processing areas are Wernicke's and Broca's regions, which have specific segments dedicated to language functions. Research has demonstrated that comprehension of language activates the posterior temporal lobe. The left posterior superior temporal gyrus (STG), according to Friederici's (2011) analysis, provides syntactic information by comparing statements to word lists and contrasting syntactically proper and semantically violating sentences. Finally, Friederici (2011) concluded that when discussing word order and the relationship between a verb and its arguments, the posterior temporal lobe is more active in the syntactic process. Moreover, it was discovered that the genesis of language may possibly have something to do with brain activation. Friederici (2011) found that all Indo-European languages had a subject-verb sentence structure when analyzing them. “Canonical” is the term Friederici chose to describe this linguistic structure. Using both canonical and noncanonical sentences, the study's methodology analyzed the brain activations associated with each sentence structure. The Broca's region was particularly active during the interpretation of these sentences in both situations. Friederici (2011) came to the conclusion that Broca's region is crucial for syntactic processing as a result, particularly in syntactically complicated sentences. The left dorsal posterior in addition to Broca's area.

RESULTS. Syndyotactic complexity additionally activates Broca's area, the left dorsal posterior IFG, the Inferior Frontal Sulcus (IFS), and the mid-posterior Superior Temporal Sulcus (Friederici, 2011). However, there comes a time when syntactic and semantic face together in order to accomplish interpretation. Research in neuroscience has demonstrated that this integration happens specifically, though not exclusively, on the Superior Temporal Gyrus (STG). According to Friederici (2011), the degree of integration determines the

domain of semantic and syntactic integration. According to the author, the integration of pertinent language information first takes place on the left IFG (Inferior Frontal Gyrus), and then the ultimate integration takes place on the left posterior STG. The syntactic, semantic, and acoustic-phonological processes are additional crucial ones. In a nutshell, the study of speech sounds and interpretation of meaning in spoken language constitute the acoustic-phonological process. Meaning is dealt with through a semantic process, but not just in spoken language, seeking to fulfil this section's second objective of explaining the connections between different parts of the brain and architecture and clarifying how language functions. Dick and Trembley (2012) used the network. The scientists found additional fiber channels (fiber pathways) for language processing in addition to the dorsal and ventral systems. Dick and Trembley (2012) found distinct connections in the ventral pathway, but they also confirmed a relationship between the dorsal pathway and the superior longitudinal fasciculus/arcuate fasciculus. According to Dick and Tremblay (2012), these relationships exist between the inferior fronto-occipital fasciculus, the inferior longitudinal fasciculus, and the uncinated fasciculus. The links between language the delivery and expression are established in the dorsal route by the superior longitudinal fasciculus/arcuate fasciculus.

DISCUSSION. Thus far, neuroscience has focused a great deal of emphasis on the formation and functioning of the brain. Numerous findings in the field of language have been made that may advance our knowledge of how language functions in the human brain. This study set out to determine how neuroscience might support language teaching and learning approaches, thereby assisting educators in their work and enhancing student outcomes through increased efficacy and quality of education. Furthermore, the literature linking neuroscience to education is very new, and some writers have categorized this field of study under the title “neuroeducation”. After analyzing the available information, it was found that research on brain function and the regions of the brain that are activated in response to different language traits is what forms the fundamental link between neuroscience and education. The writers who focused their work on neuroeducation researched what attitudes activate a particular area and how it may be stimulated in a classroom by using knowledge of brain areas active for language. Notwithstanding the benefits of neuroeducation, more research, testing, and debate are required before it can be used to precisely create or enhance L1 and L2 working methods. Finding innovative ways to incorporate neuroscience into language classrooms and encouraging more instructors to study the field's literature are critical to the field's future. However, it is crucial to note that neuroscience has a number of distinct shortcomings in the field of education. According to Lief (2014), there is a lack of comprehensive data regarding the true mechanisms by which neuroscience affects education. Furthermore, there are many misconceptions regarding the findings made in neuroscience and a widespread perception that these

discoveries have the potential to significantly alter educational practices. The author claims that there is a great deal of discoveries yet to be made and that educators need to be conscious of the gap that exists between theory and practice.

CONCLUSION. According to Lief (2014), teachers are free to incorporate neuroscience into their lesson plans. But they should exercise caution and assess whether this is changing or improving the learning process by looking at how students respond, how well they use L2, and how easily they use it. Lastly, we recognize that even though applied neuroscience is still in its early stages, it is critical to incorporate it into second language or foreign language teacher preparation programs starting at the undergraduate level to empower teachers to use it in the classroom. Understanding neuroscience is crucial to improving our ability to support language learning and increase the efficacy of our teaching methods by better comprehending how students' brain's function.

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IMPROVING THE USE OF INNOVATIONS IN THE NATIONAL PAYMENT SYSTEMS OF OUR COUNTRY

Abstract: *This article describes the economic factors affecting the efficiency of the payment system, and at the same time ensuring the effective management of the economy through monetary policy is considered to be an important tool.*

Key words: *Innovation, payment system, Central Bank, financial and banking system, payment system participants, plastic card, settlements, clearing, overdraft, e-commerce.*

Introduction. At the present stage of economic development, the role of banks operating in our republic is increasing. Because none of the business entities can act bypassing banking services, cannot carry out their mutual settlements without the help of the bank. Therefore, the government is focusing on reforms to strengthen the banking system, introduce innovation and increase its freedom.

Reforms carried out in the banking system are the basis for ensuring stability not only of banks, but of the entire economy. The adoption of the Resolution of the President of the Republic of Uzbekistan dated April 15, 2005 “On additional measures to reform and liberalize the banking system” greatly contributed to the development of banks operating in the republic. This resolution devotes a special place to the requirements for the organization of commercial banks, their activities, benefits and problems associated with lending. Currently, as the banking system develops, it is necessary to improve the mechanism of relationships between banks and settlements.

Main part. Law of the Republic of Uzbekistan “On Payments and Payment Systems” was developed in order to ensure the implementation of the decision of the President of the Republic of Uzbekistan dated September 19, 2018 “On measures to develop the national payment”. system" No. PQ-3945.¹

The law establishes requirements for payment systems and their components, control and monitoring of payment systems, licensing of payment system operators and payment organizations and regulation of their activities, regulation of the electronic money market and the procedure for identifying owners of electronic money, as well as ensuring the security and protection of information in payment systems. With the adoption of this Law, it will be possible to ensure the continuous implementation of payments and the

widespread introduction of innovative technologies, as well as efficient, reliable and secure payments. systems in our republic. One of the important innovations in national payment systems is the opening and maintenance of escrow accounts.

Literature review. According to the conclusion of a group of economists, payments through an escrow account are a new, promising non-cash payment instrument, while payments through an escrow account are made in six stages:

- conclusion of a purchase and sale agreement;
- opening an escrow account;
- money transfer;
- submission of documents confirming the transfer of ownership;
- agree on payment;
- money transfer.²

According to the conclusion of Z. Dakhova and E. Eneeva, the creation of electronic money and its implementation in national payment systems is a very innovative innovation in payment systems. In turn, electronic money has the following advantages and disadvantages:

Advantages:

- *transaction amount is low;
- *anonymity of use;
- *Perform all operations in real time.

- flaws:

- *these coins only work within the system in which they were issued;
- *this money cannot act as a means of accumulation, since the issue of electronic money is guaranteed only by the issuer and it is used as a means of payment.³

According to the European Parliament, the concept of “electronic money” is a monetary value in the form of a claim against the issuer, which:

- *stored on an electronic device;
- * will be issued upon receipt of an amount of money not less than the amount of the obligation;
- *accepted as a means of payment not only by the issuer, but also by other companies. Check conversion significantly reduces the costs associated with clearing paper checks. But banks still need a paper check option. Because they should keep the paper version of the check as a daily document.

It should be recognized that the introduction of a guarantee mechanism into the settlement process through payment orders is an important innovation in military payment systems.

Check conversion significantly reduces the costs associated with clearing paper checks. But banks still need a paper check option. Because they should keep the paper version of the check as a daily document.

Analysis and results. Most economists note that payment is not guaranteed as the main disadvantage of a payment order. In fact, payment of a payment order is not guaranteed. However, developed countries have found a way to

eliminate this deficiency inherent in the payment system. That is, full guarantee of payment is achieved when settling payment orders using a bank guarantee.

In this case, the payer's bank guarantees the payer's payment obligation. However, the banks of our republic do not guarantee payment by payment orders.

The introduction of Internet banking into the activities of commercial banks is recognized by many economists as a global innovation of national payment systems.

Internet banking allows commercial banks to provide the following types of wholesale and retail services:

- cash management;
- electronic transmissions;
- clearing operations;
- presentation of invoices for payment;
- issuing a balance request;
- money transfer;
- request information about transactions;
- presentation of invoices for payment;
- sending applications for loans;
- investment activities;
- other types of income-generating services.

The main advantage of Internet banking is fast and cheap service. Strong interbank competition has forced commercial banks to introduce Internet banking.

Another advantage of online banking is that it knows no boundaries. Even a bank with small assets can become a national bank depending on the geography of its customers.

According to the conclusion of A. Prokofiev and V. Tatyannikov, the introduction of “distributed ledger” technologies and their widespread use can radically change the processes of payment, clearing and settlements in payment systems, as a result of which their efficiency can increase. and estimated risks may be reduced. The circulation of digital currencies of central banks is a relatively important area of application of distributed ledger technologies in the activities of central banks.⁴

Indeed, the implementation of distributed ledger technology is widely discussed among central banks. In this regard, the following are considered important areas for the implementation of distributed registry technologies:

- issuance of digital currencies of central banks;
- development of cross-border payment systems;
- use in interbank settlements on the securities market;
- issue of bonds and management of their circulation.

By the beginning of 2019, more than 60 central banks around the world, including the US Federal Reserve, the Central Bank of Canada, the Central Bank

of Japan, the People's Bank of China, the Central Bank of Sweden and the Central Bank of Russia are studying the issue of digital currency circulation.

The increased use of cryptocurrencies as a means of payment may reduce the demand for cash and the demand for funds in Nostro representative accounts of commercial banks with the Central Bank.

However, the dangerous aspect of cryptocurrencies is that they are not controlled by central banks or governments. This could have a serious negative impact on the stability of cryptocurrencies.

Central bank digital currencies have a specific issuer, the Central Bank, and their circulation is organized and regulated by the Central Bank.

Conclusions and offers. The creation and trading of digital financial assets is, in our opinion, one of the most important innovations in national and international payment systems.

It must be recognized that the main problem associated with the use of electronic means of payment is that the process is susceptible to various types of abuse and extortion. Because transactions in banks and other issuers are carried out by the same persons who have the right to do so. Therefore, processes for determining the identity of owners of electronic funds must be improved.

It should be noted that the development of electronic payment systems directly depends on:

- their safety;
- operational reliability;
- to make it convenient to use;
- functional efficiency;
- to standardize the processes of conducting money transfer operations.

It should be noted here that central bank digital currencies are fundamentally different from government-owned cryptocurrencies. For example, some countries with difficult economic conditions, such as Venezuela and Iran, have government-owned cryptocurrencies. The main differences between central bank digital currencies and government cryptocurrencies are:

- The decision on the issue of digital currencies of the Central Bank is made by the Board of Governors of the Central Bank, and the decision on the issue of state cryptocurrencies is made by the political leadership;

- Digital currencies of the Central Bank are backed by assets of the Central Bank, and state cryptocurrencies are backed by products owned by the state. For example, in Venezuela, the state's cryptocurrencies are backed by oil, and in Iran – by gold;

- Digital currencies of the Central Bank are issued in order to increase the level of stability of the monetary and payment system, and state cryptocurrencies are issued in order to attract funds from abroad in the context of economic sanctions.

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JANUBIY FARG‘ONA YER RESURSLARINING GEOEKOLOGIK XUSUSIYATLARI

Annotatsiya. *Ushbu maqolada Markaziy Osiyoning o‘ziga xos hududlaridan biri bo‘lmish Farg‘ona viloyati yer resurslarining hozirgi holati tahlil qilingan. Maqolada viloyatning yer fondi, uning tarkibi va asosiy foydalanish yo‘nalishlari haqida batafsil to‘xatilib o‘tilgan. Tuproq sho‘rlanishi, eroziya, ifloslanish va degradatsiya kabi geoeologik muammolarning sabab va oqibatlari yoritib berilgan. Shuningdek, yer resurslarining geoeologik holatini yaxshilash bo‘yicha amalga oshirilayotgan va rejalashtirilayotgan chora-tadbirlarga alohida e‘tibor qaratilgan. Shuningdek, yer resurslarini barqaror boshqarish va ulardan oqilona foydalanishning muhimligi borasidagi tahlil natijalaridan kelib chiqib, Farg‘ona viloyati yer resurslarining samaradorligini oshirish va geoeologik muammolarni bartaraf etish uchun taklif va tavsiyalar ishlab chiqilgan.*

Kalit so‘zlar: *yer resurslari, qishloq xo‘jaligi, tuproq sho‘rlanishi, tuproq eroziyasi, tuproq ifloslanishi, ekologik muammolar, melioratsiya, ekologik barqarorlik, yer fondi, tuproq unumdorligi.*

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GEOECOLOGICAL CHARACTERISTICS OF LAND RESOURCES OF SOUTHERN FERGHANA

Annotation. This article analyzes the current state of land resources in the Fergana region, one of the unique regions of Central Asia. The article details the land fund of the region, its composition, and its main directions of use. The causes and consequences of geoeological problems such as soil salinization, erosion, pollution, and degradation are highlighted. Also, special attention is paid to the implemented and planned measures to improve the geoeological condition of land resources. Also, based on the results of the analysis of the importance of sustainable management of land resources and their rational use,

proposals and recommendations were developed to improve the efficiency of land resources in the Fergana region and eliminate geoecological problems.

Key words: land resources, agriculture, soil salinization, soil erosion, soil pollution, environmental issues, land reclamation, ecological sustainability, land fund, soil fertility.

Kirish. Insoniyat jamiyati qadimdan birlamchi ehtiyojlarini tabiatdan olgan. Ayniqsa, yer va suv resurslari kishilar mavjudligining ajralmas qismi hisoblanadi. Xususan, yer har qanday davlatning barqaror rivojlanishini ta'minlovchi asosiy tabiiy boyliklardan biridir. Yer – resurs sifatida qishloq xo'jaligida ishlab chiqarishning asosiy omili; turli xil mahsulotlarning joylashuv makoni; mehnat yo'naltirilgan obyekt sifatidagi mehnat predmeti; shuningdek, insonlar uchun turar joy; hayvonot va o'simliklar dunyosining yashash muhitidir. Har bir xalq va millat yerni asosiy boyligi sifatida e'tirof etadi, bir nechta shart va omillarni birlashtirgan holda qishloq xo'jaligidagi afzalliklarni yer orqali tavsiflaydi. Shu jihatdan, ushbu maqolada geografik o'rni, tabiiy sharoiti va potensial imkoniyatlari bilan alohida o'ringa ega bo'lgan Markaziy Osiyo bag'ridagi Farg'ona vodiysining janubiy qismlaridagi yer resurslarining o'ziga xos jihatlari haqida tahlillar keltirilgan.

Maqsad va vazifalar. Maqolaning maqsadi Janubiy Farg'ona mintaqasining O'zbekiston qismi – Farg'ona viloyati yer resurslarining geoekologik holatini tahlil qilish va mavjud muammolarga yechim taklif etishdan iborat. Ushbu maqsadni amalga oshirish uchun bir necha vazifalar belgilab olingan:

- yer resurslarining holatiga ta'sir etuvchi omillarni aniqlash;
- yer resurslarining geoekologik vaziyatining salbiylashuviga ta'sir etuvchi noxush jarayonlarni ochib berish;
- tahliliy ma'lumotlar asosida taklif va tavsiyalar ishlab chiqish.

Metod va metodologiya. Mazkur maqolani yoritib berishda geografik taqqoslash, statistik tahlil, kartografik metodlardan foydalanilgan. Shuningdek, me'yoriy-huquqiy hujjatlar va ilmiy tadqiqot natijalariga asoslanib, tahlillar amalga oshirilgan.

Natija va tahlillar. Farg'ona vodiysi – G'arbiy Tyanshanning janubiy, Janubiy Tyanshanning shimoliy va Markaziy Tyanshanning g'arbiy tarmoqlari oraliq'ida joylashgan o'ziga xos kotlovina hisoblanadi. Vodiy relyef jihatidan markazdan atrofga tomon, g'arbdan sharqqa tomon ko'tarilib boradi. Mavjud tabiiy sharoitning shakllanishi, tuproq va o'simlik qoplamining tarkib topishi bevosita uning ushbu joylashuvi bilan bog'liq.

Farg'ona vodiysining eng aholi ko'p joylashgan, agroiirrigatsion yotqiziqlari o'ziga xos tuzilishga ega mintaqa Sirdaryo va Turkiston-Oloy tizmalari oraliq'ida joylashgan Janubiy Farg'ona mintaqasi hisoblanadi. Mintaqaning o'ziga xosligi Sirdaryo daryosining kesib o'tganligi, janubdan

boshlanuvchi daryo va soylarning faoliyati bilan bog'liq. Ushbu maqola tavsilotlari Farg'ona viloyatiga bag'ishlangan.

Farg'ona viloyati tabiiy geografik jihatidan Respublikamizning sharqida, Farg'ona vodiysining janubida joylashgan bo'lib, shimolda – Namangan, Andijon viloyatlari, janub va sharqdan – Qirg'iz Respublikasi (Batken viloyati), g'arbda esa Tojikiston Respublikasi (Sog'd viloyati) bilan chegaradosh. Viloyatga vodiyni tekislik qismi, Oloy va Turkiston tizmalarining tog'oldi hududlari kiradi. Uning umumiy maydoni 6,7 ming kv kmga teng bo'lib, mamlakat hududining 1,5 foizini tashkil etadi.

Yer resurslarining tarkib topishi geografik o'rni bilan bog'liq holda geologik tuzilma bilan ham chambarchas aloqadorlikka ega. Viloyat geologik tuzilishi hududini tashkil etuvchi jinslarning tarkibi murakkab va rang-barang bo'lib, tog'lar va qoyalar shaklida turli xil xususiyatga ega. Farg'ona viloyatining geologik tuzilishida turli yoshdagi yotqiziqlar (paleozoydan to hozirgi to'rtlamchi davrgacha) ishtirok etadi. Eng qadimgi paleozoy shakllanishlari baland tog'larda va baland tog' etaklarida paydo bo'ladi. Balandliklarning pasayishi bilan qadimgi jinslarning yosh qatlamlariga o'zgarishi kuzatilmoqda. Paleozoy tizimi silur, devon, karbon va perm shakllanishlari bilan ifodalanadi. Silur davri yotqiziqlari Turkiston va Oloy tizmalarida uchraydi.

Yer resurslarining muhim xususiyatlaridan yana biri tabiiy komponentlarning tuzilishi, rivojlanishi bilan o'zaro bog'liqligi va aloqadorligi bir butunlikni hosil qilishidir. Shu bilan birga, viloyat hududining geomorfologiyasi murakkab hududiy tabaqalangan bo'lib, turli katta-kichiklikdagi relyef shakllari va tabiiy geografik komplekslardan tashkil topgan. Viloyatda suv resurslarning tarqalish qonuniyatlarida iqlim komponentlari ham alohida o'ringa ega. Barcha tabiiy komponentlarning bir butunlik qonuniyati asosida tarkib topishi hududning yer usti tuzilishiga juda katta ta'sir ko'rsatgan.

Tabiiy sharoit mavjud komponentlarga bog'liq tarzda shakllanadi. Jumladan, yerga mexanizmlar bilan ishlov berishni chegaralovchi va tuproqlarning unumdor qatlami hajmini kamaytiruvchi salbiy omil yerning sur qo'ng'ir – toshloq xususiyatga ega bo'lishi hisoblanadi. Farg'ona viloyatida ham bunday qoplamalar ko'plab tarqalgan. Shuningdek, oxirgi yillarda Namangan, Farg'ona, Navoiy va boshqa viloyatlarda toshloq adir yerlar o'zlashtirildi, bu esa mazkur toifadagi sug'oriladigan yerlar maydonini 150 ming gektarga ko'payishiga olib keldi.

Toshloq yerlar Farg'ona viloyatining tog' oldi – Farg'ona, So'x, Rishton, O'zbekiston va Quva tumanlarida tarqalgan. Tuproqlarning ishlab chiqarish mahsuldorligiga salbiy ta'sir ko'rsatuvchi va unumdorligi pasayishiga olib keluvchi omillardan biri suv va irrigatsiya eroziyasidir. Eng kuchli irrigatsiya eroziyasi jarayonlari tog' oldi mintaqalaridagi to'q bo'z va tipikbo'z tuproqlar mintaqasida ko'rinadi. Farg'ona viloyatining So'x va Farg'ona tumanlarining sug'oriladigan yerlari irrigatsiya eroziyasiga duchor bo'lgan.

Geomorfologik xususiyat, g'arbdan havo oqimining bemalol kirib kelishi tufayli shamol eroziyasi yoki deflyatsiya jarayonlari jadal rivojlangan. Ayniqsa, Qo'qon tumanlari guruhida, asosan qumloq, qum va yengil qumoq tuproqlar keng tarqalgan. Delfyatsiya jarayoni intensiv bo'lsa-da, aholi sonining ortib borayotgani hamda yer taqchilligini inobatga olib, oxirgi yillarda shamol kuchli esadigan mintaqalarda qattiq shamol eroziyasiga uchragan maydonlarning ancha qismi o'zlashtirildi. Chunonchi, Farg'ona viloyatining Buvayda, Dang'ara, Uchko'prik, Yozyovon, Bog'dod va Furqat tumanlari maydonlari shamol eroziyasiga uchragan. Shu bilan birga, bu salbiy holatlar ko'pincha birgalikda ta'sir ko'rsatadi va yerlarning umumiy sifatini baholashga (ya'ni tuproqlar bonitirovkasiga) tegishli ravishda ta'sir qiladi.

Farg'ona viloyatining ma'muriy chegarasidagi umumiy yer maydoni 2024 yil 1-yanvar holatiga ko'ra, jami yerlar 675281 gektarni (shundan: sug'oriladigan yerlar esa 368,5 ming gektarni yoki umumiy yer maydonining 54,5 foizini) tashkil qiladi. O'zbekiston Respublikasi yer fondi yerlardan foydalanish maqsadi va tartibiga ko'ra o'ziga xos xususiyatlarga ega bo'lib, ular O'zbekiston Respublikasi Yer kodeksining 8-moddasiga asosan 8 ta toifaga bo'lingan (1-jadval) hamda shu asosda tartibga solib turiladi.

1-jadval

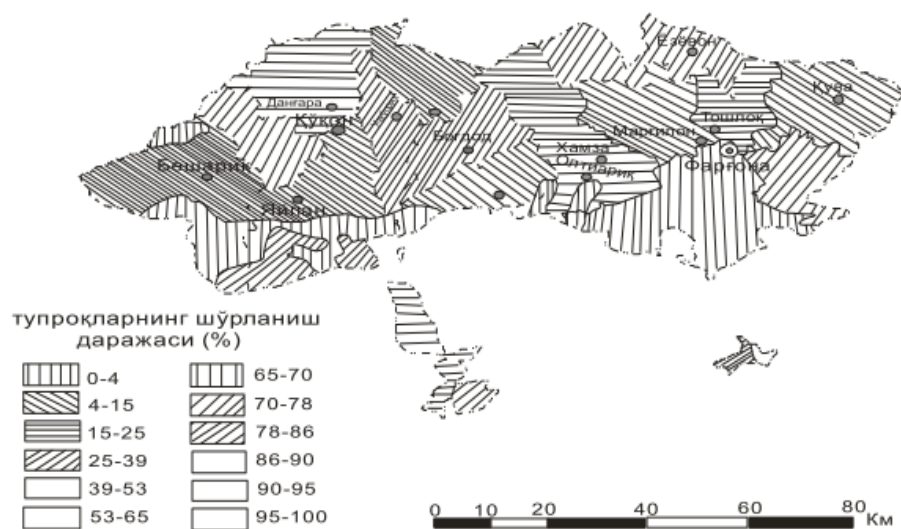
Farg'ona viloyati yer fondining toifalari bo'yicha taqsimlanishi
(ming ga. hisobida)

T/r	Yer fondining toifalari	Umumiy yer maydon (01.01.2012 holatiga)		Umumiy yer maydon (01.01.2024 holatiga)	
		Jami (ming ga.)	Foiz hisobida	Jami (min g ga.)	Foiz hisobida
1	Qishloq xo'jaligiga mo'ljallangan yerlar	589,4	82,4	532,3	78,8
2	Aholi punktlarining yerlari	169	23,6	18,6	2,7
3	Sanoat, transport, aloqa, mudofaa va boshqa maqsadlarga mo'ljallangan	21,8	3,05	51,1	7,5
4	Tabiatni muhofaza qilish, sog'lomlashtirish va rekreatsiya maqsadlariga mo'ljallangan yerlar	0,4	0,05	0,361	0,05
5	Tarixiy-madaniy ahamiyatga molik yerlar	-	-	-	-
6	O'rmon fondi yerlari	13,7	1,9	19,1	2,8

7	Suv fondi yerlari	14,5	2,02	20,5	3,0
8	Zaxira yerlar	58,6	8,1	33,0	4,8
Jami		714,7	100	675,2	100

Izoh: Jadval Suv va suvdan foydalanish to'g'risidagi O'zbekiston me'yoriy-huquqiy hujjatlar portali lex.uz ma'lumotlari asosida tuzilgan [12]

Obikor yerlarning kengayib borishi natijasida viloyatning sug'orish maydonlaridagi tuproqlarni sho'rlanish darajasi ortib bormoqda. Farg'ona viloyati sug'orish maydonlarida tarqalgan tuproqlarining asosiy qismida sho'rlanish darajasi past. Jumladan, sho'rlanish darajasi 0-4 % bo'lgan tuproqlar Farg'ona tumani hududlarida tarqalgan. Sho'rlanish darajasi 4-15 % bo'lgan tuproqlar esa Quva, Qo'shtepa, Buvayda, Rishton, O'zbekiston va Beshariq tumanlarining pastki qismlarida tarqalgan. Sug'orish maydonlaridagi sho'rlanish darajasi 15-25 % tuproqlar Dang'ara, So'x, Oltiariq, Toshloq tumanlari hududlarida rivojlangan bo'lsa, sho'rlanish darajasi 25-39 % bo'lgan tuproqlar esa Yozyovon, Bag'dod va Uchko'prik tumanlarida tarqalgan. Lekin sug'orish maydonlaridagi tuproqlarning sho'rlanish darajasi 65-70 % bo'lgan maydonlar esa Beshariq O'zbekiston, Oltiariq va Rishton tumanlarining adir va tog'oldi hududlarida, So'x tumanining janubiy qismida tarqalgan. Sho'rlanish darajasi 70-78 % bo'lgan tuproqlar Furqat, Beshariq va O'zbekiston tumanlarining yuqori qismlarida tarqalgan. Tuproqlarning sho'rlanish darajasi 78-86 % bo'lgan maydonlar esa Shohimardon hududining g'arbiy qismlarida tarqalgan (1-rasm).



1-rasm. Farg'ona viloyati sug'oriladigan yer maydonlaridagi tuproqlar sho'rlanish darajasi [5]

Farg'ona viloyati hududida sug'orish maydonlaridagi tuproqlarning sho'rlanish darajasi 86-100% bo'lgan maydonlar uchramaydi. Bunga sabab,

viloyat hududidagi geologik hosilalarning asosiy qismi zamonaviy to'rtlamchi davr yotqiziqlari hisoblanadi. Ular asosan yer usti suvlarining geologik ishi (yemirish., tashib keltirish va to'plash) natijasida hosil bo'lgan. Yemirish, tashib keltirish va to'plash jarayonida yotqiziqlarning tarkibidagi tuzlarni eritib, o'zlari bilan olib ketadi. Umumiy qilib aytganda, viloyatdagi geoeologik jarayonlar kishilik faoliyati ta'sirida yanada o'zgarib bormoqda. Xususan, yerlarning jadal o'zlashtirilishi, ishlab chiqarish tarmoqlar to'rini zichlasha borishi, sug'orish natijasida sho'rlanish va eroziyaning kuchayib borayotgani fikrimizning yorqin dalilidir.

Xulosa qilib aytganda, Farg'ona viloyatining yer resurslari hududning iqtisodiy va ijtimoiy rivojlanishida muhim ahamiyat kasb etadi. Viloyatning jami 675 281 gektar yer maydoni turli toifalarga bo'linib, qishloq xo'jaligi, sanoat, aholi yashash joylari, o'rmon fondi va boshqa maqsadlar uchun foydalaniladi. Yer fondining eng katta qismi, ya'ni 532 345 gektari qishloq xo'jaligi uchun ajratilgan bo'lib, bu yerlar viloyatning qishloq xo'jaligi mahsulotlarini yetishtirishdagi asosiy manba hisoblanadi.

Geoeologik muammolar, xususan, tuproq sho'rlanishi, eroziya, ifloslanish va tuproq degradatsiyasi Farg'ona viloyati yer resurslarining samaradorligini pasaytiradi. Tuproq sho'rlanishi, sug'orish tizimlarining noto'g'ri ishlashi va melioratsiya choralari yetarli darajada ko'rilmagani natijasida hosildorlikni kamaytiradi. Tuproq eroziyasi, yomg'ir va shamol eroziyasi natijasida unumdor qatlamlarning yo'qolishiga olib keladi, bu esa qishloq xo'jaligi hosildorligini pasaytiradi. Tuproqning sanoat chiqindilari, kimyoviy o'g'itlar va pestitsidlar bilan ifloslanishi esa tuproqning biologik faoliyatiga va inson salomatligiga zarar yetkazadi.

Yer resurslarining ekologik holatini yaxshilash uchun qator chora-tadbirlar amalga oshirilishi zarur. Melioratsiya va sug'orish tizimlarini modernizatsiya qilish, zamonaviy sug'orish texnologiyalaridan foydalanish, yerlarni drenajlash va tuproq sho'rlanishiga chidamli ekinlarni ekish sho'rlanish muammosini bartaraf etishga yordam beradi. Tuproq eroziyasiga qarshi kurashish uchun esa konservatsion texnologiyalarni joriy etish, minimal ishlov berish, qoplama o'simliklar ekish va himoya o'rmonzorlari yaratish kabi chora-tadbirlar amalga oshirilishi lozim. Tuproqning ifloslanishini kamaytirish uchun ekologik nazoratni kuchaytirish va chiqindilarni qayta ishlash tizimlarini yaxshilash muhimdir.

Shuningdek, yer resurslaridan barqaror va oqilona foydalanish, qishloq xo'jaligi texnologiyalarini takomillashtirish, ekologik nazoratni kuchaytirish va yerlarning ekologik barqarorligini ta'minlash orqali Farg'ona viloyatining yer resurslaridan samarali foydalanish mumkin. Bu nafaqat viloyat iqtisodiyotining barqaror rivojlanishiga hissa qo'shadi, balki ekologik muammolarni bartaraf etishga ham xizmat qiladi. Yer resurslarini samarali boshqarish va ulardan oqilona foydalanish viloyatning kelajak avlodlari uchun sog'lom va barqaror muhit yaratishga yordam beradi.

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ALOE PLANT - ITS PLACE IN FOLK MEDICINE, ITS SPECIAL PROPERTIES

Abstract:

Nowadays, the interest in plants with medicinal properties is increasing, the whole world is paying special attention to human health, increasing awareness of health secrets, aging and chronically ill patients are preferring natural means to activate the immune system. the absolute harmlessness and benefit of natural remedies are causing a sharp increase in the amount of investments in scientific research in this field and the demand for medicinal plants in international markets.

Key words: Aloe vera, vitamin, carotene, enzyme, dermatology, gynecology, ophthalmology, gastroentology

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ALOE O'SIMLIGINING - XALQ TABOBATIDAGI O'RNI, O'ZIGA XOS XUSUSIYATLARI

Annotatsiya:

Hozirgi kunda dorivor hususiyatga ega o'simliklarga bo'lgan qiziqish tobora ortib bormoqda, butun dunyo insonlar sog'lig'iga alohida e'tibor berilishi, salomatlik sirlaridan xabardorligini ortishi, qarigan va surunkali kasalliklarga chalingan bemorlar immun tizimini faollashtirish uchun tabiiy vositalar afzal ko'rilmogda, tabiiy vositalarning mutloq zararsizligi va foydasi ushbu sohada ilmiy tadqiqotlarga investitsiyalar hajmining va xalqaro bozorlardagi dorivor o'simliklarga bo'lgan talabning keskin ortishiga sabab bo'lmoqda.

Kalit so'zlar: Aloe vera, vitamin, karotin, ferment, dermatologiya, ginekologiya, oftalmologiya, gastreontologiya

Yurtimizda so'nggi yillarda dorivor o'simliklarni yetishtirishni rivojlantirishga, xususan tabiiy boyliklardan samarali va unumli foydalanishga katta ahamiyat berilmoqda. Jumladan, O'zbekiston Respublikasi Prezidentining

2020-yil 10-apreldagi “Yovvoyi holda o’suvchi dorivor o’simliklarni muxofaza qilish, madaniy holda yetishtirish, qayta ishlash va mavjud resurslardan oqilona foydalanish chora-tadbirlari to’g’risida”gi PQ-4670-son qarori sohani tubdan rivojlanishining huquqiy asoslarini yaratib bermoqda.. Ushbu qarordagi vazifalarni amalga oshirish natijasida dorivor o’simliklarni nafaqat tabiatda yovvoyi holda terib olish, balki madaniy holda plantatsiya usulida ko’paytirish va qayta ishlashni tashkil etish bilan shug’ullanuvchi fermerlar va tadbirkorlar soni ham sezilarli darajada ortib bormoqda.

So’nggi yillarda insonlar salomatligini yaxshilash va zararsiz dori vositalariga bo’lgan talab ortib borayotganligini inobatga olgan holda, dorivor o’simliklar xom ashyolaridan to’g’ri foydalanish ulardan olinadigan mahsulotlarni tibbiyotda qo’llay bilish oldimizda turgan maqsadlardan biri hisoblanadi. Aloe o’simligi ham juda ham katta ahamiyatga ega dorivor o’simlik bo’lib, undan tayyorlangan mahsulotlar qadimdan qo’llanilib kelingan va hozirda ham tibbiyotning ko’p sohalarida keng qo’llanilib kelinmoqda. Ushbu maqolada dorivorlik xususiyati kuchli bo’lgan xalq tabobatida keng qo’llaniladigon va tarkibi jixatdan juda boy bo’lgan aloe o’simligining dorivorligi va ahamiyati tog’risida so’z yuritiladi.

Aloe o’simligi lolaguldoshlar (Liliaceae) oilasiga mansub, bo’yi 4 m gacha yetadigan doim yashil daraxtsimon yoki o’t-o’simlik. Barglari qini yordamida poyada ketma-ket joylashadi, ko’pincha poyasining yuqori qismida to’pbarg hosil qiladi. Barglari qalin, sershira, yumshoq, qilichsimon, yuqori tomoni botiq, pastki tomoni do’ng bo’lib chiqqan, qirrasi tikanlar bilan qoplangan, uzunligi 60-65 sm, qalinligi 12-15 mm ga yetadi. Gullari chiroyli va turli rangda bo’lib poyasining yuqori qismdagi to’pbarg o’rtasidan chiqqan uzun silindirsimon gul o’qiga joylashgan shingilni hosil qiladi. Mevasi-uch qirrali silindirsimon ko’sakcha.

Aloe o’simligining foydalaniladigan asosiy qismi bargi hisoblanadi. Aloe o’simligi barglarida 220 ga yaqin faol moddalarni o’z ichiga oladi, ular orasida eng asosiylari B1, B2, B3, B12, A, C, E vitaminlari, aminokislotalar, saponinlar, foliy kislotasi, organik kislotalar, karotinlar, fermentlar, efir moylari, mineral tuzlar, mikroelementlar, sink, Ca, Mg, Cr, Zn, Na, lignin, polisaxarid kabi moddalar mavjud. Aloe tibbiyotning deyarli barcha sohalarida qo’llaniladi. Uning shifobaxsh xususiyatlari dermatologiya, ginekologiya, oftalmologiya, gastroentologiya va stomatologiyada foydalaniladi. Aloe vera barcha turlar orasida eng shifobaxsh hisoblanadi.

Aloe vera o’simligi tarkibi boyligi uchun ham ko’plab soxalarda foydali xomashyo hisoblanadi. Masalan: Gastroentologiyada ich qotishini yo’qotadi, ovqat hazm qilishni yaxshilaydi, ichak motorikasini yaxshilaydi, asemannan tufayli oshqozon shilliq qavatini tiklaydi, oshqozon va o’n ikki barmoqli ichak yarasini davolaydi. Aloe sharbatidan gastrit, enterokolit, kolit, gastroenteritda qo’llaniladi. Kam dozalarda qo’llangan aloe sharbati ovqatni hazm qilish jarayonini yengillashtiradi, safro ajralishini yaxshilaydi, ichaklar peristaltikasini

normallashtiradi. Dermatologiyada aloe bakteritsid yallig‘lanishga qarshi, antioksidant va yaralarni davolovchi xususiyatga ega va turli dermatitlar, toshmalar, toshbaqa kasalligi, ekzema, akne, kuyish va to‘shak yaralarini davolash uchun ishlatiladi. Aloe o‘simligidan tayyorlangan jelidan ko‘zlar ostidagi shishni, sovuqdan terining shikastlanishi, sivilsalar va furunkullarda foydalaniladi.

Xulosa: O‘zbekiston hududida mahalliyashtirilgan dorivor aloe vera o‘simligining farmakognostik taxlilini chuqur o‘rganish va maxsuloti asosida hamyonbop homashyo olib, yangi dorivor vosita yaratish zarur.

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O'ZBEKISTONDA INTERNET JURNALISTIKASINING RIVOJLANISHI

Annotatsiya: ushbu maqolada O'zbekistonda internet jurnalistikasining rivojlanishi va hozirgi ahamiyati, tarixdan rivojlanish bosqichlari haqida ma'lumotlar keltirilgan.

Kalit so'zlar: kommunikatsiya, texnologiyalar, bosma nashrlar, an'anaviy tele-radiokanallar, elektron, OAV, ommaviy axborot vositalari, internet tele va radiokanallar, internet gazetalar.

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DEVELOPMENT OF INTERNET JOURNALISM IN UZBEKISTAN

Annotation: this article presents information about the development and current importance of internet journalism in Uzbekistan, the stages of its development from history.

Keywords: communication, technology, print media, traditional TV channels, Electronic, Media, Media, internet TV and radio channels, internet newspapers.

Zamonaviy kommunikatsiya texnologiyalari shiddatli rivojlanishi jarayonida axborot almashinuvi tezligi ham misli ko'rilmagan darajaga yetib ulgurdi. Mustaqillik davrida O'zbekistonda internet tarmog'ining an'anaviy OAV olamiga kirib kelishi bosqichma-bosqich amalga oshirildi.

2005-2007 yillarni o'z ichiga olgan mazkur dastlabki bosqich tajribalari internet tarmog'idan samarali foydalanish an'anaviy OAV imkoniyatlarini yanada kengaytirishini ko'rsatdi.

Mamlakatimizda 2007 yil yanvar oylaridan alohida, ya'ni faqat internetda faoliyat yuritadigan alohida nashrlar paydo bo'la boshladi. Bosma nashrlardan, an'anaviy tele-radiokanallardan butkul mustaqil ravishda faoliyat yuritadigan elektron OAV yaratish ishlari kengaydi. Ya'ni internet ommaviy axborot vositalari hisoblanmish internet tele va radiokanallar, internet gazetalar va hokazo internet nashrlar soni ko'payib borib, ular alohida onlayn axborot makonini tashkil eta boshladi.

Bu – milliy media makon ichida yangi voqelik, yangi reallik edi.

Keyingi davrlarda internet nashrlar yanada izchil rivojlandi. Ular professional nuqtayi nazardan shakllandi hamda o'sib bormoqda.

O'quvchilar hamda tahririyat o'rtasidagi muloqot tezkor, zamonaviy, virtual ko'rinish kasb etdi. Interaktivlik sifati hamda qamrovi yuqori darajaga olib chiqildi.

Internet gazetalar ixtisoslashuvi masalasiga ham alohida e'tibor qaratildi. Veb texnologiyalar imkoniyati sifatida vujudga kelgan Veb 2.0 (Web 2.0) va Blog (Blog) tizimi juda tez ommalashdi. Ayrim blog saytlar ayrim rasmiy axborot tarqatuvchi saytlarga qaraganda tezkor ishlayotganidan kelib chiqib Nyus 2.0 (News.2) nomi bilan atala boshlandi. Nyus 2.0 kelajakda jurnalistika darajasiga ko'tarilish-ko'tarilmasligi alohida masala, biroq bundan qat'i nazar blog tizimiga asoslangan yangidan yangi saytlar ko'payib borayotgani fakt (www.binafsha.uz, www.Itishnir.uz, www.blog.fonus.uz, www.blog.uzinfocom.uz, www.ayol.uz kabi saytlar singari).

Tarixga qarasak, an'anaviy bosma nashrlar, gazeta va jurnallar, shuningdek, tele-radio kanallar asosan respublikamiz hududida faoliyat olib borgan. Ular tarqatgan ma'lumotlar, xabarlar, fakt va raqamlar deyarli O'zbekiston sarhadlaridan tashqariga chiqmagan (Toshkent xalqaro radiosidan tashqari) bo'lsa, so'z yuritilayotgan yangi media makonning bosh xususiyati milliy axborotning hech bir to'siqsiz dunyoga tarqab ketishi bilan ajralib turibdi.

O'zbekistonda internet jurnalistika paydo bo'lgan ilk davrda uning istiqbol jarayoni mavhum tuyulgan. O'zbekistonda tom ma'nodagi internet jurnalistika 2000 yillar o'rtalaridan shakllana boshlangan. Bu albatta, texnik taraqqiyot bilan bog'liq jarayon edi. O'sha vaqtlarda internet jurnalistikaning o'zbek segmentida yangiliklar saytlari barmoq bilan sanarli holatda edi.

O'zbekistonda ilk milliy internet festivali 2005 yili o'tkazilgan. Unda xabar nashrlari yo'nalishida hozirgi Uzreport TV asosi bo'lgan uzreport.com sayti 2-o'rinni egallagan. Birinchi va uchinchi o'rinni egallagan saytlar (security.uz, darvoza.uz) hozirgi kunda ishlamayapti.

Informatsion texnologiyalarning jadallik bilan taraqqiy etishi mamlakatimizda ham internet jurnalistikaning rivojlanishi va ommalashishiga olib keldi. Hozirda Internet jurnalistika O'zbekiston ommaviy axborot vositalari ichida tezkorligi bo'yicha birinchi, auditoriyasining ko'pligi va ta'sir doirasining kengligi bo'yicha televideniedan so'ng ikkinchi o'ringa chiqib oldi.

Internet jurnalistika eng tezkor OAV sifatida matbuot, radio, televidenie imkoniyatlarini o'zida jamlab bormoqda. Endi siz biron axborot bilan tanishish uchun gazeta chop etilishini, TV yoki radioda yangiliklar dasturi boshlanishini kutib o'tirmaysiz. Eng katta internet-nashrlari matn, foto, tasvir, ovoz, infografika kabi elementlardan foydalanib, xabarlarni interaktiv tarzda yetkazib bermoqda. Internet-radio va Internet-televidenie yo'nalishi ham jadallik bilan rivojlanib bormoqda, desak mubolag'a bo'lmaydi.

Tadqiqotlarga ko'ra, 2023 yilning yanvar holatiga O'zbekistonda 27 million Internet foydalanuvchisi va 5 million 300 mingdan ortiq ijtimoiy tarmoq foydalanuvchisi ro'yxatdan o'tgan. Raqamli texnologiyalar vazirligi axborotida

qayd etilishicha, ijtimoiy tarmoq foydalanuvchilari umumiy internet foydalanuvchilarining 20 foizini tashkil etadi.

“Bu degani internet foydalanuvchilari soni umumiy aholi soniga nisbatan deyarli 75 foizini tashkil qilsa da hozirgi zamonning keng tarqalgan ko‘nikmalaridan biri bo‘lmish ijtimoiy tarmoqlardan aholining qariyb 15 foizi foydalana oladi.

Shu munosabat bilan aholining raqamli savodxonligi va axborot madaniyatini rivojlantirish masalasi ayniqsa dolzarb bo‘lib qolmoqda. Ushbu maqsadlarda respublikaning barcha tuman (shahar)larida raqamli texnologiyalar o‘quv markazlari faoliyati bosqichma-bosqich yo‘lga qo‘yildi.

Markaziy Osiyo davlatlarining barchasida yangiliklar saytlari eng ko‘p kiriladigan saytlardir. Rossiya va boshqa rivojlangan davlatlarda ommabop saytlar ro‘yxatini milliy internet korporatsiyalari egallagan (Rossiyada — Yandex, AQShda — Google, Xitoyda — Baidu). O‘zbekistonda ham ma’lumotlar qidiruvi, elektron pochta, yangiliklar, videoxosting, tarjimon, savdo platformasi, disk, ob-havo, entsiklopediya, ish izlash kabi yuzlab servislarni jamlagan, kuchli himoyalangan va qulay ishlash tizimiga ega bo‘lgan milliy internet korporatsiyasiga ehtiyoj bor. Aks holda axborot xavfsizligi haqida qancha qayg‘urmaylik, boshqa servislarga qaram bo‘lib qolaveramiz.

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HOZIRGI KUNDA KIBERJINOYATNING XAVFLARI

Annotatsiya: ushbu maqolada hozirgi kunda dunyo bo'yicha kiberjinoyatning xavflari va ularni bartaraf etish yo'llari haqida ma'lumotlar keltirilgan.

Kalit so'zlar: dunyo, kiberjinoyat, axborot, axborot tarqatish, strategiya himoya qilish, ma'lumotlar, xurujlar.

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THE DANGERS OF CYBERCRIME AT PRESENT

Annotation: this article presents information about the dangers of cybercrime around the world and ways to eliminate them at present.

Keywords: world, cybercrime, information, information dissemination, strategy Protection, data, attacks.

Hozirgi vaqtda ma'lumki dunyoda daqiqalar sayin rivojlanib borayotgan internet olami hamda axborot texnologiyalari taraqqiyoti qanchalik ishlarimizni osonlashtiribgina qolishi bilan birga, zararli oqibatlar ham yonma-yon ravishda rivojlanmoqda.

Kiberjinoyat — bu axborot texnologiyalari hamda internetdan foydalanish orqali amalga oshiriladigan jinoyatlar to'plami hisoblanadi.

Birgina kiberjinoyat va bundan foydalanib kelayotgan firibgarlarning usullari ham kun sari yangilanib hamda ko'payib bormoqda.

Bugungi kundagi Yer sayyorasida to'qqiz milliard atrofida odam yashayotgan bo'lsa, tabiiyki, ularga havola etilayotgan axborot undan-da ko'proqdir. Masalaning shu tomoni ham borki, mazkur axborotdan qaysi biri xolis, qaysi biri kimning va nimaning manfaatlari uchun xizmat qilishini anglash ham qiyindir.

Demak, axborot tarqatish, olish ortida strategiya turgan ekan, uni himoya qilish, turli ma'lumotlar ta'siri va xurujlariga qarshi tura olishning ham ahamiyati ayni paytda juda muhimdir.

Butun dunyoda axborot xavfsizligi masalasi dolzarb vazifa sifatida ko'rilmogda. Jumladan, mamlakatimizda ham axborot xavfsizligini ta'minlash,

uning huquqiy bazasini yaratish borasida qator chora-tadbirlar amalga oshirib kelinmoqda.

Axborot xurujlari orasida “kiberjinoyat” tushunchasi mavjuddir. Jahonda sodir etilayotgan jinoyatlar ichida kiberjinoyatchilik to‘rtinchi pog‘onada turadi. U insonlar tomonidan boylik orttirish yoki boshqa g‘arazli maqsadlarda axborot texnologiyalaridan noqonuniy foydalangan holda sodir etilgan xavfli jinoyat hisoblanadi. Uning yuzaga kelishiga global internet tarmog‘ining paydo bo‘lishi sabab bo‘lgan. Qisqa qilib aytganda, bu turdagi jinoyatni kompyuter qarshisida o‘tirib, minglab kilometr uzoqlikdagi mintaqada joylashgan biror tashkilotning mablag‘ini o‘marish orqali ham sodir etish mumkin.

XXI asrda insoniyatga xavf soluvchi ekstremizm, terrorizm, odam savdosi, giyohvandlik kabi global muammolar qatoriga kiberjinoyatchilik ham kirib keldi. Bu jinoyat virusli dasturlarni tarqatish, parollarni buzib kirish, bank plastik kartasi va boshqa bank rekvizitlaridagi mablag‘larni o‘zlashtirish, talon-toraj qilish, shuningdek, internet orqali qonunga zid axborot, xususan, bo‘hton, ma’naviy buzuvchi ma’lumotlarni tarqatish bilan bashariyat hayotiga juda katta xavf solyapti.

Axborot texnologiyalari yutuqlar bilan birga, global muammolarni ham kun sayin ortib bormoqda. Oxirgi vaqtlarda tilimizda tez-tez aylanayotgan “kiberhujum”, “kiberjinoyatchilik” atamaları zahirida turli virusli dasturlarni tarqatish, parollarni buzish, xakerlik hujumlari, veb-saytlarga noqonuniy kirish, firibgarlik, plastik kartalardan pul o‘g‘irlash kabi jinoyatlar ham yashiringan.

Kiberjinoyatning asosiy turlariga misol qilib, viruslar yordamida zarar yetkazuvchi dasturlarni tarqatish, parollarni buzib kirish, kredit karta va boshqa bank rekvizitlaridagi raqamlarni o‘g‘irlash, shuningdek, internet orqali qonunga zid axborotlarni tarqatish kabilar kiradi.

Hozirda jahondagi turli davlatlarning eng muhim infratuzilmalar hamda axborot tizimlariga kiber-hujumlar tez-tez uyushtirilyapti. Misol uchun, Rossiya Federatsiyasi axborot agentliklarining tahliliga ko‘ra, 2015-yilda mamlakatda 30 mingga yaqin axborot texnologiyalari sohasida sodir etilgan kompyuter jinoyati qayd qilingan. Mazkur jinoyatlar zahirida moddiy manfaat bo‘lgani hammaga ayon, albatta. Bu jinoyat o‘zgalar mol-mulkini internet yoki kompyuter vositalari orqali talon-toraj qilish jahonda shiddat bilan o‘tib borayotgan va chegara bilmaydigan jinoyat ekani bilan ham o‘ta xavflidir.

So‘nggi paytlarda ijtimoiy tarmoqlarda saytlarni buzib kirish, virusli dasturlar tarqatish kabi holatlar haqida xabarlar ko‘payib bormoqda. Kiberjinoyatlar, ayniqsa, pandemiya vaqtida jiddiy muammolardan biriga aylandi. Jinoyat kodeksining bir qator moddalarida kompyuter texnikasi vositalaridan foydalanib sodir etiladigan jinoyatlar va ularga nisbatan javobgarlik ham ko‘zda tutilgan. Shu jumladan, ushbu kodeksning 278⁵-moddasiga ko‘ra, o‘zganing kompyuter uskunasi qasddan ishdan chiqarish, xuddi shuningdek kompyuter tizimini buzish (kompyuter sabotaji): 3 yilgacha muayyan huquqdan mahrum qilib, 66 mln 900 ming so‘mdan 89 mln 200 ming

soʻmgacha miqdorda jarima; 2 yilgacha ozodlikni cheklash; 2 yilgacha ozodlikdan mahrum qilish bilan jazolanadi. Shuningdek, mazkur harakatlarni guruh boʻlib, takroran yoki xavfli retsidivist tomonidan sodir etish 3 yilgacha ozodlikdan mahrum qilish bilan jazolashga sabab boʻlishi mumkin. Unutmaslik kerakki, qonunni bilmaslik javobgarlikdan ozod etmaydi!

Xulosa oʻrnida aytish mumkinki, tobora kuchayib borayotgan globallashtirish jarayonida axborot xurujlari hamda kibertahdidlardan himoyalaniish, oʻz navbatida, ularga qarshi kurashish uchun har bir kishi hushyor va ogoh boʻlishi, axborotni tahlil qila bilishi lozimligini hozirgi davrning oʻzi talab etib bormoqda. Shunday ekan, ogohlikni kundalik shiorimizga aylantirib olishimiz zarurdir.

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DIFFERENT APPROACHES FOR LEARNING FOREIGN LANGUAGES

Annotation: *In the article different approaches for learning foreign languages and benefits of utilizing these methods are noted. On the other hand, basic steps to learning a foreign language and advantages of technology in language learning process were highlighted.*

Key words: *goal-setting, learning style, feedback, summarizing, paraphrasing, guessing, making connections, traditional methods, new approaches, interactive exercises.*

Learning foreign languages is definitely an investment that pays off. Every investment needs to be carefully considered, and the same applies to studying foreign languages. Currently, a lot of attention is paid to the new approach in the field of education, the transition from traditional education to the educational process enriched with modern technologies. The use of technology in education also increases the effectiveness of student education. Therefore, in our country, the deep reform of this issue is reflected in the decrees of our President on the development of ICT in the field of education. For example, the decision of the President of the Republic of Uzbekistan No. 5117 "On measures to raise the learning of foreign languages to a new quality level in the Republic of Uzbekistan" opened up great opportunities for students[1]. The decision is set to "organize the creation of videos, games, entertainment shows, films and other educational content for the comprehensive mastery of foreign languages and the development of basic language skills." This decision includes all the above mentioned topics and serves to raise education to a new level.

Learning a foreign language can be a rewarding and enriching experience, but it can also be challenging and frustrating. How can you make the most of your time and effort and achieve your language goals? In this article, we will explore some of the best study methods for learning a foreign language, based on research and expert advice. We will cover topics such as setting realistic and specific objectives, choosing the right materials and resources, using a variety of skills and strategies, and reviewing and testing your progress[2]. One of the first steps to learning a foreign language is to set clear and realistic goals for yourself. A useful framework for goal-setting is the SMART acronym, which stands for Specific, Measurable, Achievable, Relevant, and Time-bound. For example, instead of saying "I want to learn Spanish", you could say "I want to reach the A2 level of Spanish by the end of the year, by studying for 30 minutes a day, using an online course and a language exchange partner". This way, you

have a more concrete and manageable target, and you can track your progress and motivation more easily.

Choose the right materials and resources- Another important factor for learning a foreign language is to choose the right materials and resources that suit your level, interests, and learning style. There are many options available, such as textbooks, podcasts, apps, websites, videos, games, and more. You should look for materials that are engaging, relevant, and appropriate for your goals and needs. For example, if you want to improve your listening skills, you could listen to podcasts or videos that match your level and topic of interest, and use subtitles or transcripts if needed. You should also try to expose yourself to authentic and varied sources of, such as news, music, movies, or blogs.

Use a variety of skills and strategies- Learning a foreign language involves developing four main skills: reading, writing, listening, and speaking. You should try to practice all of them regularly and balance them according to your goals and preferences. For example, if you want to improve your speaking skills, you could join a conversation club, find a language exchange partner, or record yourself speaking and get feedback. You should also use different strategies to enhance your learning, such as repeating, summarizing, paraphrasing, guessing, making connections, asking questions, and taking notes.

Review and test yourself- One of the most effective ways to learn a foreign language is to review and test yourself frequently and systematically. This helps you consolidate your memory, identify your strengths and weaknesses, and measure your progress. You can review and test yourself in various ways, such as using flashcards, quizzes, games, or self-assessment tools. You should also review and test yourself at different intervals, such as after a lesson, a week, a month, or a longer period. This helps you avoid forgetting and reinforces your learning. **Seek feedback and support-** Learning a foreign language can be challenging and sometimes discouraging. That's why it's important to seek feedback and support from others who can help you improve and motivate you. You can seek feedback and support from various sources, such as teachers, tutors, peers, friends, family, or online communities. You should ask for constructive and specific feedback on your performance, such as what you did well, what you need to work on, and how you can improve. You should also seek support from people who share your goals, interests, and challenges, and who can encourage you, inspire you, and celebrate your achievements.

Enjoy the process- Finally, one of the best study methods for learning a foreign language is to enjoy the process and have fun with it. Learning a foreign language is not only a cognitive task, but also a cultural and personal adventure. You can enjoy the process by exploring the aspects of the language and culture that fascinate you, such as history, literature, art, music, food, or customs. You can also enjoy the process by finding ways to make it fun and rewarding, such as playing games, watching movies, listening to songs, or traveling. By enjoying

the process, you will not only learn more effectively, but also enrich your life and broaden. There are various different approaches and methods in language teaching that are used around the globe at home and in the classroom. Here we go through and analyze the most common approaches to language teaching so you can find the best for you or your children. Learning a foreign language can be an exciting yet daunting task. It requires discipline, dedication, and a willingness to step out of your comfort zone. While traditional methods such as textbooks and language classes have been popular for many years, there are now new approaches emerging that can help make the process of learning a foreign language more engaging, effective, and even fun.

Technology has revolutionized the way we learn languages. With the rise of language learning apps, anyone with a smartphone can now learn a foreign language anytime, anywhere. These apps are designed to be engaging and fun, with features such as gamification and interactive exercises that make learning feel more like a game than a chore. Some popular language learning apps include Duolingo, Babbel, and Rosetta Stone. These apps offer a range of features, from basic vocabulary and grammar lessons to more advanced courses and personalized learning plans. Plus, many of them are free or offer a free trial, making them a low-risk investment in your language learning journey. If you're someone who enjoys listening to podcasts, why not use them as a tool for language learning? Language learning podcasts are a great way to immerse yourself in the language and improve your listening comprehension skills[3]. Podcasts such as Coffee Break Spanish and FrenchPod101 offer language learners a chance to listen to native speakers and practice their listening skills. These podcasts often include engaging stories, interviews, and news segments, providing a variety of content to keep learners engaged and motivated. Similar to podcasts, language learning YouTube channels offer a wealth of content for language learners. From grammar lessons to cultural insights, YouTube channels such as Easy German and JapanesePod101 provide learners with a variety of resources to help them improve their language skills.

One of the benefits of YouTube is that you can see and hear native speakers using the language in real-life contexts. This can help learners pick up on nuances of the language, such as slang and colloquialisms, that they may not learn from a textbook or classroom setting. Games are a great way to make learning fun, and language-learning games are no exception. Games such as Scrabble and Bananagrams can be played in a foreign language, helping learners practice their vocabulary and spelling skills. There are also many language learning games specifically designed for language learners. For example, the game FluentU uses real-world videos, such as movie trailers and music videos, to help learners practice their listening and comprehension skills.

If you're serious about learning a foreign language, consider immersing yourself in the language and culture of the country. This could mean taking a trip to the country or even moving there for a period of time. Immersive

language learning offers a unique opportunity to fully immerse yourself in the language and culture, giving you a chance to practice your language skills in a real-life context. It can be challenging, but it's also one of the most effective ways to learn a language. A language teaching method or approach refers to a set of principles and techniques that a language teacher uses to teach their students a foreign language. It provides a systematic framework that guides language teachers in selecting and sequencing content, designing activities, and assessing student learning. Language teaching methods have evolved over time, with different approaches emerging in response to changing language learning theories and instructional practices. Some of the most common language teaching methods and approaches include:

1. Grammar-Translation Approach: This method emphasizes the study of grammar rules and translation of texts from the target language into the learner's native language.
2. Direct Method: This approach emphasizes the use of the target language in the classroom, with the teacher and students [communicating](#) entirely in the target language.
3. Audio-Lingual Method: This method emphasizes the development of oral language skills through the repetition and drilling of language patterns and structures.
4. [Communicative](#) Language Teaching: This approach emphasizes the use of authentic communication and meaningful language use in real-life situations, with a focus on developing both language accuracy and fluency.
5. Task-Based Language Teaching: This approach emphasizes the use of language in task-oriented activities that simulate real-world situations, with a focus on developing communicative competence.
6. Content-Based Language Teaching: This approach emphasizes the use of language in the context of academic content, with a focus on developing both language and content knowledge.

There are many other language teaching methods and approaches, each with its own strengths and weaknesses, and each suited to different learner needs and contexts[4]. Successful language teaching requires careful consideration of the goals, needs, and interests of the learners, as well as the available resources and instructional context. Here, you'll find an overview of language teaching methods and approaches to help you take your teaching skills to the next level!

To sum up all given facts above it should be noted that, learning a foreign language can be a challenging yet rewarding experience. While traditional methods such as textbooks and language classes have been popular for many years, these new approaches offer a fresh and engaging way to learn a foreign language. Whether you prefer to learn through technology or immersive experiences, there is an approach out there that can help you achieve your language learning goals Finally, language learning communities are a great way

to connect with other language learners and native speakers. These communities can be found online, through social media groups or forums, or in person through language exchange events or language clubs. Joining a language learning community can provide learners with a supportive network of like-minded individuals who can offer tips and advice on language learning, practice speaking with them, and even offer cultural insights.

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KOMPETENSIYAVIY YONDASHUV ASOSIDA TALABALARNI MA'NAVIY-MA'RIFIY FAOLIYATGA TAYYORLASHNING TEXNOLOGIYALARI

***Annotatsiya:** Ushbu ilmiy maqolada professional ta'lim muassasalarida bo'lajak mutaxassislarni tayyorlashning zamonaviy holati va muammolari, professional ta'limda kompetensiyaviy yondashuv asosida mutaxassislarni kasbiy faoliyatga tayyorlashda virtual laboratoriyalarning o'rni va roli hamda professional ta'limda kompetensiyaviy yondashuv asosida mutaxassislarni kasbiy faoliyatga tayyorlash mazmuni, tuzilmasini ishlab chiqish haqida fikr yuritilgan.*

***Kalit so'zlar:** Kompetensiya, maqola, professional, ta'lim, ma'naviyat, mamalakat, pedagog, xususiyat.*

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TECHNOLOGIES OF PREPARING STUDENTS FOR SPIRITUAL AND EDUCATIONAL ACTIVITY BASED ON THE COMPETENT APPROACH

***Abstract:** In this scientific article, the modern state and problems of training future specialists in professional educational institutions, the role and role of virtual laboratories in preparing specialists for professional activity based on the competency approach in professional education, and the preparation of specialists for professional activity based on the competency approach in professional education the development of the content and structure was discussed.*

Key words: *Competence, article, professional, education, spirituality, country, pedagogue, characteristic.*

Dunyo amaliyotida turli millatlar va xalqlarning aslar davomida shakllangan o'ziga xos milliy ma'naviyati hamda fazilatlaridan mamlakatni rivolantirishda samarali foydalanishga alohida e'tibor qaratiladi.

Shu nuqtai nazardan ilg'or oliy ta'lim muassasalari tomonidan ma'naviy qadriyatlarning jamiyat hayotiga ta'sirini hisobga olgan holda o'quv mazmuniga tarixiy va ijtimoiy iqtisodiy rivojlanish xususiyatlarini, boy madaniy me'ros va an'analarni singdirilishi pedagoglar tayyorlash jarayonlari natijadorligini ta'minlashning muhim omillari sifatida qabul qilingan. Jahonda ta'lim jarayonini tubdan o'zgartirish va rivojlantirishning ilmiy asoslangan tizimini yaratish dolzarbligicha qolmoqda. Xususan, ijtimoiy sohani rivolantirish va bo'lajak o'qituvchilarni ma'naviy-ma'rifiy faoliyatga innovatsion tayyorlashni takomillashtirish, ta'lim-tarbiya samaradorligiga yo'naltirilgan ilg'or pedagogik yondashuvlar va texnologiyalarga oid tadqiqotlar Princeton University (AQSH), Manchesters University (Angliya), National Advice on Pedagogical Technology (Angliya), Belfield Pedagogical University (Germaniya), Ta'lim texnologiyalari innovatsion axborot-metodik markazi (Rossiya) va Seoul Cyber University (Janubiy Koreya) kabi nufuzli ilmiy tadqiqot ta'lim markazlarida olib borilmoqda va salmoqli amaliy natijalarga erishilmoqda.

Mamlakatimizda oliy ta'lim tizimini rivojlantirish va ta'lim sifatini yaxshilash, bunda ijtimoiy soha va iqtisodiyot tarmoqlari ehtiyojlarini inobatga olish, ilmiy va innovatsion faoliyatni samarali tashkil etish borasida amalga oshirilayotgan islohotlar talabalarni ma'naviy-marifiy faoliyatga innovatsion yo'naltirish, sifatli ta'limga yo'naltirilgan motivatsiyasini faollashtirish imkoniyatlari kengaytirmoqda. O'zbekiston Respublikasi oliy ta'lim tizimini

2030-yilgacha rivolantirish konsepsiyasida "oliy ta'limda ma'naviy-axloqiy mazmuni kuchaytirish, innovatsion faoliyat, tadqiqot natijalarini amaliyotga keng joriy etish, xalqaro ta'lim standartlariga asoslangan ilg'or pedagogik texnologiyalar, o'quv dasturlari va o'quv-uslubiy materiallarni keng joriy etish" kabi vazifalar belgilangan. Bu borada oliy ta'lim tizimida ma'naviy-ma'rifiy faoliyatning nazariy-metodologik asoslarini tahlil qilish, bo'lajak o'qituvchilarni tayyorlashning innovatsion texnologiyalarini aniqlashtirish, ma'naviy-ma'rifiy faoliyat jarayoni uchun axborot-metodik ta'minotni ishlab chiqish muhim hisoblanadi.

O'zbekiston Respublikasi Prezidentining 2017 yil 7 fevraldagi «2017-2021 yillarda O'zbekiston Respublikasini rivojlantirishning beshta ustuvor yo'nalishi

bo'yicha Harakatlar strategiyasi to'g'risida»gi PF-4947-son, 2019-yil 8-oktabrdagi "O'zbekiston Respublikasi oliy ta'lim tizimini 2030-yilgacha rivojlantirish konsepsiyasini tasdiqlash to'g'risida" gi PF-5847-son Farmonlari,

2017-yil 27-iyuldagi «Oliy ma'lumotli mutaxassislar tayyorlash sifatini oshirishda iqtisodiyot sohalari va tarmoqlarining ishtirokini yanada kengaytirish chora-tadbirlari to'g'risida»gi PQ-3151-son, 2018-yil 14-avgustdagi "Yoshlarni ma'naviy-axloqiy va jismoniy barkamol etib tarbiyalash, ularga ta'lim-tarbiya berish tizimini sifat jihatidan yangi bosqichga ko'tarish chora-tadbirlari to'g'risida"gi PQ-3907-son, 2019-yil 3-maydagi "Ma'naviy-ma'rifiy ishlar samaradorligini oshirish bo'yicha qo'shimcha chora-tadbirlar to'g'risida" PQ-4307-son, 2020-yil 27-fevraldagi "Pedagogik ta'lim sohasini yanada rivolantirish chora-tadbirlari to'g'risida" gi PQ-4623-son Qarorlari hamda mazkur faoliyatga tegishli boshqa me'yoriy-huquqiy hujjatlarda belgilangan vazifalarni amalga oshirishga muayyan darajada xizmat qiladi.

Mustaqillik yillarida ushbu muammoga bag'ishlangan bir qator ilmiy - tadqiqot ishlari amalga oshirildi. Faylasuf va sotsiolog olimlardan S.Shermuxamedov, N.Komilov, M.Imomnazarov, Q. Nazarov, J. Tulenov, A.Begmatov, M.Bekmurodov, I. Karimov, A.Umarov, N. Jo'rayev, T.Mahmudov, E. Yusupov va boshqalar inson kamolotining ma'naviy asos ari, milliy g'oya va mafkura, milliy va umuminsoniy qadriyatlar, milliy mentalitet, millat sha'ni, axloq, mustaqillik va ma'naviyat kabi masalalarni atroflicha tadqiq qilganlar. Ma'rifatparvarlar I.Gaspirinskiy, M.Bexbudiy, S.Alizoda, A.Avloniy, I.Ibrat,

A. Shakuriy, A. Fitrat va boshqalarning ta'lim tarbiyaviy g'oyalari ta'lim tizimida amalga oshiriladigan ma'naviy-ma'rifiy faoliyatning mazmunini takomillashtirishga asos bo'ladi. Tarbiyaviy ishlarning ilmiy-nazariy va metodik asoslari mamlakatimiz pedagog olimlari tomonidan tadqiq etilgan.

Xususan shaxs ma'naviy-axloqiy madaniyati va uni shakllantirishning pedagogik xususiyatlari O.Musurmonova, yoshlarni ma'naviy tarbiyalashda oila va milliy qadriyatlarni ahamiyati M.Inomova, uyg'onish davri, Sharq allomalari ijodida komil inson tarbiyasi masalasi S.Nishonova, yuqori sinf o'quvchilarida axloqiy-madaniyat va uni tarbiyalash U.Maxkamov, o'qituvchi odobi M.Ochilovlarning tadqiqotlarida yoritilgan. Respublikamizda pedagogika sohasida amalga oshirilgan ilmiy ishlarda oliy ta'lim muassasalari ishlarining turli qirralari R.Mavlonova, O.Xasanboyeva, V.A.Slastenin, U.N.Nishonaliyev, A.R.Xodjaboyev, N.V.Kuzmina, Y.K. Vasilyev, N.SH.Shodiyev, X. I. Ibragimov, A. Choriyev, M.H.Maxmudov, I. Valixo jayeva, P. Yusupova, O.Jamoliddinova, G.Qosimova, R.Safarova, A.Bekmurodov, M.Xaydarov, B.H.O'razov, X.Nazarova va boshqa olimlar tomonidan organilgan. Biroq shu paytgacha oliy ta'limda ma'naviy-ma'rifiy faoliyatga innovatsion tayyorlash yaxlit ilmiy ish sifatida yetarlicha o'rganilmagan.

Yuqorida qayd etib o'tilgan ishlarning tahlili shuni ko'rsatdiki, ma'naviy-ma'rifiy faoliyatni shakllantirish, milliy ma'naviy muhitni yaratish va mustahkamlash jamiyatning ma'naviy sog'lom turmush tarzini ta'minlash, ta'lim tizimining barcha bosqichlarida amalga oshiriladigan ma'naviy-ma'rifiy faoliyatlarni kuchaytirish lozimligini taqozo etadi. Shu nuqtai nazardan kelib

chiqib, biz tadqiqot ishimizni «Bo'lajak o'qituvchilarni ma'naviy-ma'rifiy faoliyatga tayyorlashning innovatsion texnologiyalari» mavzusini dolzarb pedagogik muammo sifatida tadqiq etishimiz uchun asos bo'ldi.

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THE IMPACT OF CLIMATE CHANGE ON THE HEALTH OF THE POPULATION OF ZARAFSHAN REGION

Abstract. *In the article, Zarafshan provides information about the causes of climate change in the region, the factors affecting the health of the population of the region, the types of diseases spreading in the region, and their prevention. In this case, it is not a single feature of the region, but a number of factors, such as relief, climate, soil, flora and fauna, as well as, in contrast to natural geographical zoning, the specialization of this region, the main leading sectors in industry or agriculture, medical assessment from a geographical point of view is important.*

Key words: *Regional climate, disease types, regions of disease distribution.*

Introduction. The impact of climate change on the health of the population of the Zarafshan region The climate of the Zarafshan region is a continental region, and due to the fact that the region stretches far from west to east and the relief is rising, the temperature regime and the amount of precipitation are different everywhere. Today, climate change is recognized by the world community as the most serious problem facing humanity. Climate change has a great impact on all spheres of human life, including human health, and requires immediate measures to prevent negative consequences of climate change and adapt to new living conditions.

Zarafshan region is one of the main criteria for issues related to public health and socio-economic development. Determining the factors affecting the climate change of the Zarafshan region and preventing them, in turn, restoring the health of the region's population is an important condition and sign of the region's development [4]. At this point, it should be said that in order to clarify the factors influencing the change of the climate of the region and the issues of population morbidity, it is necessary to know the types and composition of diseases. According to the World Health Organization, diseases are divided into two large groups. Including non-infectious and infectious-parasitic diseases.

Today, in the health of the population of the Zarafshan region, due to the specialization in the cultivation and processing of more agricultural products, infectious parasitic, digestive, and endocrine system diseases are the leading diseases in such places, while in areas with dense industrial and transport networks, respiratory, heart, blood- vascular, nervous system diseases are

characteristic [3,6]. As can be seen from the above, structural medical geographic zoning of the climate of the Zarafshan region is one of the main issues, geographic research cannot be imagined without zoning. Another important principle of geographical zoning of Zarafshan region is the approach of complexity. In this case, it is not a single feature of the region, but a number of factors, such as relief, climate, soil, flora and fauna, as well as, in contrast to natural geographical zoning, the specialization of this region, the main leading sectors in industry or agriculture, medical assessment from a geographical point of view is important. The principle of historicity is also taken into account in medical geographic regionalization [4].

This principle can be considered as the main factor in almost all types of zoning. For example, in determining the common diseases among the population, the climatic conditions and external conditions that cause them, it is important to determine whether such diseases existed in the region before, or whether it is the effect of climate change in the region or vice versa. Our scientists N.Komilova, A.Soliev, A.Ravshanov and many other scientists, who are conducting and continuing scientific research on the factors that cause the spread of diseases among the population and their prevention, have contributed to human health. are conducting research on the scientific-theoretical and practical issues of the mysterious factors [5]. The following principles (principles) were taken as the main criteria for the changes in the health of the population as a result of the change in the climate of the region, as well as the medical division of the region into geographical regions:

- the generality of the geographic location of Zarafshan region;
- existence of nosogeographic areas of various diseases ;
- prevalence and specialization of groups of diseases;
- the integrity of the administrative-territorial unit.
- medical geographical assessment of all elements of natural and economic-social factors affecting the emergence and spread of diseases, determining the health of the population of the region;
- study of climatic complexes affecting population health ;
- forecasting the geographical situation of climate change based on the existing indicators based on the future natural location of the regions;
- creation of special medical-geographic maps describing the positive or negative influence of individual elements of natural and economic-social factors.

This article describes the causes and conditions of climate change and its effects on the health of the population of the region. Also, in the study of the climate of the region, work is carried out based on certain methods. In particular, natural geographical description, cartographic analysis, field and stationary research, zoning, and the use of questionnaires in socio-demographic content are of great importance to carry out research in this direction. Among the above, some general methods are also widely used. For example, system-content, statistical, mathematical modeling, historical, comparative methods are widely

used. In the study of the climate of the Zarafshan region, it is determined by determining the health status of the population and its interaction with geographical factors, their connection, consequences and ways to eliminate them. The decisive role of socio-economic factors is especially taken into account. The effect of regional climate on public health is also widely used in the traditional zoning method.

The article examines the impact of climate change on the health of the population of Zarafshan region, as well as geographic and regional features, factors influencing them, and their regional problems and foundations, and develops appropriate scientific recommendations and conclusions.

Conclusion. In conclusion, it should be noted that today, the climate of the Zarafshan region is changing as a result of human economic activities, and as a result, infectious diseases spread among the population of the region and lead to chronic continuation of these diseases. From the above, it can be seen that structural medical geographical regionalization of the climate of the Zarafshan region is one of the main issues. is to identify and develop recommendations for their prevention.

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ABDULLA ORIPOV POETIKASIDA XALQ OG'ZAKI IJODINING O'RNI

Annotatsiya. O'zbekiston xalq shoiri Abdulla Oripov uslubining o'ziga xos belgilaridan biri xalq jonli tiliga yaqinlikdir. Jonli tilga yaqin degani esa xalq turmushi bilan yaqin degani bo'ladi, ularni bir-biridan ajratib bo'lmaydi. Xalqning turmush tarzi, urf-odatlarini, ishonch e'tiqodlarini chuqur bilish shoir qo'llagan metaforalarning xalqona bo'lishini ta'minlaydi, ularga soddalik, go'zallik va samimiyat baxsh etadi. Shu bilan birga shoir ijodida folklorning – xalq og'zaki ijodining ta'siri ham sezilarli darajada kuchli ekanini payqash mumkin. Mazkur maqolada shoir ijodida xalq og'zaki ijodi xususiyatlarining namoyon bo'lishi ko'rib chiqiladi.

Kalit so'zlar: Shoir, metod, xalq og'zaki ijodi, she'r, urf-odat.

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THE PLACE OF FOLK ORAL CREATIVITY IN THE POETRY OF ABDULLAH ORIPOV

Abstract: One of the distinctive signs of the style of the people's poet of Uzbekistan Abdullah Oripov is the proximity to the folk living language. And closer to the living language means closer to the people's marriage, they cannot be separated from each other. A deep knowledge of the lifestyle, customs, beliefs of trust of the people ensures that the metaphors used by the poet are folk, giving them simplicity, beauty and sincerity. At the same time, it can be noticed that the influence of folklore – folk oral creativity-is also significantly stronger in the work of the poet. This article examines the manifestation of the features of folk oral creativity in the work of the poet.

Keywords: poet, method, folk oral creativity, poem, tradition.

XX asrning o'rtalaridagi o'zbek lirikasi davr she'riyatida alohida maqomga ega. Negaki, soxtakorlik, quruq shiorbozlik davom etayotgan tarixiy bir sharoitda inson ko'ngli, qalbida kechayotgan inja tuyg'ularni ayta olish ulkan hodisa edi.

Abdulla Oripov mana shunday shoirlar sirasiga kiradi. U she'riyat bilan birga o'sdi, ulg'aydi. Har bir odam o'ziga xos individual qobiliyat va intellekt sohibi. Lekin buning o'zi yetarli emas. Odam ma'lum sohada muayyan natijaga erishishi uchun albatta ilmiy va amaliy maktablarni o'tamog'i lozim. Abdulla Oripov mana shu maktabni ulug' ustozlarga ma'naviy shogirdlikka tushish, qolaversa, hayot tajribasi yordamida o'tadi. Respublikamizning birinchi prezidenti I.A.Karimov O'zbekiston Davlat madhiyasining muhokamasiga bag'ishlangan majlisda: "Abdulla Oripovdek shoirlar yuz yilda bir marta dunyoga keladi"[1], deb aytgan edi.

Lekin she'rlarida baribir xalqona ohanglar, tasvirdagi xalqchillik, inson va jamiyatning azaliy orzusi qaysidir nuqtalarda saqlanib qolaveradi. Masalan, "Samoviy mehmon, besh donishmand va farrosh kampir qissasi" [2], asari xalq og'zaki ijodidan ta'sirlanish omiliga yorqin misol bo'la oladi. Milliy ruhda bitilgan mazkur she'rda olamdagi barcha tirik mavjudotlarga mehr xuddi quyosh nuridek zarur degan fikr ilgari suriladi. She'rdagi shoir fantaziyasi xalq ertaklarida aks etgan xayolotning uchqurligiga, cheksizligiga o'xshash. Badiiy g'oya ilmiy fantastikaga yaqin bo'lsa-da, unda xalqona poetik tafakkur uyg'un. Unda soddalik va aniqlik mavjud. Adabiyotshunos olim, akademik Baxtiyor Nazarov asar haqida shunday yozadi: *"Mehr-oqibat, adolat, insof, vijdoniy poklik, ma'naviy go'zallikni ulug'lash va ularga monelik qiluvchi har bir hodisaga qarshi beshafqat kurashish Abdulla Oripov she'rlaridagi yuksak ma'nodagi gumanizmning hujayralaridir. Bu masalaga shoir izchil realistik uslub asosiga qurilgan she'rlaridagina emas, fantastika elementlaridan unumli foydalangan asarlarida ham murojaat etadi. "Samoviy mehmon, besh donishmand va farrosh kampir qissasi" ana shunday asarlardan biridir"*[3].

Qissaning bosh g'oyaviy maqsadi – mehr-oqibatni ulug'lash. Shoir asar botinidagi badiiy muammoni sarlavhaga olib chiqqan. "Samoviy mehmon" o'rganilishi lozim bo'lgan tekshirish ob'ekti. Asosiy tadqiqotchilar – besh donishmand. Donishmandlarning yo'l qo'ygan xatolarini ko'rsatib beruvchi "opponent" – farrosh kampir. Sarlavhaning mazmunidan ham ma'lum bo'lyaptiki, "mehr-oqibat"ni himoya qilish maqsadida shoir hatto donishmandlarni ham ayab o'tirmaydi. She'riy quyidagicha boshlanadi:

Xabar keldi Fan shahriga

Olis Jungli tomondan.

O'tgan kecha allanarsa

Yonib tushmish osmondan [4].

Bu xabar tezda ilm ahliga yetkaziladi; voqeani o'z joyida o'rganish uchun nufuzli komissiya tuziladi: "Jo'natdilar Jungli tomon topib beshta vakilni. Beshovi ham tengsiz olim, Besh qit'adan bo'lmish jam. Dunyodagi barcha ilm shul beshovda mujassam. Dunyodagi tillarni-ku Besh barmoqday bilishar. Kerak bo'lsa qushlar bilan xandon suhbat qurishar. Xullas, beshov yig'ilishib Jungli tomon yeldilar. Hatto farrosh kampirni ham Birga olib keldilar"[5]. Besh donishmand samoviy mehmonni o'rganishga kirishadi. Olimlarning ish uslubi

qanchalik mukammal bo'lmasin, lekin mehmon bilan muloqotga kirisha olmaydilar. "Ish chiqmadi, demak bizni tushunmadi u taraf!" – deb, tekshirishni to'xtatadilar. "O'sha payt, deng farrosh kampir Kirib keldi tentirab. – Voy bechora bolaginam, Dard zabtiga opti-ku! Holdan toyib, boshqa ko'zi Yumilib ham qopti-ku! Rangini ko'r, somon deysan, Suvdanmikan yo o'tdan!"

"Samoviy mehmon, besh donishmand va farrosh kampir qissasi" asari davrimizning dolzarb masalalaridan biri – inson mehr tuyg'usini asrab- avaylash mavzuiga bag'ishlangan. Zero, ma'naviy qadriyatlar ham tabiat ekologiyasi misoli yo'qolib boryapti. To'g'ri, ilmiy-texnika inqilobi davlat qudratini oshirishda cheksiz imkoniyatlar yaratdi. Shu bilan birga, zamondoshlarimiz ma'naviy dunyosining ma'lum darajada qashshoqlashishiga olib keldi. Bu holat barcha ijodkorlar kabi Abdulla Oripovni ham tashvishga soladi. Shu ma'noda inson ma'naviy-axloqiy madaniyatining muhim belgisi bo'lgan mehr tuyg'usini e'zozlashga bag'ishlangan she'riy qissa shoirning sara asarlaridan biridir. "Tabiat bilan inson o'rtasidagi uyg'unlik buzilganda, buni oldin qushlar bilan shoirlar anglab yetadilar,- deb yozadi adabiyotshunos olim I. G'afurov. - Buloq qurisa, oldin shoirlar iztirobga tushadi, u boshqa buloqlar ham qurishiga befarq qarab turolmaydi. Tabiatda muvozanat buzilgan chog'da u tinimsiz signallar bera boshlaydi. Abdullaning she'rlari mana shuning qarshisida g'aflatda qolmaslikka bir chaqiriq kabi tuyuladi"[6]. Biz tahlil etayotgan "Samoviy mehmon, besh donishmand va farrosh kampir qissasi" ana shunday ma'naviy ekologiyaning himoyasiga chaqiriq sifatida jaranglaydi. She'riy qissani qisqacha "Farrosh kampir" deb atasa ham bo'lar ekan. Negaki, farrosh kampir asarning markaziy qahramoni sanaladi. Obraz har tomonlama mukammal yaratilgan. Uning har bir harakati, har bir so'zi san'atkorona mahorat bilan gavdalantirilgan. Kampirning xatti-harakatlari (*O'sha payt, deng farrosh kampir Kirib keldi tentirab*) va so'zlarida (*Voy bechora bolaginam, Dard zabtiga opti-ku! Holdan toyib, boshqa ko'zi Yumilib ham qopti-ku! Rangini ko'r, somon deysan, Suvdanmikan yo o'tdan!*) yuksak insoniy fazilatlar, o'zbek onalariga xos tengsiz mehr-shafqat ufurib turadi. Xalq og'zaki ijodi motivlari asosida (*Rangini ko'r, somon deysan, Suvdanmikan yo o'tdan!*) berilgan Kampir obrazi tasvirida ham shoirning o'zbek onalariga ulkan ehtiromi yaqqol ko'zga tashlanadi.

Aytilganidek, Abdulla Oripov ijodida mehr-oqibat tushunchasi uning ijodidagi yetakchi mavzular sirasiga kiradi. Ular haqidagi kechinmalarini kitobxonga yetkazmoq uchun shoir xalq og'zaki ijodi namunalaridan tashnalik bilan zo'r ilhom oladi. Shoirning maqsadi rivoyatlarni she'riy tizimga solish emas aslo. Asl maqsad el orasida tobora siyraklashib borayotgan mehr-oqibatni saqlab qolishga da'vat, ezgu intilishdir. Ana shu badiiy-estetik qimmatiga ko'ra "Samoviy mehmon, besh donishmand va farrosh kampir qissa"ni so'z san'atining nodir namunalari qatorida sanash mumkin.

Boshdan-oyoq chuqur donishmandlarga xos mazmun va shaklan xalq og'zaki motivlari bilan sug'orilgan asarlardan yana biri "Sharq hikoyasi" (1980) she'ridir. Unda aytilishicha, juda kambag'al ota-o'g'il uzoq yo'lga o'tlanishadi.

*Qurib ketsin yo'qchilik ham
Kim nelarga zor edi.
Ikkovining o'rtasida
Bitta eshak bor edi*[6].

Ota-bola uzoq tortishuvdan keyin eshakni navbat bilan minishga kelishib oladi. Birinchi bo'lib eshakka ota minadi. Bir qishloqdan o'tayotganda, to'rt-besh odam orqalaridan piqirlashib kulishib qoladi:

– *Ahmoq ekan manavi chol,
Ahmoq haddan ziyoda.
O'zi ulov minib olgan,
O'g'li esa piyoda* (O'sha joyda).

Uyalib ketgan ota shartta eshakdan tushib, o'g'lini mindirib qo'yadi. Yana bir qishloqdan o'tayotganda, ortlaridan to'rt-besh odam piqirlashib kulishadi. Bolaning oriyati qo'zg'ab, shartta eshakdan tushib, piyoda keta boshlaydi. Bir qishloqdan o'tayotganda, orqalaridan yana kulishib qolishadi, unga chiday olmagan ota-bola janjallashib qoladi.

Abdulla Oripov to'rtliklaridagi falsafiy xulosa, maqollarning o'ziga xos badiiy tasviri, o'zbek xarakterining betakror ifodasi aslida yuksak iste'dodning xalq dahosi bilan uyg'un namoyon bo'lishi bilan izohlanadi.

Jajji go'dak, sen tug'ilding, sen uchun
Kim **belanchak** yasab turar shu damda.
Kimdir senga uchqur **tulpor** egarlar,
Kimdir senga **hassa** yo'nar shu damda.[7]

Mazkur she'r g'oyasi umr haqidagi xalq donishmandligining namunasi hisoblangan bitiklar mazmunida ham uchraydi. Ertaklardagi uch kunlik dunyo to'g'risidagi savol-javoblar, umrni uch faslga ajratish – go'daklik, balog'at, qarilik kabilarni esga soladi. Beshik, tulpor va hassa predmetlari majoziy ma'noda qo'llanilgan.

Abdulla Oripovning she'rlarida ko'plab xalq maqollari va iboralarini uchratamiz. Shoir ana shu xalq tafakkuri durdonalarini tayyor holatda asarga kiritish, shu tariqa asarini badiiy bezash yo'lidan bormaydi. Aksincha, she'r mazmunini yangi ijtimoiy-axloqiy g'oyalar bilan boyitadi. O'zbek xalqining yuksak odob-axloqi va madaniyatini ko'rsatadigan maqol va matallari juda ko'p. Xalqning ko'ngliga ko'zgu bo'lgan bunday hikmatlar she'rda ibratli chuqur ma'no kasb etadi; uning estetik ta'sir kuchini oshiradi. Shoir xalq iboralarini, maqol va matallarini shunday o'rinli qo'llaydiki, kitobxon bu hikmatlar xalqniki yoki shoirning o'zi to'qiganmi, payqamay qoladi. Bu hol Abdulla Oripovning she'rlari mohiyatidagi xalqona poetik tafakkurni namoyon etadi. Shoirning xalq ruhini, uning fikrlash tarzi va ijodkorligining asosiy jihatlarini puxta o'zlashtirib olganligidan dalolat beradi.

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ANTROPOGEN OMILLARNING DORIVOR O'SIMLIKLARGA TA'SIRI

***Annotatsiya.** Maqolada Janubiy orol bo'yi sharoitida tarqalgan dorivor o'simliklarga antropogen omillarning ta'siri keltirilgan. Hozirgi vaqtda dorivor o'simliklarga antropogen ta'sirlar ichida sanoat korxonalari chiqindilari, transport, yo'llar, burg'ulash kabi jarayonlar o'z ta'sirini ko'rsatmoqda.*

***Kalit so'zlar:** factor, transport, korxona, burg'ulash, degradatsiya, o'simlik qoplamai*

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EFFECT OF ANTHROPOGENIC FACTORS ON MEDICINAL PLANTS

***Abstract.** The article presents the influence of anthropogenic factors on medicinal plants distributed in the conditions of the South Island. Currently, among the anthropogenic influences on medicinal plants, processes such as waste from industrial enterprises, transport, roads, and drilling show their influence.*

***Key words:** factor, transport, enterprise, drilling, degradation, vegetation cover*

Janubiy Orolbo'yida keyingi yillarda shakllangan mavjud ekologik, ijtimoiy-iqtisodiy muammolar majmuasi oqibatlarini xalqaro va global darajadagi ahamiyat kasb etmoqda. Ko'pgina tadqiqotchilarning fikriga ko'ra, ushbu mintaqada cho'llanish va qurg'oqchilik jarayonlari ekstremal bo'lib bormoqda, bu esa turli xil ekologik tizimlarning nomutanosibligiga, biotik potentsialning buzilishiga va natijada tabiiy-iqtisodiy kompleksning pasayishiga olib keladi.

Orol dengizining qurishi, Amudaryo oqimini tartibga solish va to'qay va qamishzorlar maydonlarining o'zgarishi botqoqlanish jarayonlari hukmron bo'lgan hududlarda deflyatsiya jarayonlarining paydo bo'lishiga olib keldi. Olimlarning fikriga ko'ra, daryo yuzasi ham kuchli ob-havoga duchor bo'ladi. Amudaryo, uning atrofi asosan mayda donador qumli loydan hosil bo'lgan. Amudaryoning daryo o'zani bo'ylab oqishi va doimiy shamol oqimi qumtepa va

bo'g'imli qumlarning paydo bo'lishiga, shuningdek, pasttekisliklarning yemirilishiga olib keladi [1].

Dorivor o'simliklar tirik organizmga kompleks ta'sir ko'rsatadigan turli xil kimyoviy moddalar (alkaloidlar, glikozidlar, flavonoidlar, efir moylari va boshqalar)ning tabiiy tarkibiy qismlaridir. Zamonaviy tibbiyotda o'simlik dori vositalaridan foydalanish nafaqat barqaror bo'lib qolmay, balki ko'payish tendentsiyasiga ega [1,4]. Janubiy Orolbo'yida dorivor o'simliklarni yetarli darajada o'rganilmagan. Ammo so'nggi yillarda ularni davolashda qo'llashning yangi usullari va ta'sirini o'rganish usullari munosabati bilan dorivor o'simliklarga qiziqish ortib bormoqda [1].

Qadim zamonlardan beri dunyo aholisi ko'plab o'simliklardan dori sifatida foydalangan. Ular inson tanasiga yumshoq ta'sir ko'rsatadigan kam toksik moddalar ekanligini isbotladilar [2]. Zamonaviy ekologik sharoitda dorivor o'simliklar yetishtiriladigan maydonlarning o'zgarishi ham katta qiziqish uyg'otadi. Hozirgi vaqtda Orolbo'yida dorivor o'simlik xomashyosining zamonaviy resurslarini o'rganish zarurati tug'ilmoqda [2].

Ekologik nuqtai nazardan, hozirgi vaqtda o'simliklarga texnogen ta'sirlarning quyidagi turlarini ajratib ko'rsatish kerak: ariqlar yoki qazish ishlari bilan chegaralangan asfalt yoki shag'al qoplamali yaxshi ta'mirlangan magistral yo'llarning ta'siri va o'z-o'zidan hosil bo'lgan asfaltsiz yo'llar bo'ylab o'tadigan transport vositalari yo'llar, ba'zan esa turli o'tish mumkin bo'lmagan yo'llar bo'ylab o'z yo'lini qiladi [4].

Amaliyot shuni ko'rsatadiki, afsuski, Qoraqalpog'iston Respublikasida yaxshi ta'mirlangan yo'l yo'nalishlarining keng tarmog'i juda yomon rivojlangan, shuning uchun avtotransport vositalarining tartibsiz harakati o'simliklarga eng katta ta'sir ko'rsatadi. Shu bilan birga, eng keng tartibga solinadigan avtomobil transporti tarmog'iga ega bo'lgan hududlar ham mavjud bo'lib, ularning umumiy uzunligi bugungi kunda 4700 km ni tashkil qiladi [4].

O'simliklar dunyosiga salbiy tasir ko'rsatadigan antropogen omillariga, yana kimyoviy birikmalar bilan qishloq xo'jalik ekinlariga ishlov berishni kiritish mumkin[5]. Bunda begona o'tlarga qarshi ayrim gerbitsidlar ishlatiladi, bu jarayonda ayrim ko'ngilsiz xodisalar ham bo'ladi. Begona o'tlar bilan bir qatorda boshqa o'simliklar ham yo'qotiladi. Gerbitsid, pestitsid, insektitsidlar foydali xususiyati bilan birgalikda salbiy tomonlari ham bor.

So'nggi yillarda Ustyurt platosida bir tomondan Orol dengizining qurishi (g'arbiy qirg'oqlari ilgari Ustyurt platosining sharqiy qismi bilan chegaradosh bo'lgan) bilan bog'liq bo'lgan ekstremal ekologik sharoitlar kuzatilmoqda. U yerda neft va gaz sanoatining rivojlanishi, umuman bioxilma-xillikka salbiy ta'sir ko'rsatmoqda. Burg'ulash maydonchalarida tabiiy o'simlik qoplami, bugungi kunga qadar tiklanmagan, chunki Ustyurt platosining shimoliy qismida ko'plab oldingi va ikkita zamonaviy burg'ulash stantsiyalari mavjud. "To'r" kabi yo'l marshrutlari platoni turli yo'nalishlarda qoplaydi, quduqlarni bog'laydi. Yo'l inshootlari bo'ylab o'simliklar sezilarli darajada buzilgan va juda uzoq vaqt

davomida tiklanmaydi. Bu omillarning barchasining murakkabligi Ustyurt florasining ham dominant, ham nodir elementlarining hayotiy holatining yomonlashishiga olib keladi [3].

Hozirgi vaqtda mazkur hududda hozirgi kunda ilmiy tibbiyotda tabiiy va madaniy holda o'sadigan faqatgina 80 (18,2%) dorivor o'simlik turlaridan foydalaniladi. Yangidan-yangi dorivor o'simlik turlarni aniqlashda hamda dori-darmon tayyorlashda turlarning o'zaro yaqinligini (turkum va oila) filogenetik jihatdan yetarli e'tibor qaratish hamda ushbu guruh kasalliklarni davolashda ishlatiladigan o'simliklarning xemotaksonomik va farmakodinamikasiga yanada turlariga chuqurroq yondashish zarur.

Dorivor o'simlik resurslarini har tomonlama o'rganish uchun ularning ekologik va biologik xususiyatlarini berish kerak. Bunga asosiy abiotik, biotik va antropogen omillarning intensivligi va yo'nalishini va alohida turlarning ularga bo'lgan munosabatini ko'p yillar davomida o'rganish orqali erishish mumkin.

Shunday qilib, dorivor o'simliklarning o'simliklar birlashmalari resurslarini o'rganishda yovvoyi dorivor o'simliklar assortimentiga intensiv antropogen ta'sirni ekologik baholash, ularning o'sishi, ularni muhofaza qilish va ulardan oqilona foydalanish chora-tadbirlarini ishlab chiqish va muhofaza qilishga qaratilgan ekologik yondashuv qo'llanildi.

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O‘ZBEKISTONDA ERKIN IQTISODIY ZONALARNING EKSPORT SALOHIYATINI OSHIRISH MUAMMOLARI

***Annotatsiya.** Ushbu maqolada korxonalarning eksport salohiyatini oshirishda erkin iqtisodiy zonalarining o‘rni va ularni rivojlantirish omillari bayon qilingan. Shuningdek, erkin iqtisodiy zonalarda eksport va import faoliyati bilan bog‘liq imtiyozlar o‘rganilgan.*

***Kalit so‘zlar.** Erkin iqtisodiy zonalar, eksport, import, salohiyat, raqobatbardoshlik, moliyaviy imtiyozlar, iqtisodiy o‘shish.*

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PROBLEMS OF INCREASING THE EXPORT POTENTIAL OF FREE ECONOMIC ZONES OF UZBEKISTAN

***Annotation.** This article describes the role of free economic zones in increasing the export potential of enterprises and the factors of their development. The benefits associated with export-import activities in free economic zones were also studied.*

***Key words.** Free economic zones, export, import, potential, competitiveness, financial benefits, economic growth.*

Makroiqtisodiy hududiy tadqiqotlar instituti tomonidan o‘tkazilgan tahlil natijalariga ko‘ra, eksport hajmi iqtisodiy o‘shishga sezilarli va ijobiy ta’sir qiluvchi omil ekanligi va eksport hajmining 1 foizga ortishi qo‘shimcha 0,4 foiz iqtisodiy o‘shishga olib kelishi aniqlandi. Bunday holat ichki investitsiyalar, iqtisodiy erkinlik, ishchi kuchi va tashqi qarz ko‘rsatkichlari ta’sirini olib tashlagan holda ham saqlanib qoldi [1]. Eksportni rag‘batlantirishning turli strategiyalari orqali tayyor mahsulot va xizmatlar eksportini kengaytirish iqtisodiy o‘shishga erishishning ajralmas qismi sifatida qaralishi lozim. Shu nuqtai nazardan, jahon standartlariga javob beradigan raqobatbardosh mahsulot ishlab chiqarish, mamlakatimizning eksport salohiyatini oshirish masalasi bugungi kunda eng dolzarb vazifalardan biri hisoblanadi.

Bozor iqtisodiyoti sharoitida mamlakatning eksport salohiyati tushunchasini uchta asosiy guruhga ajratish mumkin:

- Tabiiy ustunliklar, mamlakatdagi mavjud tabiiy milliy resurslar orqali aniqlanadi.

- Texnologik xarakterdagi raqobatdoshlik ustunliklar, ishlab chiqarishning barcha bosqichlarida fan-texnika yutuqlari va innovatsiyalarga asoslanib mahsulotni yaratishdan tortib uni xorijiy iste'molchilarga taqdim etishgacha bo'lgan sikl orqali aniqlanadi.

- Institutsional ustunliklar, xorijiy mamlakatlarda faoliyat yuritayotgan milliy korxonalarining davlat tomonidan huquqiy, tashkiliy-me'yoriy qo'llab-quvvatlanishi orqali aniqlanadi.

Shu o'rinda, salohiyat va eksport tushunchalariga aniqlik kiritamiz. Salohiyat deganda, biror vazifani hal etish va ko'zlangan maqsadga erishish uchun qandaydir manba, imkoniyatlar yoki zahiralarga ega bo'lish tushuniladi [7]. Eksport (inglizcha "export" lotincha "exportare" so'zidan olingan bo'lib, chetga (tashqi bozorga) chiqarmoq, chet el hamkoriga tovarlar sotish va eksport qilish bo'yicha ko'plab tijorat operatsiyalari majmui bo'lib hisoblanadi. Demak, eksport salohiyati deganda, korxonaning zarur miqdorda raqobatbardosh mahsulot ishlab chiqarish va tashqi bozorlarga yetkazib berish qobiliyati tushuniladi.

Korxonaning eksport uchun mahsulot ishlab chiqarishga zarur bo'lgan resurslar yig'indisi uning ichki eksport salohiyatini tashkil etadi. Bularga tabiiy, mehnat, moliyaviy, moddiy va axborot resurslari kiradi. Bunda nafaqat ushbu resurslarning mavjudligi, balki ulardan samarali foydalanish qobiliyati eksport salohiyatini rivojlantirishning asosiy omili hisoblanadi. Korxonaning tashqi eksport salohiyati raqobatbardosh mahsulotlarni sotish bilan bog'liq bo'lib, u korxonaning marketing, logistika va xizmat ko'rsatish faoliyati orqali ta'minlanadi.

Korxonalarning eksport salohiyatini oshirishda erkin iqtisodiy zonalar muhim o'rin tutadi. Erkin iqtisodiy zonalar innovatsion faoliyatni rivojlantirish, ilg'or texnologiyalarni joriy qilish, eksport, shuningdek transport va telekommunikatsiya infratuzilmasini jadal rivojlantirish kabi bir qator muhim masalalarni ijobiy hal etish imkonini beradi.

Shundan kelib chiqqan holda, erkin iqtisodiy zonalarining eksport salohiyatini aniqlashda quyidagi ko'rsatkichlarni asosiy mezon sifatida qarash mumkin:

1. Korxonaning zaruriy resurslar bilan ta'minlanganligi va ularning sifati
2. Korxonaning ishlab chiqarish quvvati va uning xarakteristikasi (ishlab chiqarish salohiyati)
3. Korxonaning malakali kadrlar bilan ta'minlanganligi va ularning malaka darajasi (kadrlar salohiyati)
4. Ishlab chiqarilayotgan mahsulotning raqobatbardoshlik darajasi (raqobatbardoshlik salohiyati)

5. Ishlab chiqarish va tijoratni moliyalashtirish uchun yetarli moliyaviy resurslarning mavjudligi (moliyaviy salohiyat)
6. Korxonada tashqi savdo aloqalarining yo'lga qo'yilganligi: xorijiy hamkorlar bilan hamkorlik shartnomalarining mavjudligi, xorijda tijorat faoliyatining yo'lga qo'yilganligi yoki mahsulotlarni xorijda sotish uchun barqaror kanallarning mavjudligi (eksport salohiyati).
7. Korxonada yaratiladigan ishlanmalarning innovatsion xususiyati (innovatsion salohiyat)
8. Yetkazib beriladigan tovarlarni o'rnatish yoki ishlatib berish xizmatlarning mavjudligi (xizmat ko'rsatish salohiyati)
9. Korxonani va tadqiqot ishlarini rivojlantirishda iste'molchilar ta'sirining xususiyatlari (marketing salohiyati)

Erkin iqtisodiy zonalarda eksport va import faoliyati bilan shug'ullanish amaliyotining mavjudligi ularga bog'liq imtiyozlarni ham joriy etish zaruriyatini keltirib chiqaradi. Eksport-ishlab chiqarish hududlarida eng ko'p qo'llaniladigan imtiyozlar quyidagilardan iborat[2]: eksport mahsulotini ishlab chiqarishda qo'llaniladigan xomashyo yarim tayyor mahsulotlar va tayyor mahsulotlar import bojlaridan ozod etiladi; eksport qilinayotgan mahsulotni realizatsiya qilishdan hamda mamlakat ichida mahsulot ishlab chiqarish uchun xarid qilingan tovarlar va xizmatlar bo'yicha to'lanadigan soliqlardan ozod qilinadi; eksport-ishlab chiqarishda qatnashayotgan korxonalarda soliq ta'tili berish yoki foydadan to'lanadigan soliqdan qisman ozod etiladi; kommunal xizmatlar, idora xonalari, yer ijarasi bo'yicha to'lovlarga subsidiya beriladi va boshqalar.

Import yo'nalishidagi ishlab chiqarish hududlarida imtiyozlar tizimi faqatgina eksportga qaratilgan hududlardagidan tubdan farq qiladi. Bu farqlar quyidagilar iborat: hududdan mamlakat ichiga kiritilayotgan tovarlar uchun bojlar va kvotalarni bekor qilish; mamlakat ichiga yo'naltiriladigan tovarlar va xizmatlarni soliqlar orqali rag'batlantirish. Hududdan tashqaridagi korxonalar bilan aloqasini moliyaviy rag'batlantirish; mahalliy xomashyo va materiallardan ishlab chiqarishda foydalanishni ma'muriy yo'l bilan majburan ta'minlash.

Xulosa qilib aytganda, erkin iqtisodiy zonalarining eksport salohiyatini oshirishda quyidagi omillarni inobatga olish muhim hisoblanadi:

- erkin iqtisodiy zonalar uchun tanlangan maydonda investitsiyaviy hamkorlikni olib borish uchun zaruriy ob'yektiv sharoitlarni yaratish;
- imtiyoz va qulayliklar tizimini yaratishda xorijiy investorlar manfaatini har tomonlama hisobga olish, qulay investitsiya muhitini saqlash kafolatini ta'minlash;
- erkin iqtisodiy zonalarda ma'muriy boshqaruv tizimining samaradorligini va moslashuvchanligini oshirish.

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GEODEZIYA VA GEOINFORMATIKA YO`NALISHIDA ZAMONAVIY TEXNIKA VA AXBOROT TEXNOLOGIYALARIDAN FOYDALANISHNING USTUVORLIKLARI

***Annotatsiya:** Maqola "Geodeziya va Geoinformatika yo'nalishida zamonaviy texnika va axborot texnologiyalaridan foydalanishning ustuvorliklari" geodeziya va geoinformatika sohasidagi yangi texnologiyalar va ularning ilmiy amaliyotga qo'llanilishini tahlil etadi. Zamonaviy texnologiyalar, masalan, GPS, GIS (geografik axborot tizimlari), dronlar va sensorlar, bu sohada yuqori aniqlikdagi ma'lumotlarni yig'ish, tahlil qilish va boshqarishda muhim rol o'ynaydi. Maqola, ushbu texnologiyalarning integratsiyasi orqali qanday qilib geodezik va geoinformatik tadqiqotlarni yanada samarali va aniq o'tkazish mumkinligini ko'rsatadi. Shuningdek, texnologiyalarning rivojlanishi natijasida yuzaga keladigan muammolar va ularni hal qilish usullari ham muhokama qilinadi. Maqola, soha mutaxassislari va tadqiqotchilar uchun zamonaviy texnologiyalarni qo'llash orqali sifatli va ishonchli natijalarga erishish bo'yicha amaliy tavsiyalarni o'z ichiga oladi.*

***Kalit so'zlar:** Geodeziya, Geoinformatika, zamonaviy texnika, axborot texnologiyalari, GPS (Global Positioning System), GIS (Geografik Axborot Tizimlari), Dronlar, sensorlar, ma'lumot yig'ish, ma'lumot tahlili, texnologik integratsiya, tadqiqot samaradorligi*

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PRIORITIES OF USING MODERN TECHNIQUES AND INFORMATION TECHNOLOGIES IN GEODESY AND GEOINFORMATICS

***Abstract:** The article "Priorities of using modern techniques and information technologies in geodesy and geoinformatics" analyzes new technologies in the field of geodesy and geoinformatics and their application to scientific practice. Modern technologies, such as GPS, GIS (geographic information systems), drones and sensors, play an important role in the collection, analysis and management of high-resolution data in this field. The*

article shows how geodetic and geoinformatics surveys can be conducted more efficiently and accurately through the integration of these technologies. Also, the problems that arise as a result of the development of technologies and the ways to solve them are discussed. The article contains practical recommendations for industry professionals and researchers to achieve quality and reliable results by using modern technologies.

Key words: *Geodesy, Geoinformatics, modern technology, information technologies, GPS (Global Positioning System), GIS (Geographic Information Systems), Drones, sensors, data collection, data analysis, technological integration, research efficiency*

Kirish: Geodeziya va geoinformatika sohalari zamonaviy texnika va axborot texnologiyalarining rivojlanishi bilan doimiy ravishda yangilanib bormoqda. Geodeziya, yerning shakli, o'lchamlari, joylashuvi va boshqa fizika jihatlarini aniqlash bilan shug'ullanadi, geoinformatika esa bu ma'lumotlarni to'plash, saqlash, tahlil qilish va vizualizatsiya qilish usullarini o'rganadi. Ushbu sohalarda zamonaviy texnika va axborot texnologiyalaridan foydalanishning ustuvorliklari ko'p jihatdan geodezik tadqiqotlar va geoinformatika dasturlarining samaradorligini oshiradi.

Bugungi kunda, yuqori aniqlikdagi GPS tizimlari, geodezik skanerlash texnologiyalari, masofadan zondlash (remote sensing) va GIS (geografik axborot tizimlari) kabi ilg'or texnologiyalar geodeziya va geoinformatika sohaslarida innovatsion yechimlar yaratishga imkon beradi. Ushbu texnologiyalar yordamida yer yuzasining geodezik xaritalarini yaratish, tabiiy resurslarni boshqarish, urbanizatsiya va infratuzilma loyihalarini rejalashtirish, shuningdek, ekologik monitoring va tavsiflash kabi muhim vazifalarni ancha samarali bajarish mumkin. Shu bilan birga, bu texnologiyalardan foydalanishning ustuvorliklari ham shundaki, ular katta hajmdagi ma'lumotlarni tezda tahlil qilish, real vaqt rejimida monitoring o'tkazish va natijalarni vizualizatsiya qilish imkonini beradi. Bu, o'z navbatida, qaror qabul qilish jarayonlarini soddalashtiradi va vaqtni tejashga yordam beradi. Ushbu kirish bo'limida geodeziya va geoinformatika sohaslarida zamonaviy texnika va axborot texnologiyalaridan foydalanishning ustuvorliklarini batafsilroq ko'rib chiqamiz, bu sohalarning rivojlanishiga qanday hissa qo'shayotganini va ularning amaliy qo'llanilishini tahlil qilamiz.

Metodlar bo'limi: Geodeziya va geoinformatika sohaslarida zamonaviy texnika va axborot texnologiyalaridan foydalanishning ustuvorliklarini aniqlashda quyidagi metodlar qo'llaniladi:

1. GPS va GNSS Texnologiyalari: Global pozitsiya tizimlari (GPS) va global navigatsiya sun'iy yo'ldosh tizimlari (GNSS) geodezik o'lchovlarda yuqori aniqlikni ta'minlash imkonini beradi. Bu texnologiyalar orqali yer yuzasidagi nuqtalarni aniqlik bilan belgilash va xaritalash ishlari amalga oshiriladi. GPS va

GNSS tizimlarining o'zgaruvchan aniqlik va samaradorligini o'rganish, ularning ma'lumotlar bazalarini tahlil qilish metodlari keng qo'llaniladi.

2. Masofadan Zondlash (Remote Sensing): Masofadan zondlash texnologiyalari, ayniqsa sun'iy yo'ldoshlar orqali yer yuzasining tasvirlarini olish va tahlil qilish uchun ishlatiladi. Ushbu metod yordamida geodezik xaritalar yaratish, tuproq va iqlim o'zgarishlarini monitoring qilish, shuningdek, ekologik monitoring olib borish mumkin. Masofadan zondlash ma'lumotlarini qayta ishlash va tahlil qilish usullari, shu jumladan tasvirni qayta ishlash algoritmlari va spektroskopik tahlil metodlari ishlatiladi.

3. Geografik Axborot Tizimlari (GIS): GIS texnologiyalari ma'lumotlarni saqlash, boshqarish va tahlil qilishda keng qo'llaniladi. GIS yordamida yer yuzasining har xil qatlamlari haqida ma'lumotlar to'plangan xaritalar yaratiladi, bu ma'lumotlar tahlil qilinadi va vizualizatsiya qilinadi. GIS metodlari orqali ma'lumotlarning fazoviy tahlili, o'zgarishlarni kuzatish va prognozlash imkoniyatlari o'rganiladi.

4. 3D Skanning va Fotogrammetriya: 3D skanerlash texnologiyalari va fotogrammetriya orqali ob'ektlarning uch o'lchovli modellarini yaratish mumkin. Bu metodlar, ayniqsa, arxitektura, qurilish va merosni saqlash sohalarida ishlatiladi. 3D skanerlash va fotogrammetriya yordamida yuqori aniqlikdagi ma'lumotlar olish, ularni tahlil qilish va tasvirlarni tahrirlash usullari o'rganiladi.

5. Ma'lumotlarni Tahlil Qilish va Vizualizatsiya: Axborot texnologiyalaridan foydalanish orqali katta hajmdagi ma'lumotlarni tahlil qilish va vizualizatsiya qilish mumkin. Statistik tahlil, ma'lumotlar bazalari va vizualizatsiya dasturlari yordamida ma'lumotlarni samarali qayta ishlash va qaror qabul qilish jarayonlarini optimallashtirish metodlari qo'llaniladi.

Ushbu metodlar geodeziya va geoinformatika sohalarida zamonaviy texnika va axborot texnologiyalaridan foydalanishning ustuvorliklarini aniqlash va ularning amaliy qo'llanilishini o'rganishga yordam beradi. Metodlarning samaradorligi va innovatsion imkoniyatlarini tahlil qilish orqali sohalarining rivojlanishiga hissa qo'shish mumkin.

Natijalar bo'limi: Geodeziya va geoinformatika yo'nalishida zamonaviy texnika va axborot texnologiyalaridan foydalanish bir qator ustunliklarni taqdim etmoqda. Tadqiqotlar natijalariga ko'ra, bu texnologiyalarning qo'llanilishi sohada katta samaradorlik va aniq natijalarga erishish imkonini yaratgan.

Birinchidan, texnologik yondashuvlarning samaradorligi o'zini namoyon qilmoqda. Yuqori aniqlikdagi GPS tizimlari, dronlar va sun'iy yo'ldosh suratlari yordamida o'lchov va kuzatish jarayonlari sezilarli darajada tezlashgan. Masalan, tuproq o'lchovlari va yer tuzish jarayonlari avvalgi usullarga qaraganda 30-40% ga tezroq amalga oshirildi.

Ikkinchidan, axborot texnologiyalaridan foydalangan holda ma'lumotlarni tezkor tahlil qilish imkoniyati yuzaga kelgan. Geoaxborot tizimlari (GIS) orqali katta hajmdagi ma'lumotlarni avtomatik tarzda tahlil qilish va vizualizatsiya

qilish ancha osonlashgan. Natijalar ko'rsatdiki, bu dasturlar yordamida ma'lumotlarni qayta ishlash jarayonlari bir necha kunlardan bir necha soatgacha qisqaradi.

Uchinchidan, resurslarni tejash natijasida iqtisodiy samaradorlik oshgan. Zamonaviy texnologiyalarni qo'llash bilan resurslardan, xususan, vaqt, mablag' va inson mehnatidan samarali foydalanish imkoniyati yaratilgan. Misol uchun, sun'iy yo'ldosh suratlari va dronlar yordamida olingan ma'lumotlar dastlabki geodezik o'lchovlarga ketadigan mablag'ni 20% ga kamaytirishga imkon berdi.

To'rtinchidan, aniqlik va ishonchlilik oshgan. Zamonaviy texnologiyalardan foydalangan holda olingan ma'lumotlar yuqori aniqlikka ega bo'lib, bu esa qurilish, kadastr, yer tuzish va boshqa sohalarida muhim ahamiyat kasb etadi. Bu texnologiyalar yordamida kiritilgan o'lchovlarning aniqligi 95-98% oralig'ida ekanligi qayd etilgan.

Beshinchidan, innovatsion yondashuvlar ko'pchilik murakkab geodezik masalalarni hal qilishda yordam beradi. Sun'iy intellekt va avtomatlashtirilgan tizimlardan foydalanish orqali yer usti o'zgarishlarini kuzatish va oldindan bashorat qilish ancha osonlashdi. Bu yondashuvlar tabiiy ofatlarni oldindan aniqlash va ularning oqibatlarini yumshatish imkoniyatini berdi. Shu sababli, geodeziya va geoinformatika sohalarida zamonaviy texnika va axborot texnologiyalaridan foydalanish natijalari samarali va istiqbolli bo'lib, sohaning keyingi rivojlanishida katta ahamiyat kasb etadi.

Munozara bo'limi: Geodeziya va geoinformatika sohalarida zamonaviy texnika va axborot texnologiyalaridan foydalanishning ustuvorliklarini baholash jarayoni ko'plab aspektlarni o'z ichiga oladi va bu jarayonda turli fikrlar va nuqtai nazarlar mavjud.

1. Texnologik Rivojlanishning Imkoniyatlari: Zamonaviy texnologiyalar, masalan, GPS, GNSS, GIS va masofadan zondlash usullari geodeziya va geoinformatika sohalarini sezilarli darajada takomillashtirdi. Ushbu texnologiyalar yordamida er yuzasining yuqori aniqlikdagi xaritalari yaratilmoqda, tabiiy resurslar boshqarilmoqda va ekologik monitoring amalga oshirilmoqda. Biroq, bu texnologiyalar bilan bir qatorda ularga bo'lgan bog'liqlik, texnik nosozliklar va ma'lumotlarning to'liq va aniq bo'lishi kabi muammolar ham mavjud.

2. Ma'lumotlar Xavfsizligi va Maxfiylik: Zamonaviy texnologiyalar ko'plab ma'lumotlarni to'plash va saqlash imkonini beradi, bu esa ma'lumotlarning xavfsizligi va maxfiyligi masalalarini keltirib chiqaradi. Geodezik va geoinformatika ma'lumotlarining buzilishi yoki noto'g'ri ishlatilishi xavfi mavjud. Shu sababli, ma'lumotlarni himoya qilish va maxfiylikni ta'minlash uchun muayyan standartlar va protokollar ishlab chiqilishi zarur.

3. Texnologiyalarni Integratsiya Qilish: Zamonaviy texnologiyalarni integratsiya qilish jarayoni murakkab bo'lishi mumkin. GIS, GPS, va masofadan zondlash kabi texnologiyalar o'rtasidagi ma'lumotlar o'zaro mos kelishi va uyg'un bo'lishi kerak. Texnologiyalar o'rtasidagi integratsiya muammolari,

ma'lumotlarning bir-biriga mos kelishi va tizimlarning o'zaro ishlashi kabi masalalarni hal qilish zarur.

4. O'rganish va Malaka Oshirish: Zamonaviy texnologiyalardan samarali foydalanish uchun mutaxassislarning bilim va malakalarini doimiy ravishda oshirib borish zarur. Texnologiyalar rivojlanayotgan sari, yangi vositalar va metodlar bilan tanishish va o'zlashtirish kerak bo'ladi. Bu jarayonda o'quv dasturlari, kurslar va malaka oshirish treninglari muhim rol o'ynaydi.

5. Sotsial-iqtisodiy Ta'sir: Zamonaviy texnologiyalardan foydalanishning sotsial va iqtisodiy ta'sirlari ham mavjud. Ularning samaradorligi iqtisodiy foydalar, vaqt va xarajatlarni tejash kabi jihatlarni o'z ichiga oladi. Biroq, texnologik yangilanishlar xarajatlar va resurslarni talab qiladi, bu esa ayrim hududlarda iqtisodiy tengsizliklarni yuzaga keltirishi mumkin. Geodeziya va geoinformatika sohalarida zamonaviy texnika va axborot texnologiyalaridan foydalanishning ustuvorliklarini baholash jarayonida yuqoridagi aspektlarni hisobga olish muhimdir. Texnologiyalar bilan bog'liq mavjud muammolar va qiyinchiliklarni hal qilish orqali ushbu sohalarining samaradorligini oshirish va ularning amaliy qo'llanilishini yaxshilash mumkin.

Xulosa: Zamonaviy usullar va axborot texnologiyalarining uyg'unligi nafaqat rivojlandi, balki geodeziya va geoinformatikaning vakolatlarini ham o'zgartirdi. Yuqori aniqlikdagi tasvirlash va lazerli skanerlashdan murakkab ma'lumotlarni tahlil qilish va sun'iy intellekt yordamida modellashtirishgacha bo'lgan bu innovatsiyalar Yerning murakkab tizimlarini misli ko'rilmagan aniqlik va batafsil tushunish imkonini beradi. Ushbu keng bilim bazasi bilan iqlim o'zgarishi, resurslarni boshqarish, shaharsozlik va yaqinda sodir bo'lgan tabiiy ofatlar bilan bog'liq global muammoni hal qilish mumkin. Undan foydalanib, men yangi bilim sohalarini ochaman va yanada barqaror va bardoshli buduzobocik paydo bo'lishiga hissa qo'shaman.

Ilg'or geodeziya va geoinformatika texnologiyalarini muvaffaqiyatli joriy etish strategik yondashuvni talab qiladi. Tadqiqot va ishlanmalarga sarmoya kiritishga ustuvor ahamiyat berish, tadqiqot kengashlari, sanoat va hukumat o'rtasidagi hamkorlik aloqalarini mustahkamlash, ishonchli ma'lumotlarni boshqarish va infratuzilmani rivojlantirish muhim ahamiyatga ega. Bundan tashqari, ochiq ma'lumotlar standartlarining ommabopligi va ulardan foydalanish imkoniyati ushbu texnologiyalarni keng qo'llash va ulardan foydalanish imkonini beradi. Ushbu sa'y-harakatlarga ustuvor ahamiyat berish orqali biz Yerni boshqarishni yaxshilash va yanada xabardor va vakolatli jamiyatni yaratish uchun innovatsiyalar kuchidan foydalanishimiz mumkin.

Foydalanilgan adabiyotlar ro'yxati:

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EFFECTIVE WAYS OF IMPROVING READING COMPREHENSION

ABSTRACT

The article discusses reading comprehension along with the most effective ways to improve reading skills.

Index Terms: reading, comprehension, component, meaning, strategy, style, ability.

Introduction.

Reading comprehension is a crucial component of reading. Make an effort to comprehend and derive meaning from what you read in order to become more aware of what you are reading overall. You may increase your reading comprehension skills and make reading easier and more pleasurable by learning and putting into practice several reading strategies as well as altering the way you read.

Methods:

In this article, relying on the principles of science and impartiality, the essence of the topic was revealed.

Research results:

We will discuss reading comprehension in this article along with the most effective ways to improve your reading abilities.

Reading comprehension: what is it?

The capacity to comprehend or grasp what you are reading is known as reading comprehension. This occurs before, during, and after you read anything. It is an intentional and active aspect of reading. Understanding what you are reading can help you deduce the author's meaning and grasp the main points of the book.

Text comprehension and word knowledge are the two halves of reading comprehension. Text comprehension is the process of using the language used to gain an understanding of the meaning underlying the text, whereas vocabulary knowledge is the capacity to grasp the language being used.

Why is it vital to have reading comprehension skills?

Reading comprehension is beneficial and significant for a number of reasons. Proficiency in reading can enhance your personal and professional experiences and augment your pleasure of reading in general. Understanding texts can improve your knowledge in specific areas and speed up the process of learning new material and abilities.

Having strong reading comprehension abilities also has the following advantages:

- having the ability to comprehend, evaluate, and react to written correspondence in the workplace
- enhanced capacity for effective and clear writing
- the capacity to understand and participate in written accounts of current events, such as those seen in newspapers
- improved capacity for sustained concentration when reading
- Increased motivation and enjoyment.

Seven techniques to enhance your comprehension abilities in reading

You can start using a number of reading techniques right now to enhance your comprehension abilities. You will improve your comprehension of what you read as you practise more. You can practise the following seven easy tactics to improve your comprehension:

1. Expand your vocabulary Understanding the meaning of the words you read might help you better understand the text's content. You can: to increase your vocabulary

To determine your present level of vocabulary understanding, take an online vocabulary quiz.

Once or twice a week, use flashcards to test your knowledge of unfamiliar words.

Make it a point to communicate both orally and in writing using recently learnt words.

2. Come up with questions about the text you are reading

Asking questions about what you are reading can help improve your reading comprehension by allowing you to become invested in the text. It can also broaden your overall understanding of what you are reading by enabling you to explore themes, motifs and other components of text that you otherwise wouldn't inquire about. The more specific your questions, the more likely you will gain further insight into the text and its meaning. The following are examples of questions you could pose as you read:

- Why did the author begin the book at that location?
- What kind of relationship do these two characters share?
- What do we know about the main character up to this point in the book?
- Are there any themes that have consistently come up throughout the book? If so, what do they mean?

3. Use context clues

Using context clues is a great way to understand what you are reading, even if you don't know all the vocabulary being used. Context clues can be found in the words and sentences surrounding the word that you aren't familiar with. To use context clues, you can focus on the key phrases or ideas in a sentence and deduce the main idea of a sentence or paragraph based on this information.

You can also look for nearby words that are synonyms or antonyms of the word you don't know.

4. Look for the main idea

Identifying the main idea of a paragraph or article can help you determine the importance of the article. Understanding why what you're reading is important can give you a better comprehension of what the author is trying to convey. When reading, pause every few paragraphs and see if you can decipher what the main idea is. Then, try to put the main idea in your own words for even further understanding.

5. Write a summary of what you read

A great way to increase your knowledge of what you have read is to write a summary. Summarizing requires you to decide what is important in the text and then put it in your own words. Summarizing allows you to determine if you truly understand what you have read and better remember what you have read in the long term.

6. Dividing the reading into smaller portions can be helpful if you're dealing with lengthy or difficult texts. For example, instead of reading a whole chunk at once, you can read two paragraphs and then pause to summarize the content in your mind. This approach can reduce of overwhelm and improve your understanding of the material.

7. Pacing yourself is another effective strategy for enhancing reading comprehension. By setting realistic goals for your reading practice, especially with challenging books or literature, you can make progress. Rather than attempting to finish an entire book in a short time, break it into smaller portions, like reading three chapters per night. This approach allows for better comprehension and processing of the information between reading sessions.

To optimize your reading comprehension practice, it's important to eliminate distractions that hinder your focus. Minimize external disruptions and give your undivided attention to the text at hand, regardless of whether it's a simple email or a complex article. Concentrating solely on what you read will help you gauge your understanding of the material.

Starting with books that are below your current reading level can establish a foundation for improving comprehension. Choose texts that are comfortable for you to comprehend easily, rather than diving into challenging material right away. Taking an online quiz can help determine your current reading level accurately.

If you come across a sentence or paragraph that you don't understand, take the time to reread it until you grasp its meaning. Slow down your reading pace during the second attempt and use a dictionary to clarify the definitions of unfamiliar words.

Conclusion:

In summary, incorporating reading aloud into your comprehension practice combines visual and auditory learning. It also compels you to read at a slower pace, allowing more time for processing the information you encounter.

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MEDIA AND COMMUNICATION ARE OVERT AND COVERT INFLUENCES IN THE AGE OF DIGITAL TECHNOLOGIES

***Abstract.** This article analyzes some of the open and hidden risks in the world of media in the age of digital technologies. Also, attention is paid to the fact that the development of media literacy is one of the urgent issues of today, to understand and eliminate the problems of information security of the growing generation.*

***Keywords.** Crime, media and information, information space, media culture, media literacy.*

Introduction. The development of digital technologies in the conditions of globalization, along with the development of each country in society, as well as the expansion of relations in the field of information, new social relations aimed at preventing violations in this field - ensuring information security has become one of the urgent issues. Problems and events related to the spread of digital technologies in the fields of information and communication have been especially evident in the last decade, and the changes that are being felt now will have a significant impact on the socio-cultural landscape in the near future. It is possible that he will pass on his secret.

Media literacy is critical to understanding today's digital environment. In young people, first of all, the skills of sorting the daily information transmitted and received through the media, making the right decision in any situation even after receiving various information, where, by whom and for what purpose the information is transmitted, whose interests are reflected in it it is necessary to form concepts that It is inevitable that news and information whose essence has not been studied and which are being spread will fundamentally change our lives. "As a result of not analyzing the information and accepting it as it is, young people in different parts of the world are committing crimes, and those who feel like movie heroes are innocent people, taking up weapons and repeating the actions of "heroes". are taking their lives. Therefore, prevention of these situations, a conscious approach to information is the need of the hour today. [1]

Materials methods. In the conditions of global information, the possession of a large amount of information complicates the process of educating a person. This difficulty is related to the fact that, first of all, the young generation faces a large "media information field" with colorful information. Professor of Pedagogical Sciences M. Kuronov explained with the example of an anecdote in the book "The idea that unites us", referring to the

fact that a person's credulity and critical opinion are not formed in the world of media and information. [2]

Young people, who are the future of society, are deviating due to the inability to properly analyze the information disseminated through the media and the absence of an independent, critical opinion. However, the basis of the requirements for a modern well-rounded person is "owning one's own independent opinion, the ability to resist external influences. " About media culture, Marshall McLuhan said, "In order to be literally literate, a person must first be literate in the world of media", [3], Alisher Navoi said, "If you are aware, you are a king". This created the need to develop media literacy, media knowledge, media competence and media culture.

In the conditions of global information, the possession of a large amount of information complicates the process of educating a person. This difficulty is related to the fact that, first of all, the young generation is faced with a large "information field" of colorful information. According to the characteristics of age, all available information is interesting for a person until he reaches adulthood and acquires a certain level of worldview. However, it should be noted that not all interesting information will be useful and personal development information. The information collected in the information society is unsystematically assimilated by young people, who are curious by their psychological nature and strive to understand the essence of any situation, reality, event, or process. By its very nature, unsystematically assimilated information is just information, not knowledge. The difference between knowledge and information is determined by its systematic and purposeful acquisition. Continually absorbing information from a large "information field" ensures that the learner has an overload. A large amount of loading by itself creates tension in the human brain in receiving, assimilating, and processing information. Mental stress, in turn, causes depression. The constant development of depression causes nervous system diseases. Prevention of such negative situations is one of the most important and urgent tasks facing modern pedagogy and psychology.

Results. In the conditions of stable development of the society, in order to protect the public from harmful information and develop national sites, science-based systematic works are being carried out in our country. In this regard, it is appropriate to study the foreign experience of developed countries' Internet networks based on innovative technologies. It should be noted that the number of users of the global Internet network in the world is constantly increasing, if 4. 1% of people used the global Internet service 20 years ago, this figure will exceed 8 billion in 2023, that is, today in the world 75. 8% of the population uses this information network. Most of them are young people. Social networks, which are the most popular means of communication among the population, are used not only as a means of communication, but also as a forum for discussing the socio-economic and political processes taking place in our country. [4]

Social networks can gradually lead to the consequences of the development of cyber addiction in the socialization of young people. Secondly, social institutions began to gradually implement the task of developing social mobility. The influence of Internet culture increases, leaving virtual life aside from real values.

In this regard, the Agency is carrying out systematic work on the introduction of effective mechanisms to protect the interests of the state and society in the information sector. Priority is given to quick identification and prevention of dissemination of incorrect and legally prohibited information through social networks and messengers.

In addition, the development of the media in the Republic has led to the increase of various informational and ideological calls and threats. In particular, recruiting and engaging the population, promoting the ideology of extremism and terrorism, inciting unconstitutional and separatist sentiments, inter-religious and inter-ethnic

it should be noted that the role of social networks in inciting enmity is increasing. Spreading disinformation and fake news using manipulative methods by various forces and influence groups, as well as unification of public positions and further actions attempts at coordination are no less important.

Conclusion. The results of the analysis of the national media space, conducted from January 2021 to January 2022, show that young video bloggers use Instagram, YouTube, TikTok and other popular social platforms in order to increase the level of "popularity", which contradicts our national values and causes sharp protests from the society. shows that the cases of creating video content are increasing. During this period, 3, 833 materials were identified, which caused a sharp protest in the society, and 79, 738 comments and comments were left on them. It is worth noting that the actions of young video bloggers/tiktokers are dangerous and immoral, and sometimes they cause injuries to the death of the "heroes". Practical work is being carried out by the agency to protect children from information harmful to their health, to strengthen legal guarantees to limit the language of ignorance (bullying). In particular, by making changes to the Code of Administrative Responsibility, efforts are being made to improve the legal framework in the field of combating the spread of harmful content on the Internet, including among minors. [5]

In conclusion, it should be noted that in modern conditions, it is impossible to limit the needs of young people to receive information. If it was done in this way, it would be pedagogically ineffective. But the harmful, hidden effects of the information needs of young people are dangerous and cannot be allowed to lead them to disaster. For this reason, it is desirable for young people to acquire only useful and safe information from the media.

Acquaintance with theoretical views while conducting the research, based on the analysis of the obtained practical results, created the need to develop the

concept of developing media and information literacy in order to achieve the assimilation of only useful and safe information by the media:[6]

- to determine the factors that develop media literacy;
- determination of forms, methods and means of media literacy development;
- organizing and conducting lessons based on an integrated approach;
- establishing a system of training media pedagogues;
- creating a methodology for media education classes;
- development of methodological recommendations enriched with elements of media education;
- creation of a single didactic materials portal for all educational institutions.

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“EKOLOGIK KARKAS” TUSHUNCHASINING SHAKLLANISHI

Annotatsiya

Ushbu maqolada tabiatni muhofaza qilish va undan foydalanishning eng samarali shakllaridan biri bo‘lgan ekologik karkas tushunchasining shakllanishi hamda uning rivojlanishini tadqiq etiladi. Hozirda har qanday hududning “ekologik karkas”ini oqilona tashkil etish orqali tabiatdan oqilona foydalanish hamda muhofazasi masalalarini oqilona tashkil etish mumkin.

Kalit so‘zlar: Ekologik karkas, ekologik infratuzilma, muhofaza etiladigan hududlar, biologik xilma-xillik

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FORMATION OF THE CONCEPT OF «ECOLOGICAL CARCASS»

Annotation

This article examines the formation and development of the concept of ecological framework, which is one of the most effective forms of nature protection and use. Currently, by rationally organizing the "ecological framework" of any area, it is possible to rationally organize issues of nature protection and rational use.

Key words: Ecological network, ecological infrastructure, protected areas, biological diversity

Insoniyat ehtiyoji ortib borgan sari tabiat bilan keskinlashuv ham parallel tarzda oshib bordi. Tabiat va jamiyat munosabatlariga xronologik e’tibor qaratilsa dastlabki ibtidoiy jamoa davridan to hozirgi kunga qadar asta-sekin tabiatga bo‘lgan tazyiqni ortib borishini kuzatish mumkin. Qishloq xo‘jalik inqilobi, sanoat inqilobi, fan texnika inqilobi davrlarida tabiat bosqichma-bosqich zaiflasha bordi. Ammo bu jarayonlar shu zaylda davom etishi insoniyat uchun haqiqiy falokatga aylanishi aniq edi va shu bois 19-asrning oxirlarida tabiatni muhofaza qilishga e’tibor qaratila boshlandi. Tabiat muhofazasi ostida qo‘riqxonalar, milliy bog‘ kabilar tashkil etildi. Asosiysi bu jarayonlar hozirgi kunga qadar milliy va global miqyosda davom etmoqda. Biroq tabiatni muhofaza qilish, biologik xilma-xillikni saqlash va turlar o‘rtasida o‘zaro ta’sirni

kuchaytirish uchun zamonaviy loyiha va yondashuvlar zarur. Shuning uchun muhofaza ostiga olingan hududlarni yaxlit tizimga aylantirish yanada foydalidir.

Bugungi kunda fan, qurilish-arxitektura sohalarida hududning tabiiy, tabiiy-ekologik, ekologik, landshaft ekologik karkasi va ekologik infrastrukturasi kabi atamalar keng foydalanilmoqda. Jumladan geografiya va ekologiya fanlarida bu konsepsiya allaqachon keng qo'llanilmoqda. Biroq bu atamaning talqinida biroz chalkashliklar mavjud. Mualliflarning aksariyati tomonidan ekologik karkas "ekologik tayanch", "ekologik sinch" kabi iboralar orqali ifodalanmoqda. "Karkas" so'zi fransuz tilida carcasse – skelet degani. Ammo aksariyat holatlarda yuqoridagi atamalar "ekologik karkas" ning asl mohiyatini anglatishi munozaralidir[1].

Ekologik karkas tushunchasining paydo bo'lishi uchun turtki bo'lgan asosiy sabablardan biri yagona tizimga ega bo'lgan ekologik infratuzilmani yaratishga bo'lgan ehtiyojdir. Deyarli barcha tadqiqotchilar tomonidan ekologik karkas yoki ekologik tarmoqlar METH(Muhofaza etiladigan tabiiy hududlar)lar tizimining takomillashgan shakli sifatida baholangan. METHlar tizimini to'liq va yaxlitligini ta'minlash orqali ekologik karkas shakllantiriladi. METHlarni geoekologik yo'laklar va bufer zonalar yordamida shakllangan muayyan mintaqadagi integratsiyasi tizim elementlari o'rtasidagi o'zaro ta'sir va aloqadorlikni kuchayishiga hamda yaxlitlikni ta'minlanishiga olib keladi. Bunday yondashuv ushbu tizimda yangi xususiyat va imkoniyatlarni shakllantiradi. Natijada, METHlar tizimi funksional dasturlashtirishdan inson manfaatlariga xizmat qiluvchi ekologik karkas sifatida boshqarilishga o'tadi[2].

Atrof-muhitni boshqarishni rivojlantirishning rejalashtirilgan yo'nalishlarini amalga oshirish uchun barqarorlashtirishga qaratilgan yangi samarali mexanizm zarur. Zamonaviy iqtisodiy, ijtimoiy va ekologik jihatdan javob beradigan tabiiy resurslardan foydalanish jarayonlari hamda jamiyat taraqqiyoti tendensiyalaridir. Atrof-muhitni boshqarish tizimini takomillashtirish orqali ekologik karkasni tashkil etish bo'yicha dastlabki ishlar XX asrning 70 yillarida hozirgi Yevropa Ittifoqi mamlakatlaridan Estoniya va Litvada amalga oshirilgan. Estoniyada ishlab chiqilgan «ekologik kompensatsiyalangan rayonlar tarmog'i» ekologik tarmoqlarni yaratishdagi dastlabki innovatsion yondashuv hisoblanadi. Dastlab ekotarmoqlar Estoniyada «ekologik kompensatsiyalangan rayonlar tarmog'i», Litvada «tabiat ramkasi», Chexiya va Slovakiyada «barqaror landshaftlarning hududiy tizimi», Rossiyada «yashil mintaqa hududlari va muhofaza qilinadigan tabiat tizimlari», AQShda «Yovvoyi hududlar tarmog'i», Avstraliya va Portugaliyada «yashil yo'lak» sifatida nomlangan.

Hozirgi kunda mamlakatlarda tashkil etilgan ekologik hududlar tashkiloti turli nomlar bilan ataladi masalan: Niderlandiyada – ekologik tarmoq, Buyuk Britaniyada – milliy trast, Fransiya - tabiatni rivojlantirish tarmog'i, AQShda - yovvoyi yerlar tarmog'i, Rossiyada - ekologik karkas kabilardir[3].

Olimlar tomonidan ekologik karkas konsepsiyasi haqida dastlabki fikrlar ham o'tgan asrning so'nggi choragida yangray boshladi. 1980-yilda V.V.

Vladimirov birinchilardan bo'lib ekologik karkas haqida gapiradi. Sanoat shaharlari uchun tabiiy muhit shakllanish hududi uchun antropogen tizimlar, texnikalar, ekologik asosni yaratish tamoyillari va yondashuvlari quyi bosqichda shakllanishda bo'lgan degan fikrni yuritadi.

Umuman hozirgi kunda ekologik karkas atamasiga sinonim sifatida foydalanidigan bir qancha terminlar mavjud. Yuqorida ta'kidlanganidek ko'plab chet el adabiyotlarida bu nazariya asosan "ekologik tarmoqlar" (ekotarmoqlar) va bunga asos bo'lishi uchun esa "Biologik xilma-xillik va landshaftni muhofaza qilish bo'yicha butun Yevropa strategiyasi"dir (1995). Ekologik tarmoqlarning funksional ahamiyati biologik xilma-xillikni saqlashga qaratilgan formani nazarda tutadi atrof-muhitni muhofaza qilishning tuzilishidir. [4]

Rus adabiyotlarida ekologik karkas terminiga ma'no jihatidan o'xshash tushunchalar mavjud va bunday tushunchalarni olimlar turlicha qo'llashgan: "ekologik karkas" [V.V. Vladimirov, A.V. Elizarova, N.A. Sobolev, I.L. Prigunova, T.P. Savenkova], "hududning tabiiy karkasi" [P. Kavaliauskas, N.F. Reymers], "biosfera karkasi" [E.B. Alaev], "ekologik karkas (yashil karkas)" [A.A. Tishkov], "tabiiy ekologik karkas" [T.G. Runova, I.N. Volkova, T.G. Nefedova], "landshaft-ekologik karkas" [Y.A. Chibilev, L.K. Kazakov], "landshaft karkasi" [Z.V. Lisenkova, I.N. Rotanova, A.A. Dyachenko], "klasterli qo'llab-quvvatlash karkasi" [R.G. Safiullin, R.M. Safiulina] va boshqalar.

Ekologik karkas g'oyasi Yevropa mamlakatlari orasi Niderlandiyada 1980-yilda taklif etildi va 1990-yilda Germaniya hukumati tomonidan tabiatni muhofaza qilish milliy loyihasining bir qismi sifatida qabul qilindi. 90-yillarning boshlarida Yevropa Ekologik Tarmog'i (EECONET) konsepsiyasi Yevropaning tabiiy merosini saqlash uchun umumevropa yondashuvi sifatida katta e'tibor qozondi. Natijada Germaniya hukumati tashabbusi va homiyligida 1993-yilda Butunjahon tabiatni muhofaza qilish tashkiloti (IUCN) Yevropa ekologik tarmog'ini markaziy va sharqiy Yevropa hududlarigacha kengaytirilgan loyihani taqdim etdi. Asosiy maqsad milliy ekologik tarmoq va har bir mamlakatda tabiatni muhofaza qilish milliy rejalarini ishlab chiqish edi. Milliy loyihalarning dastlabki qismi Polsha, Vengriya, Chexiya va Slovakiya davlatlarida yo'lga qo'yildi.[5] Hozir butun Yevroittifoq bo'ylab bu loyiha amalda qo'llanilgan Amerika adabiyotlarida ham bu tushuncha "Ekologik tarmoqlar" deb yuritiladi.

Xulosa

Yuqorida turlicha tarzda ishlatiladigan atamalar aynan shu davlatlarda ham asosan ekologik karkas tarzida foydalaniladi. Ekologik karkas "Ekologik tarmoqlar"ni o'rganish ekotizimlarning atrof-muhit o'zgarishlariga qanday javob berishini tushunishga yordam beradi. Ekologik karkas termini qanday qo'llanilishidan qat'iy nazar tabiatni boshqarishning eng samarali usullaridan biriga aylanib ulgurdi. Rivojlanib borayotgan jamiyatda ham tabiatni raqamli texnologiyalardan foydalangan holda boshqarish yanada qulayroq va samaraliroq bo'lardi.

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RAQAMLI IQTISODIYOTNI RIVOJLANTIRISH CHORA- TADBIRLARI

Mavhum. Ushbu maqola raqamli iqtisodiyotni yanada rivojlantirish va uni yo'q qilish, raqamli iqtisodiyot o'sishining global miqyosga ta'siri, iqtisodiy o'sish va raqamli iqtisodiyotning jahon bozoridagi rolga bag'ishlangan. Shuningdek, u odamlarning turmush tarzini sezilarli darajada o'zgartirish qobiliyatiga qaraydi va bu uning asosiy foydasi.

Kalit so'zlar: raqamli iqtisodiyot, raqamli iqtisodiyotning shakllanishi, Internet iqtisodiyoti, raqamli iqtisodiyot va jahon iqtisodiyoti istiqbollari, aloqa.

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MEASURES FOR THE DEVELOPMENT OF THE DIGITAL ECONOMY

Abstract. This article focuses on the further development of the digital economy and its elimination, the impact of the growth of the digital economy on the global scale, economic growth, and the role of the digital economy in the world market. It also looks at its ability to significantly change people's lifestyles and this is its main benefit.

Keywords: digital economy, formation of digital economy, Internet economy, digital economy and world economy prospects, communication.

Kirish. Raqamli iqtisodiyotning yuksalishi 21-asrning o'ziga xos belgilaridan biridir. Albatta, bugungi kunni raqamli texnologiyalarsiz tasavvur qilish qiyin. Zamonaviy ilm-fanning cho'qqisi yuqori texnologiyali, raqamli dunyoda ko'rinadi. To'rtinchi sanoat inqilobi taraqqiyotning yangi ko'rinishi – “raqamli iqtisodiyot”ni anglatadi. Bugun oldimizda yaqin kelajakda erishmoqchi bo'lgan buyuk maqsadlarimiz bor. Buning uchun, bizga yetuk kadrlar, mutaxassislar albatta kerak. Raqamli texnologiyalar jamiyatga ta'sir qiladi. ko'p

jihatdan iqtisodiyot, jumladan, xizmat ko'rsatishning kuchli tarkibiy qismiga ega yangi mahsulotlar, yangi aloqa va hamkorlik vositalari, ularning roli ma'lumotlarda iqtisodiy o'sish omili sifatida sun'iy intellektdan foydalanish (AI), vazifalarni avtomatlashtirish va yangi biznesning paydo bo'lishi, platformalar kabi modellar inson hayotini o'zgartirdi. Shuning uchun, asosan, raqamlashtirish birgalikda yashash va ishlash tarzimizni o'zgartiradi. Bu taraqqiyot va farovonlikni anglatadi. Butun davlat Shuningdek, korxonalar uchun samaradorlik, vaqt, malaka, daromadlarni to'g'ri taqsimlash, barcha sohalardagi tashkilotlar, atrof-muhit va tashqi dunyoga chuqur ta'sir ko'rsatadi. Biz hozirda asosan rivojlangan davlatlar qatoriga kirishimiz uchun harakatdan chetda turishimiz kerak emas. Xorijiy mamlakatlarda raqamli iqtisodiyot biznikidan ancha rivojlangan. Iqtisodiyotni raqamlashtirish mamlakat taraqqiyoti uchun juda muhim. Bugun, raqamli iqtisodiyotning rivojlanishi barcha sohalarning rivojlanishi bilan chambarchas bog'liq

Raqamli iqtisod, raqamli texnologiyalarga asoslangan iqtisodiy faoliyatni saqlash samaradorligini jiddiy ravishda oshirish imkonini beruvchi, elektron tijoratdan foydalanishga asoslangan turli xil texnologiyalar, uskunalar, tovarlar va xizmatlarni sotish va yetkazib berish, tahlil natijalari va keng ko'lamli axborotni qayta ishlash, shuningdek, raqamli qo'llaniladigan iqtisod. Raqamlashtirish jahon iqtisodiyotining o'sishiga olib keladi. Masalan, nufuzli McKinsey Global Institute konsalting kompaniyasi fikricha raqamli texnologiyalar hisob-kitoblar 2025 yilga kelib yalpi ichki mahsulot (YIM) o'sishiga olib keladi. Kompaniyaning hisob-kitoblariga ko'ra, 12 turdagi yuqori texnologiyalar (mobil Internet, ilg'or robototexnika, bulut texnologiya, qayta tiklanadigan energiya, Internet of Things (IoT) ma'lumotlari) o'sishiga hissa qo'shadi.

Ayni paytda yirik kompaniyalar butun dunyo bo'ylab raqamlashtirishdan xabardor. Raqamlashtirish, raqamli iqtisodiyotni shakllantirish, iste'molchilarga, davlatga, umuman jamiyatga katta imkoniyatlar ochadi. Dunyo orasida raqamli iqtisodiyotni qo'llab-quvvatlash bo'yicha yetakchi davlatlar - Singapur, Xitoy, Janubiy Koreya, Zelandiya va Daniya. Bu mamlakatlar sohada muhim tashabbuslarni jumladan raqamlashtirish va yuqori texnologiyalarni rivojlantirishni amalga oshirdi. Misol uchun, Singapur 2014 yilda o'zining Smart Nation kontseptsiyasiga asos solgan va uni taklif qilgan. Raqamli texnologiyalarni joriy etish orqali aholining hayot sifatini yaxshilashga qaratilgan texnologiyalarni ularning kundalik hayotiga kiritish joiz.

Nafaqat yirik kompaniyalar, balki kichik va o'rta kompaniyalar tadbirkorlik sub'ektlari ushbu konsepsiyani amalga oshirishga jalb etildi. "Aqlli" texnologiyalar ma'lumotlar bazalari, shahar bloklari bilan Jihozlangan. Ular real vaqt rejimida elektr energiyasi, suv va boshqalarni iste'mol qilish ko'rsatkichlarini nazorat qiladi. Olingan ma'lumotlar hukumatga suv iste'molini yaxshilash va olib kelishga yordam beradi. Shahardagi toza suv Malayziyaga qaramlikni kamaytirishga yordam beradi. Sensorlar fuqarolarga resurslarni

kuzatish va foydalanish imkonini beradi. Dastur ishtirokchilari, birinchi navbatda, uy-joy, sog'liqni saqlash (bemorga uydan chiqmasdan yordam berish, shifokor bilan masofadan aloqa qilish imkonini) va transport tarmog'I (uchuvchisiz transport vositalari va avtobuslar) imkonini beradi. U Virtual Singapur deb nomlangan yagona ekotizimni tashkil qiladi (rezidentlar real vaqtda trafikni tomosha qilish, xavfsizlik kameralari ma'lumotlarini ko'rish va h.k.)

Ta'kidlanishicha, raqamli iqtisodiyot arziyas o'zgarishlarga olib keladigan mavjud tarmoqlarning yarmi. Masalan, Jahon banki ekspertlarining fikricha, 10% tez internet foydalanuvchilari sonining ko'payishi milliy iqtisodiyotlarga ularning o'sishiga imkon beradi. yalpi ichki mahsulot yiliga o'rtacha 0,4-1,4 foizga oshadi. Raqamli iqtisodiyot noldan yaratilishi kerak bo'lgan boshqa iqtisodiyot emas. Bu yangi texnologiyalar, platformalar va biznes modellarni yaratish va mavjudlarini ko'chirishni anglatadi

Iqtisodiyotni kundalik hayotga joriy etish orqali yangi tizimga o'tkazishning asosiy belgilariga quyidagilar kiradi:

- yuqori darajadagi avtomatlashtirish;
- elektron hujjat konvertatsiyasi;
- buxgalteriya hisobi va boshqaruv tizimlarining elektron integratsiyasi;
- ma'lumotlar bazalari;
- CRM (mijozlar bilan o'zaro aloqa tizimi) mavjudligi;

Korporativ tarmoqlar va ularning qulayligi:

1. To'lovlar uchun xarajatlar kamayadi (masalan, boshqa resurslar tejiladi).

2. Tovar va xizmatlar haqida ko'proq va tezroq o'rganiladi.

3. Raqamli til xizmati dunyoga kirish uchun katta imkoniyatlarga ega.

5. Tezroq, sifatliroq, qulayroq. Shu bois, mamlakatimizda "Elektron hukumat" tizimini joriy etish muhim ahamiyatga ega. Raqamli iqtisodiyotni rivojlantirishning ajralmas qismi bo'lib, asosan soddalashtirishga qaratilgan ma'muriy tartiblardan o'tish, aholi hayot sifatini yaxshilash, investitsiya va ishbilarmonlik muhitini yaxshilash, belgilangan asosiy vazifalarni amalga oshirish, shuningdek, milliy kontseptsiyani ishlab chiqish "raqamli iqtisodiyot" raqamli texnologiyalardan foydalangan holda bugungi kunda iqtisodiyotning barcha tarmoqlarini yangilashni maqsad qilgan. Mamlakatimizda raqamli jamiyatni rivojlantirish, qulay imkoniyatlar yaratish maqsadiga erishish odamlar va tadbirkorlar uchun samarali va ochiq boshqaruv tizimini rivojlantirishga yordam beradi.

Iqtisodiy rivojlanish davridan qat'i nazar, sanoatlashtirishning asosiy belgisi, korxonalar ishlab chiqarishning doimiy o'sishi ko, konveyer lentalarini uzaytirildi va xodimlar ko'paydi. Axborot texnologiyalari asri bu sohada ham yangi qoidalarni belgilab berdi. Ayni paytda raqamli iqtisodiyot tor fikrli olimlar uchun qiziqarli dissertatsiyalar, lekin misli ko'rilmagan bozor modeli potentsial va o'zini oqlaydigan amaliyot.

Shu bois mamlakatimizda raqamli tizimga o'tish bo'yicha amaliy choralar ko'rilmogda. Jumladan, davlatimiz rahbarining "Qo'shimcha chora-tadbirlar to'g'risida"gi farmoni raqamli iqtisodiyot, elektron hukumat va axborot tizimlarini jamoatchilikka joriy etish O'zbekiston Respublikasi ma'muriyati" mavzusida samarali chora-tadbirlar bo'lib o'tdi. Mamlakatimizda raqamli iqtisodiyotni rivojlantirishga qaratilgan ushbu hujjat bilan "elektron hukumat" tizimini yaratish va qo'shimcha asoslarni ishlab chiqish, Milliy tadbirkorlik va davlat o'rtasida samarali hamkorlikka ko'maklashish, O'zbekiston Respublikasi Prezidenti huzuridagi Loyiha boshqaruvi agentligi raqamli iqtisodiyotni rivojlantirish va rivojlantirish bo'yicha vakolatli organ sifatida belgilangan.

Hozirgi kunda Agentlik yagona davlatni ishlab chiqish sohasidagi tashkilotlar siyosat va davlat organlari faoliyatini muvofiqlashtirish va amalga oshirish uchun javobgardir. Agar klassik bozor iqtisodiyoti modeli talab, taklif va raqobatga asoslangan bo'lsa, raqamli iqtisodiyotdagi taklif talabni shakllantirishi mumkin. Buning uchun raqamli mahsulotlar va ularni keng foydalanish turlarini ko'paytirish kerak. Bunday vaziyatda, iqtisodiy jarayonlar tezlashadi, xarajatlar kamayadi va yuqori sur'atlarda daromad olinadi. Bu, o'z navbatida, insonni chetlab o'tib, bu munosabatlarning shaffof bo'lishiga yordam beradigan omil, ulardagi korruptsiyaning oldini olishga yordam beradi. Shuningdek, raqamli iqtisodiyot shaffoflikni ta'minlaydi. Odamlar hukumatning iqtisodiy rivojlanishi bo'yicha amaliy tanishishlari mumkin. Iloji boricha kamroq resurslarni sarflash va ko'proq mahsulot ishlab chiqarish ustuvor vazifadir.

Mamlakatimizda raqamli iqtisodiyotni takomillashtirish. Biznin zimmamizga ham katta mas'uliyat yuklangan. Davlatimiz rahbari ta'kidlaganidek, Iqtisodiyotni shakllantirish katta mablag' talab qiladi. Ammo biz bundan qo'rqqmasdan raqamli iqtisodiyotni shakllantirishimiz kerak. Biz bugun ma'rifat va qat'iyat bilan bu ishni boshlashimiz kerak. Har bir inson rivojlanishi, mamlakat farovonligi uchun zarurdir. Har birimiz bu masalani jiddiy o'ylab ko'rishimiz kerak. Mamlakatimizda raqamli iqtisodiyotning ayrim elementlari allaqachon muvaffaqiyatli faoliyat yuritmoqda. Masalan, hujjatlar va aloqalarni raqamli ommaviy axborot vositalariga ommaviy ravishda o'tkazish, elektron imzolarni avtorizatsiya qilish va hukumat bilan aloqa qilish ham, mavjud elektron platformalarga o'tkazildi. Albatta, bu sohada raqamlashtirish to'xtamasligi kerak va boshqa sohalarda raqamli iqtisodiyotni jadal olib borish kerak.

Xulosa.

Xulosa qilib aytadigan bo'lsak, mamlakatimiz taraqqiyoti ham raqamli iqtisodiyotning rivoji va raqamli texnologiyalarni qamrab olish darajasiga bog'liq. Yangi texnologiyalar muqarrar ravishda mehnat bozoridagi sezilarli o'zgarishlar bilan kirib kelmoqda. Jumladan, ayrim tarmoqlarda ish o'rinlarini qisqartirish va keng miqyosda yangi imkoniyatlar yaratish joiz. Raqamli iqtisodiyot turli xil yangi bilim va ko'nikmalar va sezilarli darajada yangi ijtimoiy himoya choralari, shu bilan birga, katta mablag' talab etadi. Ta'limni

yaxshilash, shuningdek, umrbod ta'lim xizmatlaridan umumiy foydalanishini ta'minlaydi.

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MUBORAK TUMANI HUDUDINING TABIIY GEOGRAFIK SHAROITI VA GEOEKOLOGIK VAZIYAT

***Annotatsiya.** Maqolada tuman hududining tabiiy sharoit shakllanishi va undagi ayrim masalalar aytib o'tilgan. Tumanning tabiiy geografik xususiyatlari ochib berilgan. Arid iqlimli mintaqa tabiati va undan foydalanish istiqbollari yoritilgan.*

***Kalit so'zlar.** Tabiiy muhit, sharoit, geoeкологиya, relyef, iqlim, tuproq, quruq iqlim.*

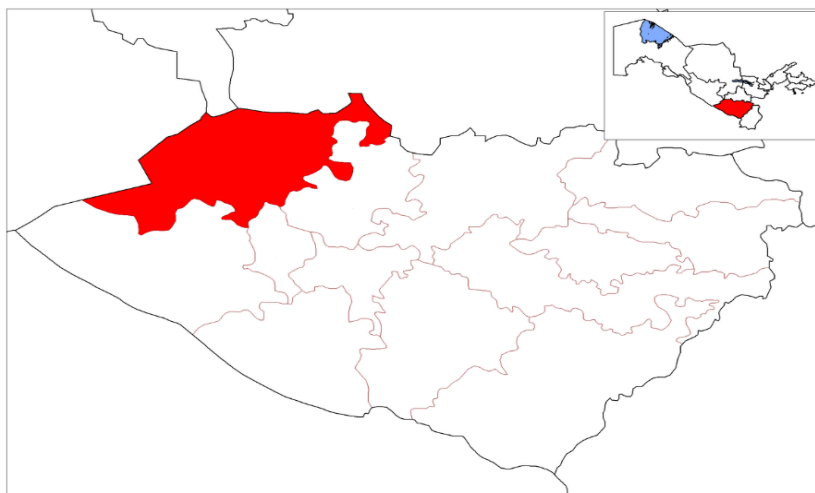
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NATURAL GEOGRAPHIC CONDITIONS AND GEOECOLOGICAL SITUATION OF THE TERRITORY OF MUBARK DISTRICT

***Abstract.** The article describes the formation of natural conditions of the district and some of its issues. The natural geographical features of the district are revealed. The nature of the arid climate region and the prospects for its use are highlighted.*

***Key words.** Natural environment, conditions, geoecology, relief, climate, soil, dry climate.*

Muborak tumani-O'zbekiston Respublikasining Qashqadaryo viloyatidagi tuman. 1978-yil 13-sentabrda tashkil etilgan. G'arbda Buxoro viloyati, shimolida Navoiy va Samarqand viloyatlari, sharqda viloyatning Koson tumani, janubida Kasbi va Mirishkor tumanlari bilan chegaradosh(1-rasm). Maydoni 3,07 ming km². Muborak shahri Qashqadaryo viloyatining markazi Qarshi shahridan 78 km masofada joylashgan. Mazkur tuman Qashqadaryo viloyatidagi eng katta maydonga ega tumanlardan biri hisoblanadi. Dehqonobod tumani kattaligi bo'yicha birinchi o'rinda tursa ikkinchi o'rinda Mirishkor tumani hamda maydoni jihatdan uchinchi kattalikka Muborak tumani turadi. Qashqadaryo viloyati hududining eng shimoliy qismi tuman hududi hisoblanadi.



1-rasm. Qashqadaryo viloyatida Muborak tumani chegarasi

Muborak tumani relyefi hosil bo'lishida 2 asosiy tabiiy geografik jarayonni keltirib o'tishimiz mumkin:

- ❖ Deflyatsiya (buzuvchi);
- ❖ Vujudga keltiruvchi (eol akkumlyatsiyasi);

Taqir hamda sho'rxoq hosil bo'lishi jarayonlari uncha katta ahamiyatga ega emas ammo o'ziga xos o'rin tutadi. Tumanda yanvar oyining mutlaq minimumi -27C ni, iyulda mutlaq maksimum esa +49C ni tashkil etadi. O'rtacha harorat misolida oladigan bo'lsak, yanvar oyi izotermasi -2C, iyul oyi +32C ga tengdir. Eng baland harorat va o'rtacha eng baland haroratlar aynan Muborak tumani uchun xos. Iqlim ko'rsatkichlari Muborak gidrometreologik stansiyasida o'rganib, qayd etib boriladi. Yog'in miqdori arid va ekstra aridga xos bo'lib, ko'pgina hududlarida 100 mmga ham yetmaydi. Ba'zi yillarda 200 mmga yaqin yog'in yog'ishi kuzatiladi. Bu ko'rsatkich Samarqand viloyati, Kasbi hamda Kosonga chegaradosh qismlari uchun xosdir.

Muborak tumani Qashqadaryo viloyatining shimoli g'arbida joylashgan bo'lib, hududi cho'l, chalacho'l, pasttekisliklardan iborat. Turon plitasining sharqiy chekka qismida joylashgan. Uning ustini qum, gil, konglomerat kabi jinslar qamrab olgan. Hududi tabiiy sharoiti noqulay deb baholansada, ammo uzoq davom etgan tarixiy jarayonlar negizida tabiiy resurslar shakllanishiga asos bo'lib xizmat qilgan. Cho'l zamini paleozoy davrida vujudga kelgan. Keyingi geologik davrlarda xuddi O'zbekistonning ko'plab qismlari singari bir necha marta suv ostida qolgan, ya'ni transgressiya va regressiya jarayonlarini o'tagan. Ordovik, silur va devon davrlarida bu hududda dengiz bo'lgan, uning ohaktosh, qumtosh, giltosh tarkibli hosilalari bu davrdan keyin ro'y bergan gertsin tog' burmalanishi natijasida metamorflashgan. Yura davrining oxirida

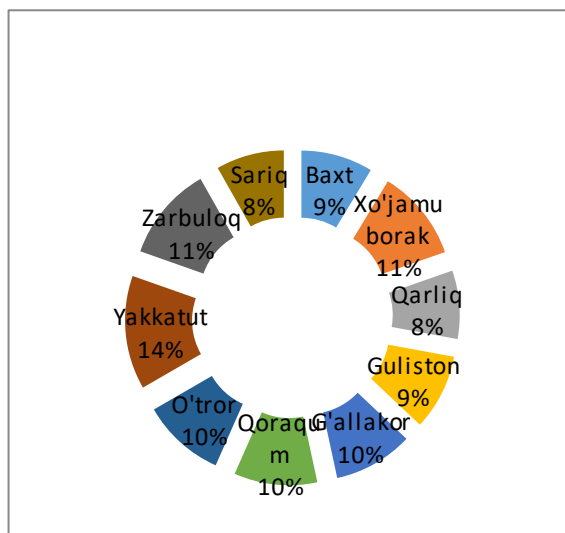
Kellovey – Oksford bosqichida hozirgi hududning deyarli barcha qismlari janubi g'arbga tomon sayozlashib borgan Kopetdog' dengizi bilan qoplanadi. Bu dengizning yotqiziqlarida - ammonitlar, marjonlar va suv o'tlari kabi organizmlarning qoldiqlari uchraydi. Hozirgi neft va gaz konlarining vujudga kelishida ayni shu davrdagi dengiz yotqiziqlari bilan ham bog'liqlik mavjud. Yuqori bo'rning oxirida dengiz sayozlanib va gips to'plana boshlaydi. Butun Qashqadaryo viloyati hududining paleogeografik sharoitlari yura va bo'r yotqiziqlari neft va gaz konlarini qidirish uchun qulaylikni vujudga keltiradi. Jumladan, Muborak tumanida ham bu jarayon kechadi. Paleogen oxiri va neogen boshlarida dengiz suvi chekinib quruqlikka aylangan. Tuman hududining geomorfologiyasiga e'tibor beradigan bo'lsak, hozirgi (golotsin) yotqiziqlaridan iborat chag'irtosh, shag'altosh va qumlardan tashkil topgan yosh terrasalardan tuzilganidir. Albatta Qashqadaryoning flyuvial jarayonlarda ishtirok etganini inkor qilmaydi. To'rtlamchi davrda hozirgi relyef ko'rinishiga kelgan va eol jinslarning ishtirokida hozirgi ko'rinish shakllangan.

Hududning geografik muhitida suv havzalarining yo'qligi va doimiy oqar suv manbalariga ega bo'lmaganligi asosiy o'ringa chiqadi. Ammo shu o'rinda shuni qayd etish lozimki, yer osti suv manbalari zaxirasi yetarli salmoqqa egadir. Xo'jaligida haligacha quduqlar faoliyatidan foydalaniladi. Bundan tashqari esa intensiv xo'jalik faoliyatini yo'lga qo'ya boshlagan fermer xo'jaliklari artezian havzalar qazish ishlarini yo'lga qo'yishgan. Tuman hududining tabiiy sharoitini o'rganadigan bo'lsak, bu yerning maydonida asosiy landshaft ko'rinishini – qum barxanlari, saksovullar, yulg'unlar, isiriqzorlar va mavsumiy o'simiklar egallaydi.

Yer yuzida o't-o'simliklar qoplamasi siyrak, madaniylashgan hududlarida turli xildagi ekinlar, mevali daraxtlar ekilishi yo'lga qo'yilgan. Sug'oriladigan yerlarida paxta, g'alla kabilar yetishtiriladi. Tabiiy o'simliklaridan saksovullar anchagina maydonlarni egallaydi, ammo maydon ko'lami bilan solishtirilganda ma'lum miqdorda. Muborak buyurtmaxonasi ham aynan saksovullarni himoya qilish maqsadida barpo etilgan. Hududi – 80 ming gektarni tashkil etadi. Yaylovlar ham mavjud bo'lib, biroq unumi nisbatan past. Tuman hududlarida aynan juda ko'plab mayda mollar boqiladi. Qo'y va echkilar salmog'i yetakchi o'rinni egallaydigan Muborak tumani hududi bo'yicha ham mayda mollar hisobi bo'yicha ham uchinchi o'rinda turadi.

Muborak tumanida bundan qariyb 50 yillar ilgari antropogen ta'sir kam bo'lgan va hududda qalin saksovulzorlar areali mavjud edi. Afsuski bugungi

antropogen ta'sir evaziga ularning maydoni kamayib ketdi. Xususan, saksovul cho'lga moslashgan, arid iqlimni sevuvchi, tanasida suv miqdori boshqa o'simliklarga nisbatan kam va asosiysi xalq xo'jaligida "o'tinbop" daraxt turi hisoblanadi. Ammo atrof – muhitda uning bajaradigan funksiyasi yuqoridir. Ma'lumki eol jinslar qum uyumlarini hosil qiladi va ba'zan bu barxanlar ko'rinishida bo'ladi. Ayni



shu uchma qumlarni tutib qoladigan narsa bu o'simliklardir. Muborak tumanida cho'l landshafti vujudga kelgan bo'lib, hudud baravariga tekislikdan tashkil topgan. Ba'zi joylarda qum barxan tepalarini uchratamiz.

Ma'lumki, sho'rlangan tuproqlarga o'simliklar uchun zararli miqdorda mineral tuzlar mavjud bo'lgan tuproqlar kiradi. Qishloq xo'jaligi ekinlarining ezilishi profilidagi tuz miqdori tuproq massasining 0,25% dan ortiq bo'lganda boshlanadi. Tuproqning chuqur namlanishi bo'lmagan qurg'oqchil

Manba: *Muborak tumani irrigatsiya va melioratsiya suv xo'jaligi qo'mitasi*

cho'l va chalacho'l zonalarida tuzlarning to'planishi ularning biogen to'planishi, nurash, tuproq hosil bo'lishi, shuningdek, impuls hosil bo'lishi (shamol o'tishi) natijasida sodir bo'lishi mumkin. Afsuski, tuman tuproqlari sho'rlanishga tez uchraydigan tuproqlar sirasiga kiradi.

Tuproqlarining sho'rlanganlik darajasi bo'yicha quyidagicha tasnifga ega:

- ✓ 8 % - sho'rlanmagan;
- ✓ 65 % -kuchsiz sho'rlangan;
- ✓ 18 % - o'rtacha sho'rlangan;
- ✓ 9 % - kuchli sho'rlangan;

Bunda 1,99 ming km.kv. kuchsiz sho'rlangan, 0,55 ming km.kv. o'rtacha sho'rlangan, 0,28 ming km.kv. kuchli sho'rlangan, 0,25 km.kv. esa sho'rlanmagan. O'rtacha va kuchli sho'rlangan tuproqlar asosan bo'z-qo'ng'ir tuproqlar hisoblanadi. Ba'zi hududlarida pastga tushgan sari sho'rlik ortib boradi. Bizning o'rganishlarimiz natijasida bo'z-qo'ng'ir tuproqlar tarqalgan 8 sm chuqurlikdagi grunt suvlar sho'rliqi tekshirilganda 1,29 grammni tashkil etdi.

Tumanda asosiy ekin ekiladigan hududlaridan biri bo'lgan Guliston negizida tuman tuproqlari sho'rlanishini ko'rib chiqamiz. Hudud 267 ta

konturga bo'linib, 3 xil namuna asosida tuproqlar olinadi. Maxsus laboratoriyalarda esa ular tekshiruvdan o'tkaziladi. 1-namuna 0,0-30,0 smgacha, 2-namuna 30,0-70,0 smgacha, 3-namuna 70,0-100,0 smgacha bo'ladi. Bunda 30 sm gacha bo'lgan sathning tahlillari jihatidan umumiy 0,89 l/gr ga, 30,0 smdan 70,0 smgacha 1 l/gr ga yaqin, 1 metrgacha bo'lgan yuzada esa sho'rlik 0,75 l/gr ga tengdir.

Hudud miqyosida tanlab olingan nuqtalarning sho'rlanish darajasi, 100%da:

Tuman hududining asosan janubi g'arbiy va markaziy qismlarida aholi qalin qatlami yashaydi. Shimoliy qismida Muborak buyurtma maskani tashkil etilgan va muhofaza ostiga olingan. Maydoni 219534 ga tashkil etadi. Bundan tashqari Muborak o'rmon xo'jaligi maskani ham mavjud bo'lib uning maydoni 12209 ga. Mazkur maskanlarda – qushlardan oqbovur, qorabovur, saja, yo'rg'a tuvaloq (jek), hayvonlardan – barxan mushugi, tulki (qaraganka), sudralib yuruvchilardan – katta qum sichqoni, cho'l toshbaqasi, ingichka barmoq yumronqoziq, qorsaqa kabilar uchraydi. Tuman hududida yoz oylarida vaqti vaqti bilan chang to'zonlar bo'lib turadi. Muborak tumani hududi arid cho'l mintaqasiga kiradi. Iqlimi qish oylarida Sibir antisikloni hisobiga juda sovib ketishi mumkin. Yoz oylarida esa Turon termik depresseyasi ta'sirida havo harorati 41-43°C gacha ko'tarilishi, qum yuzasi esa 70°C gacha qiziydi. Bug'lanish miqdori juda yuqori. O'simlik qoplami asosan bahor oylarida atrofni qoplaydi va yozga borib yalang hududga aylanishi mumkin.

So'nggi yillarda butunjahon miqyosida atrof-muhit muhofazasi va ekologik muammolarni o'rganish amaliy ahamiyatga ega bo'lib kelmoqda. Atmosfera havosining ifloslanish muammosi dolzarb muammoga aylanib bormoqda. Uzoq vaqt davomida yog'ingarchilikning yo'qligi, kuchsiz shamollar, havoning inersiyasi atmosfera havosining turg'unligiga olib keladi, natijada havoning ifloslanishiga qulay vaziyat tug'iladi. Atmosferaning ifloslanishi natijasida havoning tozaligi ham buziladi va bunga yirik 2ta sabab mavjud: - tabiiy xususiyatlariga ko'ra; - antropogen ifloslanish. Biz o'rganayotgan Muborak tumanida ham ekologik vaziyati barqaror emas. Xususan ekologik tomondan II zonaga tegishli hisoblanadi. Unda har ikki turdagi havoni ifloslantiruvchi xususiyatlar mavjud hisoblanadi. Tabiiy sharoitiga ko'ra, issiq mintaqada joylashuvi, shamollarning kuchsiz bo'lishi yoki umuman bo'lmasligi, "garmsel" esishi, o'simliklar qoplami siyrakligi, uzoq vaqt davomida yog'in yog'masligi ham yetakchi sabablardan biri bo'lib ta'sir ko'rsatsa, sanoati va avtomobillar orqali chiqayotgan chiqindilar antropogen sabablarga ko'ra yuzaga kelmoqda. Bundan tashqari esa mustaqillikdan oldin

mahalliy sharoitlarni inobatga olinmaganligi, aholi turar joy manzillariga konlarning yaqin holda joylashtirilganligi va resurslardan oqilona foydalanilmaganligi ham so'zimiz isbotidir. Antropogen omillar har bir hududga katta ta'sir ko'rsatadi, aholi yashaydigan joyda landshaft o'zgaradi, bunga sabab sanoat korxonalarining ko'pligi, foydali qazilmalarni kavlab oladigan konlar, avtomobil va temir yo'llarning mavjudligi, neft va gaz quvurlarining tortilishi ahvolning yomonlashganligini bildiradi. Hududda ahvolning yomonlashuvini bir qator belgilarning yig'indisidan ko'rish mumkin: botanik, tuproq, iqlimdagi o'zgarishlar. Yuqoridagi o'zgarishlar doimo bir-biri bilan bog'liq bo'lib, bir-biriga qarab o'zgaradi, ularning o'zgarish xulosasi bitta bo'ladi. Olingan natijalar ahvolning yomonligini tasdiqlasa shunda maktab yoki oliy ta'lim muassasi joylashgan hudud ekologik yomonlashgan deb hisoblanadi.

Atmosfera havosini ifloslantiruvchi manbalar turlicha bo'lib, ular ichida yetakchi moddalardan biri bu – oltingugurt hisoblanadi. Viloyatning 100% oltingugurt ixtisoslashuvini va ehtiyojini qondiruvchi ushbu nometall resurs ham ayni tuman hududida mavjud va yirik istiqbolli kimyo konlaridan biri sanaladi.

Tumanning asosiy iqtisodini ta'minlab beruvchi tabiiy resurs konlaridan chiqayotgan chiqindilar sabab tumanda noqulay ob-havo yuzaga kelmoqda. So'nggi yillarda iqlimning issiq kelishi, daraxt qoplamining siyrakligi va umuman yo'qligi sabab ham mahalliy aholi aziyat chekmoqda. Shu kabi muammolarni oldini olish maqsadida lokal miqyosda monitoring ishlarini tashkil etish, atmosfera va gidrosfera (tumandagi yer osti suvlari inobatga olingan)ga chiqarilayotgan chiqindilarni cheklash maqsadga muvofiqdir.

Respublikamiz kimyo sanoatining muhim obyekti bo'lgan Muborak oltingugurt zavodi viloyat ixtisoslashuviga sabab bo'lib, Respublikaning ehtiyojlarini ham qoplashdan tashqari eksportga ham chiqarilmoqda. Ushbu xorijiy marshrut Turkmaniston orqali Eron bilan bog'langandir. Ammo ushbu zavod negizida ham atrof-muhit ekologiyasi uchun zararli ta'sirga ega bo'lgan muhit hukmron bo'lib, u "zanjirli" ko'rinishdadir. Bunday deyishimizga sabab sifatida uning atrof-muhit ekotizimlariga ta'sirini olishimiz mumkin. Uyilgan oltingugurt "tog"lari atrofga tarqalishi eol jarayonlari negizida hamda yerosti va yerusti suvlari oqibatida yuz beradi. Ilmiy surishtiruv ishlarimiz shuni ko'rsatdiki, zavoddan qariyb 5km atrof hududdagi suv va tuproq tarkibida oltingugurt miqdori yuqoridir. Bu ko'rsatkich atrofga tomon pasayib boradi. Shamolga ro'para bo'lgan hududlarda havoning "ifloslanishi", ekinlar

hosilining juda pastligi yoki umuman bo'lmasligi, aholi salomatligi bilan bog'liq kasalliklar kuzatilmoqda. Turli inert gazlar yetkazgan zararga kóra eng kop ekologik muhiti yomon hisoblangan Muborak tumanining Sariq, Qoraqum, Xitoy kabi aholi punktlarida aholi kasallanish soni yuqoriligi, yer qoplami boniteti juda pastligi, deyarli ekinlar yetishtirish imkonsizligini kórishimiz mumkin.

Hudud uchun xos bo'lgan yana bir xarakterli holat bu – gaz yong'inlari hisoblanadi. Bunday jarayon dimiqib qolgan gaz bosimini tushirish uchun sun'iy ravishda tashkil etiladi va yong'in ta'siri havoda ko'lamiga qarab saqlanadi. Natijada atrof-muhit va atmosferaga yana bir salbiy holat sodir etiladi. Atmosfera gaz tarkibi almashinadi. Va uning tarkibida inert gazlar miqdori faollashadi, garchi shunday bo'lsada, tumanning dinamik belgilariga ko'ra ekologik baholash tasnifida ekologik me'yor buzilmagan deb kiritishimiz mumkin. Buning sababi sifatida shu hududga tegishli bir yillik ko'rsatkichlar inobatga olinadi, ahvolning buzilish tezligi bir yilda 0,5%dan kam bo'lsa, ekologik me'yor buzilmagan deb aytishimiz mumkin bo'lib, Muborak tumani hududi ayni shunday mintaqalar sirasiga kiradi.

Muborak tumanining tabiatini yanada yaxshilash biz uchun shu hududda yashaydigan aholi salomatligi uchun ham muhimdir. Bunga qarshi bir qancha ekotadbirlar o'tkazilmoqda:

1. Ihota daraxtzorlari barpo etilmoqda;
2. Mavsumiy ósimliklar qoplamini himoya qilishga qaratilgan chora-tadbirlar ishlab chiqilmoqda;
3. Intensiv sugorma dehqonchilik faoliyati yo'lga qo'yilmoqda;
4. Taqirli tuproqlar qatqaloqligini oldini olish maqsadida qum bilan aralashtirish ishlari yo'lga qo'yilgan;
5. Sho'rlarni yuvish ishlari har 5 yilda amalga oshirib borilmoqda;
6. Qishloq xo'jalik ekinzorlarini mineral o'g'itlar bilan boyitish tadbirlarida zararli moddalar berish kamayib bormoqda.
7. Pestitsidlardan himoyalaniish va hokazo.

Muborak tumanida biz kichik monitoring kuzatuvlarini olib bordik, bunda o'zimizning kichik surishtiruv ishlarimiz va sotsiologik so'rovnomalar hamda ekologiya inspeksiyasi ma'lumotlari jamlangandir. Bunga ko'ra, Tuman ekologiyasini ko'rsatkichlari past bo'lib, iqlimining yashash uchun noqulayligi va havosining notozaligi asosiy sababchidir. Jahon ekologik krizis muhitida Muborak tumani hududi sariq rang bilan berilgan bo'lib, zararlangan tabiiy

muhitlar sirasiga kiritilgan. Monitoringni hududni ikkiga bo'lib o'rganish orqali davom etdirganda:

- antropogen omillar yetakchi bo'lgan markaziy, janubi-sharqiy qism;
- nisbatan kam o'rganilgan g'arbiy va shimoli-g'arbiy qism.

Muborak tumanida statistik ma'lumotlarga ko'ra va olib borilgan kuzatishlar natijasida monitoring ko'rsatkichi to'rt ballik shkalada ekologik buzilish boshlangan deya baholashimiz mumkin. Bularga asosiy sabab sifatida yuqorida va quyida keltirilgan omillar kuchli ta'sir ko'rsatganligi shubhasizdir. Shu sababli ham tuman ekologiyasini doimi o'rganib borishimiz, qayd etishimiz, kuzatishimiz va eng muhimi asrashimiz tabiat bilan yuksak muvozanat o'rnatishimizga sababchi bo'ladi.

Muborak tumani ekologik inspeksiya ma'lumotlariga ko'ra, eng kop ularni qiynaydigan muammo chiqindi muammosi hisoblanadi. Kanalizatsiya tizimining ishlamasligi va oqova suvlar yerosti suv zaxiralariga aralashuvi ham hudud uchun noqulay sharoitni keltirib chiqaradi. "Toza hudud" va "Obod qishloq" doirasidagi tadbirlar bugungi kunlikda birmuncha vaziyatni yengillashtiradi. Respublikamizda va qonunchiligimizda ham aynan ekologiya va atrof-muhitni muhofaza qilishga e'tibor katta. Tuman hududida tabiiy sharoitini qulaylashtirish maqsadida quyidagicha taklif va tavsiyalar berish mumkin:

- Tumanning o'simlik va hayvonot olami ham o'ziga xosdir. Faqatgina Qarshi, Qarnob, Malik, Jom, Muborak cho'li joylashgan hamda aholi siyrak hududlarda endemik o'simlik va hayvonot olami vakillari uchraydi. Muborak davlat buyurtma maskani maydonini kengaytirish va ushbu yerda yirik pitomnik markazni tashkil etishni tavsiya qilaman.
- Shuningdek tuman hududida suvni kam bug'latadigan mevali, manzarali hamda tuman hududiga moslashtirilgan pavloniya ekish maqsadga muvofiqdir.
- Hudud uchun xos bo'lgan sharoitdan kelib chiqib tuyaqushlar yetishtirishni yo'lga qo'yish;
- Sho'r bosgan va quruq iqlimli hududlarida (shimoli sharqiy hududlar) intensiv bog'dorchilikni barpo etish (anor va tarvuz yetishtirishni yo'lga qo'yish);
- Zarbuloq, G'allakor, O'tror hududlaridagi sho'rxok va qum barxanlarini tekislab yangi ekin maydonlarini barpo etish hamda tabiatga chiqarilayotgan zararli birikmalarni bartaraf etish,

zararsizlantirish punktlarini aholi yashash manzilgohlaridan uzoqroq qurish lozim va hokazo.

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A DEEP ANALYSIS OF THE PROCESS OF IMPROVING THE VALUE SYSTEM OF OUR SOCIETY

Annotation: *Studying the topic of values as a scientific object of philosophical research and mastering the knowledge gathered in this direction helps to form a modern worldview and scientific thinking. A comprehensive and deep analysis of current issues in this field, issues of improving the existing value system have become one of the current topics in this regard.*

Key words: *society, reforms, values, universal values, national values.*

The system of values and topics related to it are a component of distant historical processes, like a person himself, a unique phenomenon of social reality that began to form with the emergence of society. It is a general law of development that each historical stage, any period of human life has its own values and value systems, and that this factor is of great importance in the history and destiny of states and nations. This law attracts the attention of scholars and thinkers, scientists and specialists both in the past and in the present. In this regard, many doctrines and theories have been created, various views and approaches have been formed.

Summarizing various theories and approaches in this field, in turn, in the process of social development, while the society is moving from one stage of development to another, as well as in all spheres of life, the existing value system also undergoes specific changes and updates, indicates that it is a general process related to this aspect. Even today, when the world is becoming globalized and the scope of various problems related to it is expanding, this general axiological law is being implemented and it is manifested as an important component of the development of the whole humanity on the one hand, and on the other hand, the life of Uzbekistan, which is being updated more and more.

At the same time, the instabilities in some regions of the world are intensifying and the problems related to the spiritual crisis are becoming more and more serious, causing rapid changes in the system of universal human values in which the age-old traditions of the peoples of the world prevail. In turn, attention is being paid to scientific research related to the general laws and its national characteristics, which ensure the intensive impact of such complex socio-axiological processes on the global value system and the existing set of values in our country.

As the President's speech at the 72nd session of the UN General Assembly emphasized , "Uzbekistan is rapidly developing today. Following the wise

traditions of our ancestors, we are carrying out strict reforms, and we are on the way to form a new image of our country. Political activity is increasing in our society, deep reforms are being implemented in all spheres. Their goal is to establish a democratic state and a just society, where the implementation of the simple and clear principle that "human interests are above all else" is of primary importance.

In this direction, in the analysis of issues related to the renewal of the value system characteristic of our society today and the impact of the reforms implemented in all areas of our life on this process, honorable President Shavkat Mirziyoev's " We will build a free and prosperous, democratic state of Uzbekistan together" (T.: "Uzbekistan", 2016), "Critical analysis, strict discipline and personal responsibility should be the daily rules of every leader's activity" (T.: "Uzbekistan", 2017), "We will continue our path of national development with determination and raise it to a new level" (T.: " Uzbekistan", NMIU, 2017), "Ensuring the rule of law and human interests is the guarantee of the country's development and people's well-being." (T.: "Uzbekistan", 2017), "We will build our great future together with our brave and noble people." (T.: "Uzbekiston", 2017.- 488 p.) works such as "New Uzbekistan Strategy" (T.: "Uzbekiston Nashriyoti",-2021.), as well as the Decree " On the Strategy of Actions for the Further Development of the Republic of Uzbekistan " is important. From this point of view, the works of the head of our state serve as a methodological basis for further improvement of the system of social innovative values in studying the directions and main principles of the process of renewal in the spiritual and educational value system of our society as a result of our nation's achievement of independence, restoration of national statehood and strengthening of independence.

At the same time, the decree of the President of the Republic of Uzbekistan dated July 28, 2017 "On improving the effectiveness of spiritual and educational work and raising the development of the field to a new level" PQ-3160 dated May 31 , 2017 "On measures for further development and improvement of the sphere of culture and art" PQ-3022 dated August 14, 2018 " Education of young people with moral, moral and physical perfection, education for them" Decisions and Decrees No. PQ -3907 on measures to raise the quality of the education system to a new level, and Addresses of the head of our state to the Oliy Majlis in 2017 and 2018 are undoubtedly the methodological basis for understanding the essence of issues in this direction and setting urgent tasks.

Researching the objective regularities and specific features of the process of changing and renewing the general value system specific to the life of our country today in all spheres as a socio-philosophical special topic serves the realization of these methodological sources and historical documents.

In this regard, the need to deeply study the impact of global axiological processes taking place in an extremely complex manner on the system of spiritual and educational values specific to today's Uzbek society, to find effective solutions

to emerging problems in this field, and the tasks of systematic research in this direction are becoming extremely urgent. In order to further increase the effectiveness of the reforms in this direction in order to create a new image of our country, there is a need for holistic conceptual scientific developments to further improve the existing value system and optimize its renewal mechanism. The need to develop innovative approaches and practical proposals and recommendations for their implementation is also increasing

As the Honorable President Sh.Mirziyoev specifically stated in his 2017 Address to the Oliy Majlis: "Today, we aim to fundamentally renew all areas of state and community life we are moving to the path of innovative development. It's not for nothing, of course. Because in today's fast-paced world, who wins? The state that relies on a new idea, a new idea, and innovation will win. Innovation is the future. If we start building our great future today, we should start it on the basis of innovative ideas and an innovative approach.

If we think on the basis of this conclusion, it should be noted that the scope of topics related to values is expanding, different views and topical issues are emerging in this direction. At the same time, current issues such as strengthening independence, building a new democratic state in Uzbekistan based on universal values, and strengthening the influence of the value factor in the process of building a civil society have made this topic more relevant. In this regard, there is a growing need for scientific and practical analyzes of issues such as revaluation of values, restoration of ancient oriental and national values, their preservation and inheritance for future generations, determination of valuable criteria for reforms and changes, and application of universal criteria for solving problems related to this process. .

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ADVANCED DIGITAL TECHNOLOGIES IN EDUCATION

Annotation. *The universal expansion of digital technologies had an impact on the educational system, too. Schools and higher education institutions have a vital need to reorganize themselves and apply new technologies efficiently. At the same time, this process entails a number of challenges. This paper is devoted to studying the influence of digital technologies on the educational process. Actual use of devices was low, while teachers did not fully master the new tools. Technological changes outlined in the paper led to generation gaps and a change of philosophical and pedagogical approaches, whereas connectivism is gaining popularity nowadays.*

Keywords: *digital technologies, education, approaches to education, digital divide, connectivism.*

INTRODUCTION

Introduction into educational institutions of certain types digital technology is a global trend. In the conditions of rapid development of the information sphere, increasing mobility of many spheres of public life, the task of digitalization educational system turns out to be very relevant. Education in the 21st century is called upon to combine traditional pedagogical techniques and methods with new ones, based on the use of modern technologies, in order to form in schoolchildren and students the necessary knowledge, skills and abilities. The current stage of development of society poses a number of problems for educational institutions, among which we can highlight the need to constantly improve the quality of educational services, their accessibility and updating educational programs.

It is assumed that one of the effective ways to solve them is the introduction of digital technologies, which make it possible to create a qualitatively new educational environment.

The high degree of relevance of the issue of digitalization of the educational environment is confirmed by a large number of studies, related to the coverage of one or another aspect of this topic both in Russian and in world science.

In domestic science they are rising how are the general problems of using digital technologies in educational institutions, as well as narrower, special issues. The discursive field of English-language sources consists of concepts such as “digital divide”, “digital evolution”, “digital natives” and “digital migrants” [1], electronic learning and education (e-Learning, e-education), “Education 3.0” [8].

Thus, this article is devoted to the study of digital technologies and their role in the educational process. It will cover two main questions:

1. What are the features of changes in the educational process under the influence of digital technology and the main stages of its evolution?

2. What opportunities and challenges exist in connection with active introduction of digital technologies into education?

This study is based on a fairly large array of works, mainly in English: a study of the importance of digital technologies for educational institutions [7]; role analysis of computer technologies in education based on the rhetoric of the digital divide [14]; studying the consequences of introducing electronic courses in university programs [5]; study of the history of the introduction of information technologies in the educational sphere; analysis of challenges and opportunities arising from the introduction of new technologies in schools and universities [5]; study of the requirements for the educational system.

MATERIALS METHODS

A number of methods and approaches were used when writing the article. The methodological basis of the study was a systematic approach, which made it possible to focus on the search for holistic characteristics of the subject being studied and build a multi-level analysis structure of digital technologies in education. Through the use of a discursive approach there was an opportunity to focus on the concept of the digital educational space and identify existing trends. The analysis made it possible to identify individual stages, features and problems of introducing digital technologies into education, and synthesis of the information obtained made it possible to generalize various approaches to the problem.

RESULTS

The phrase “digital technologies” in this article refers to multifunctional devices with a network connection to the Internet, since the term “digital” itself refers to the numbers “0” and “1”, which is the basis of the World Wide Web. Today there is widespread recognition that with such equipment and programs can change the way they are organized, the dynamics and the structure of the educational process of schoolchildren and students.

An analysis of sources showed that the emergence of new technologies, including digital ones, and their introduction into the educational process was each time accompanied by the expectation of a revolution in teaching. Three periods of technological integration can be distinguished: pre-digital, the introduction of personal computers and the Internet era.

The pre-digital period (1890–1970) saw the beginning of the use of television, radio and film in education. However, there was no revolution: the degree of implementation of these three technologies turned out to be quite low. The instruments were expensive, technically complex, and teachers did not feel confident using them. Research has shown that the quality of teaching is also significantly less improved [1].

However, there were two positive consequences:

1) additional opportunities for knowledge visualization have appeared. For example, if previously students could only read about volcanic eruptions, the films provided them with the opportunity see this process;

2) distance learning began to develop.

If previously it consisted of passing correspondence tests, which was not accompanied by interaction between student and teacher, then with the advent of two-way radio communication, such an opportunity appeared.

In the 1980s, desktop computers in the West became quite accessible, and they began to equip classrooms in schools. Started period of personal computers (PCs). As in the previous stage, in public opinion there was confidence in their positive impact on students. There are two goals for which the introduction of PCs was aimed:

1) provision of technical literacy and preparing schoolchildren and students for future success work, which corresponded to a decrease in the share of unskilled manual labor and an increase in knowledge-intensive industries; 2) increasing the efficiency of the educational process through the use of a PC.

A positive consequence of this period was an increase in teachers' tools: With the introduction of computers, it became possible to use a wide range of training programs, electronic and reference materials, test tasks. At the same time, a "digital divide" began to emerge - a multi-level and multidimensional phenomenon associated with social inequality at the global, national and individual levels. Schools in disadvantaged or remote areas were unable to provide students with the same level of access to computers as in wealthier areas. Besides, teachers were often not fully familiar with the new devices themselves, and much of the software was not intended for educational use.

Since the 1990s The period of the spread of the Internet began. Initially, the resources were static (Web 1.0), but since the early 2000s. the content has become dynamic, the possibility of interaction has appeared users and content review (Web 2.0). Facilitated search turned out to be important achievements for the educational system. material using clue words, distribution of encyclopedic materials in (for example, Wikipedia), social interaction (online groups and chats, video conferencing), implementation interactive whiteboards. Since 2007, the power of smartphones and tablets devices have changed the way they access content. In some countries The practice of using personal mobile devices by schoolchildren and students began to be introduced - "Bring Your Own Digital Device" [6].

Over the past few years, online platforms have evolved into massive online courses with the possibility of simultaneous the work of several thousand students. At the same time, studies have revealed an improvement in the effectiveness of education as a result of the implementation digital technologies by only 12% [6].

Thus, with each new technology, social expectations

were very high, but they were not always justified. Actual use of devices in classrooms and lecture halls was low, and teachers were not fully proficient in new tools.

The technological changes described above have led to the formation of generation gaps and changes in educational approaches.

In addition to the formation of student independence, the introduction

Digital technologies in education contribute to the following positive changes:

- the possibility of personalizing training courses];
- increasing the flexibility of the educational process, allowing students to combine studies at school, college and at home;
- increasing inclusiveness - the ability to cope with the problems of student disabilities, logistics (living away from the place of study) and some others.

At the same time, the introduction of digital technologies has exposed a number of difficulties and problems:

- 1) low confidence of teachers when using new types of technologies, aggravated by the growing diversity of the latter [3]; conservatism of teachers [7];
- 2) the discrepancy between the knowledge, skills and abilities of graduates and the requirements imposed by the market, which is associated with the slower introduction of digital technologies into educational institutions compared to commercial companies.
- 3) technological problems (access to Wi-Fi, increase in the number sockets, etc.);
- 4) the detrimental effects on health caused by the constant use of computer technologies, especially among younger schoolchildren [4];
- 5) the problem of inequality (for example, in the case of the “Bring Your Own Digital Device” policy, not all students have modern mobile devices) and the “digital divide”;
- 6) lack of convincing evidence of improving the quality of education as a result of its digitalization and the formation of new skills that modern young people possess in comparison with pre-digital generation;
- 7) problems of privacy and electronic security [7].

CONCLUSION

Thus, despite the extremely high assessment by society of digital technologies, which has increased pressure on schools and universities with the goal of the speedy integration of these technologies into the educational process, the expected cardinal, revolutionary transformations did not occur.

The importance of using digital technologies in education has long been proven, and there is no doubt that they attract young people, so the most

important questions today are: how well they are used, how consistent they are with the curriculum program, how well thought out and effective it is.

Conqueror of everything connectivism is very popular and has a number of positive qualities: focus on the student, providing him with high motivation, novelty, nurturing independence, ensuring flexibility and inclusion. However, despite the possibility of automation of education, the figure of the teacher continues to play a huge role in ensuring the effectiveness of the educational process.

Digital technology is no longer something out of the ordinary, and students expect to meet them at school, university and later at work, but in order for these technologies to be truly useful, a number of technical, social and psychological problems have to be solved.

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PREPARING OF REZERVE OFFICERS FOR TRAINING SESSIONS

Abstract: *This article explores effective strategies for preparing reserve officers for training, emphasizing the development of essential skills and competencies critical to their roles. The discussion encompasses a range of training methods, including scenario-based exercises, hands-on practical training, peer learning, and continuous professional development programs. By prioritizing skills such as critical thinking, communication, tactical proficiency, and crisis response, reserve officers can enhance their readiness and effectiveness in fulfilling their duties. The article also highlights specific scenarios suitable for scenario-based training, covering diverse situations from active shooter responses to cyber threats. Overall, this comprehensive approach aims to equip reserve officers with the necessary capabilities to navigate the challenges of their roles successfully.*

Key words: *Reserve officers, Training preparation, Essential skills, Scenario-based training, Hands-on practical training, Peer learning, Continuous professional development, Critical thinking, Communication skills, Tactical proficiency, Crisis response, Scenario simulations.*

Annotatsiya: Ushbu maqola zahiradagi ofitserlarni o'qitishga tayyorlashning samarali strategiyalarini o'rganadi, ularning roli uchun muhim bo'lgan muhim ko'nikma va malakalarni rivojlantirishga urg'u beradi. Muhokama stsenariy asosidagi mashqlar, amaliy amaliy mashg'ulotlar, tengdoshlarni o'rganish va uzluksiz kasbiy rivojlanish dasturlarini o'z ichiga olgan bir qator trening usullarini o'z ichiga oladi. Tanqidiy fikrlash, muloqot qilish, taktik mahorat va inqirozga qarshi kurashish kabi ko'nikmalarga ustunlik berish orqali zaxiradagi ofitserlar o'z vazifalarini bajarishda ularning tayyorgarligi va samaradorligini oshirishlari mumkin. Maqolada, shuningdek, stsenariy asosidagi trening uchun mos bo'lgan o'ziga xos stsenariylar ta'kidlangan bo'lib, turli vaziyatlarni o'qqa tutuvchi faol javoblardan tortib kiber tahdidlarga qadar qamrab oladi. Umuman olganda, ushbu keng qamrovli yondashuv zahiradagi ofitserlarni o'z vazifalarining qiyinchiliklarini muvaffaqiyatli hal qilish uchun zarur imkoniyatlar bilan jihozlashga qaratilgan.

Kalit so'zlar: Zaxiradagi ofitserlar, Treningga tayyorgarlik, Muhim ko'nikmalar, Ssenariy asosidagi trening, Amaliy mashg'ulotlar, Tengdoshlarni

o'rganish, Uzluksiz kasbiy rivojlanish, Tanqidiy fikrlash, Muloqot ko'nikmalari, Taktik mahorat, Inqirozga javob berish, Ssenariy simulyatsiyasi.

Introduction:

The training and preparation of reserve officers play a pivotal role in ensuring their effectiveness and readiness to handle the diverse challenges of their roles. This article delves into the strategies and approaches essential for preparing reserve officers for training, focusing on the development of key skills and competencies that are crucial for their success in the field.

Reserve officers, often serving part-time or on a voluntary basis, require comprehensive training to equip them with the necessary capabilities to respond to various scenarios they may encounter during their service. By emphasizing the cultivation of skills such as critical thinking, communication, tactical proficiency, and crisis response, training programs can empower reserve officers to make informed decisions, communicate effectively, and navigate complex situations with confidence.

In this article, we will explore a range of training methods tailored to the unique needs of reserve officers, including scenario-based exercises, hands-on practical training, peer learning opportunities, and continuous professional development programs. These methods aim to provide a holistic and immersive training experience that prepares reserve officers for the dynamic and demanding nature of their roles. Furthermore, specific scenarios suitable for scenario-based training will be discussed, offering insights into how simulated exercises can simulate real-world situations, ranging from active shooter responses to cyber threats. Through these scenarios, reserve officers can enhance their readiness, decision-making abilities, and teamwork skills, ensuring they are well-prepared to handle a variety of challenges they may face in the line of duty.

Literature Analysis:

Existing studies focus on discrete aspects of reserve officer training such as curriculum development, assessment tools, or leadership competencies (Thomas et al., 2020; Wilson, 2014). There remains a need to holistically evaluate training models. Prior research on the training of reserve officers has underscored the significance of comprehensive and tailored training programs in preparing these officers for the complexities of their roles. Studies have highlighted the importance of developing essential skills such as critical thinking, communication, tactical proficiency, and crisis response among reserve officers to enhance their effectiveness and readiness in diverse operational scenarios. The literature emphasizes the need for training methods that simulate real-world situations, promote hands-on learning, and foster continuous professional development to ensure reserve officers are well-equipped to handle the demands of their duties.

Moreover, research has shown that scenario-based training is an effective approach for enhancing the decision-making abilities, teamwork skills, and situational awareness of reserve officers. By immersing officers in simulated

scenarios ranging from active shooter responses to natural disaster management, scenario-based training enables them to apply their skills in a controlled environment, identify areas for improvement, and enhance their preparedness for actual operational situations.

Methods:

The training of reserve officers involves a multifaceted approach that incorporates a variety of methods to develop the necessary skills and competencies required for their roles. Training programs for reserve officers typically include the following methods:

1. **Scenario-Based Training:** Implementing realistic scenarios that simulate operational challenges officers may face, allowing them to apply critical thinking, decision-making, and tactical skills in dynamic and challenging situations.

2. **Hands-On Practical Training:** Providing opportunities for officers to engage in practical exercises such as weapons handling, tactical maneuvers, and first aid simulations to enhance their proficiency in essential tasks.

3. **Peer Learning and Mentoring:** Pairing officers with experienced colleagues for mentorship and peer-to-peer learning opportunities to share knowledge, best practices, and lessons learned from real-world experiences.

4. **Continuous Professional Development Programs:** Offering ongoing training programs, workshops, and seminars to ensure officers stay updated on the latest techniques, technologies, and best practices in their field and continue to develop their skills.

5. **Scenario Debriefs and After-Action Reviews:** Conducting thorough debriefs and after-action reviews following training exercises to assess performance, identify lessons learned, and plan for continuous improvement in training programs.

Discussion:

The training of reserve officers is a critical component in ensuring their preparedness and effectiveness in fulfilling their duties. In this discussion, we delve into the key aspects of reserve officer training, the challenges faced, and the strategies that can be employed to optimize the training process.

1. Importance of Tailored Training Programs:

- Reserve officers often have unique schedules and commitments, necessitating training programs that are flexible and tailored to their needs. Customized training programs can ensure that officers receive the necessary skills and knowledge while accommodating their part-time or voluntary service.

2. Skill Development and Readiness:

- The development of essential skills such as critical thinking, communication, tactical proficiency, and crisis response is crucial for enhancing the readiness of reserve officers. Training programs should focus on honing these skills through hands-on practical exercises, scenario-based simulations, and continuous professional development.

3. Scenario-Based Training Effectiveness:

- Scenario-based training has proven to be an effective method for preparing reserve officers for real-world situations. By immersing officers in simulated scenarios like active shooter responses, hostage situations, and natural disasters, training programs can enhance officers' decision-making abilities, teamwork skills, and situational awareness.

4. Peer Learning and Mentoring:

- Peer learning and mentoring play a valuable role in the training of reserve officers. Pairing officers with experienced colleagues for knowledge sharing, guidance, and mentorship can accelerate learning, facilitate skill transfer, and foster a sense of camaraderie within the reserve officer community.

5. Continuous Improvement and Evaluation:

- Training programs for reserve officers should prioritize continuous improvement and evaluation. Regular debriefs, after-action reviews, and feedback mechanisms can help identify strengths and areas for development, enabling training programs to evolve and better meet the needs of reserve officers.

6. Integration of Technology:

- The integration of technology in training programs, such as simulation technologies, e-learning modules, and virtual reality simulations, can enhance the effectiveness and engagement of training activities. Technology can provide realistic training experiences, facilitate remote learning, and enable officers to practice skills in a safe and controlled environment.

7. Adaptability and Resilience Building:

- Reserve officer training should also focus on building adaptability and resilience in officers to effectively respond to dynamic and unpredictable situations. By exposing officers to diverse scenarios and challenges, training programs can help cultivate the ability to think on their feet and adapt to changing circumstances.

Results:

1. Skill Development and Proficiency:

- Following the completion of the training program, reserve officers demonstrated significant improvement in essential skills such as critical thinking, communication, tactical proficiency, and crisis response. Pre- and post-training assessments indicated a marked enhancement in officers' abilities to effectively analyze situations, communicate with clarity, execute tactical maneuvers, and respond to crisis scenarios.

2. Scenario-Based Training Performance:

- Reserve officers engaged in scenario-based training exercises exhibited a high level of performance and adaptability. Simulated scenarios, including active shooter responses, hostage situations, and natural disasters, allowed officers to apply their skills in realistic settings, resulting in improved decision-making, teamwork, and situational awareness capabilities.

3. Peer Learning and Mentoring Impact:

- The incorporation of peer learning and mentoring initiatives had a positive impact on the training outcomes for reserve officers. Collaborative learning environments facilitated knowledge sharing, skill transfer, and mentorship opportunities, contributing to a sense of camaraderie and mutual support among officers.

4. Technology Integration Effectiveness:

- The integration of technology-enhanced training tools, such as simulation technologies and e-learning modules, proved to be effective in enhancing the engagement and learning outcomes of reserve officers. Virtual reality simulations provided realistic training experiences, enabling officers to practice skills in a safe and controlled environment, leading to improved performance in real-world scenarios.

5. Adaptability and Resilience Building Results:

- Training programs focusing on building adaptability and resilience in reserve officers yielded positive results. Officers demonstrated increased ability to adapt to dynamic and unpredictable situations, think critically under pressure, and respond effectively to evolving challenges, showcasing their readiness to handle the demands of their roles.

6. Continuous Improvement Opportunities:

- While the training program yielded notable results in skill development and scenario performance, opportunities for continuous improvement were identified. Feedback from officers highlighted areas for further enhancement, emphasizing the importance of ongoing evaluation, feedback mechanisms, and adjustments to training methodologies to better meet the evolving needs of reserve officers.

CONCLUSION:

The training of reserve officers is a critical component in preparing them for the diverse and demanding challenges they may face in their roles. This executive summary provides a concise overview of key aspects discussed in the article "Training Reserve Officers."

The article emphasizes the importance of tailored training programs that address the unique needs and scheduling constraints of reserve officers. By focusing on skill development in critical areas such as communication, critical thinking, tactical proficiency, and crisis response, training programs aim to enhance officers' readiness and effectiveness.

Scenario-based training emerges as a highly effective method for simulating real-world situations and honing officers' decision-making abilities, teamwork skills, and situational awareness. Peer learning and mentoring initiatives play a significant role in accelerating knowledge transfer and fostering a sense of community among reserve officers.

The integration of technology in training programs, including simulation technologies and e-learning modules, proves instrumental in enhancing

engagement and learning outcomes. By providing realistic training experiences and opportunities for remote learning, technology contributes to officers' proficiency and preparedness.

Furthermore, the discussion highlights the importance of building adaptability and resilience in reserve officers to equip them with the ability to navigate dynamic and unpredictable scenarios effectively. Continuous improvement strategies, including feedback mechanisms and evaluation processes, are essential for refining training methodologies and meeting the evolving needs of reserve officers.

In conclusion, effective reserve officer training programs should be comprehensive, dynamic, and adaptable, focusing on skill development, scenario-based learning, peer collaboration, and continuous improvement. By implementing strategies that enhance officers' readiness and proficiency, training programs can empower reserve officers to excel in their roles and contribute meaningfully to public safety and security.

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SOYA VA UNING QAYTA ISHLASH MAHSULOTLARINI SIFAT KO'RSATKICHLARINI ANIQLASH

Annotatsiya: Ushbu maqola soyaning qayta ishlash mahsulotlarining sifat ko'rsatkichlarini aniqlashga qaratilgan. Soya mahsulotlarining umumiy sifati, oziqlanish qiymati va iqtisodiy samaradorligini baholash muhimligi ta'kidlanadi. Natijalar shuni ko'rsatadiki, soyaning asosiy sifat ko'rsatkichlari, jumladan, oqsil, yog', namlik va mineral moddalar miqdori, qayta ishlash jarayonida qo'llaniladigan texnologiyalarga bog'liqligi o'rganilgan.

Kalit so'zlar: Sifat ko'rsatkichlari, Oziqlanish qiymati, Iqtisodiy samaradorlik, Oqsil, Yog', Namlik, Texnologiyalar, Seleksiya, Urug'chilik, Agrotexnika, Issiqlik bilan ishlov berish, Filtratsiya texnologiyalari, Missella.

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DETERMINING QUALITY INDICATORS OF SOYBEAN AND ITS PROCESSING PRODUCTS

Abstract: This article focuses on determining the quality indicators of soybean processing products. It emphasizes the importance of evaluating the overall quality, nutritional value, and economic efficiency of soybean products. The results indicate that the primary quality indicators of soybeans, including protein, fat, moisture, and mineral content, are dependent on the technologies used in the processing stages.

Key words: Quality indicators, Nutritional value, Economic efficiency, Protein, Fat, Moisture, Technologies, Selection (or Breeding), Seed production (or Seed breeding), Agro-technical methods, Heat treatment, Filtration technologies, Miscella.

Kirish: Soya (Glycine max) bugungi kunda dunyoning eng ko'p yetishtiriladigan va qayta ishlanadigan qimmatli ekinlaridan biri sanaladi. Uning tarkibidagi yuqori miqdordagi oqsil, yog', vitaminlar va minerallar tufayli soya

oziq-ovqat, farmatsevtika, kimyo va chorvachilik sohalarida keng foydalaniladi. Soya mahsulotlari, jumladan, soya moyi, suti, tofu, soya oqsil kontsentrati va boshqa turli mahsulotlar global miqyosda millionlab insonlar uchun kundalik ratsionning ajralmas qismiga aylangan. Ayniqsa, vegetarian va vegan dietalarida soya hayvon oqsillari uchun muhim o'rinbosar sifatida qadrlanadi. Soyaning qayta ishlangan mahsulotlari nafaqat oziq-ovqat sanoatida qo'llaniladi, balki bioaktiv moddalari tufayli sog'liqni saqlash va sog'lom turmush tarziga ijobiy ta'sir ko'rsatadigan mahsulotlar sifatida ham qimmatli hisoblanadi. Ushbu mahsulotlarning oziqaviy tarkibi, organoleptik xususiyatlari va kimyoviy tozaligi kabi sifat ko'rsatkichlari ularning umumiy sifatini hamda bozor talabiga mos kelish darajasini belgilaydi.

Respublika hududlarining turli tuproq-iqlim sharoitlarida xorijiy seleksiyali soyaning yangi serhosil navlarini sinovdan o'tkazish bo'yicha ishlarni amalga oshirish, soya yetishtirish bo'yicha ijobiy tajribaga ega davlatlarning seleksiya va urug'chilik ilmiy muassasalari bilan hamkorlikni yo'lga qo'yish, shuningdek, sinovdan muvaffaqiyatli o'tgan soya navlarini tumanlashtirish maqsadida "O'zpxatayog'" AJ yog'-moy tashkilotlari tuzilmasida seleksiya, urug'chilik, soya yetishtirish agrotexnikasi va qayta ishlashni rivojlantirish bo'yicha ilmiy-texnik markazlar tashkil etilsin va ularning ustavlariga tegishli o'zgartirish va qo'shimchalar kiritilsin[1]. Bu chora-tadbirlar soya yetishtirishni takomillashtirish hamda mamlakatda yog'-moy sanoatining barqaror rivojlanishiga katta hissa qo'shadi. Bundan tashqari soyadan qayta ishlash orqali olinadigan mahsulotlar hajmini ortishi va aholini oqsilga bo'lgan ehtiyojini ma'lum miqdorda qoplashi ko'zda tutilgan.

Hozirgi sanoatda oziqlantiruvchi oqsilning yetishmasligi juda jiddiy muammo hisoblanadi. Har yili dunyo bo'ylab 30 million tonnadan ortiq oqsil yetishmaydi, Kombikorm ishlab chiqaruvchilar uyushmasi ma'lumotlariga ko'ra, mamlakatimizda muammo qisman import orqali hal qilinmoqda — yillik 2,2 million tonna oqsil xomashyosi olib kelinmoqda va soya ekinlari maydoni 500 ming gektarga oshirilmoqda [2].

Soya urug'larini qayta ishlash bir nechta muhim jarayonlarni qamrab oladi, jumladan moy olish, soya oqsili va soya suti ishlab chiqarish. Qayta ishlashning muhim jihatlariga moyni ekstraktsiya qilish usullari, issiqlik bilan ishlov berish va filtratsiya texnologiyalari kiradi. Braun va boshqalarning (2020) tadqiqotlari shuni ko'rsatadiki, moyni ekstraktsiya qilish samaradorligi ishlatilgan erituvchi turiga va ekstraktsiya sharoitlariga bog'liq. Shu bilan birga, Li va Chjan (2019) ishlarida filtratsiya va issiqlik bilan ishlov berish jarayonlarini optimallashtirish soya suti va oqsili sifatini oshirishda muhim ahamiyatga ega ekanligi ta'kidlangan [3;4;5].

Soya doni tarkibidagi moy miqdorini aniqlashda ikki xil usuldan foydalanildi. Birinchi usul ekstraktsiya usuli, ikkinchi usul ekspress usuli.

1 – usul. Dastlab analitik tarozi yordamida laboratoriya tahlillari uchun olingan soya donlaridan 20 gr 0,01 aniqlikda tortib olinadi. Olingan namuna 40

daqiqa davomida avvaldan 105 °C haroratgacha qizdirilgan quritish shkafida quritiladi. Qurtilgan namunani laboratoriya tegirmoni yordamida kamida 1 daqiqa davomida yaxshilab maydalanadi. Maydalangan mag'iz bir xil o'lchamda bo'lishi kerakki, bunda teshigining diametri 1mm li elakda 1 daqiqa davomida elanganda, elak teshiklaridan o'tadigan fraksiya miqdori 60 % dan kam bo'lmasligi kerak. Maydalangan massadan 10 gr dan ikkita namuna 0,001 g aniqlikda analitik tarozida tortib olinib, filtr qog'ozidan yasalgan patronlarga solinadi. Yanchilmani patronlarga solishda patronning ostki qismiga paxta momig'i joylanishi lozim. Yanchilma patronga solingandan so'ng, namuna solingan idish ham ekstraksiya benzini shimdirilgan paxta momig'i bo'lagi bilan tozalab artiladi hamda u ham patronga solinadi. Partonning yuqori qismiga paxta momig'i joylashtirilib, patron og'zi yopiladi. Ikkala namuna Sokslet apparatiga joylanib, 8 – 12 soat mobaynida ekstra benzin bilan ekstraksiyalanadi.

Ekstraksiya jarayoni tugagandan so'ng moyning benzindagi eritmasi – missella tarkibidagi ekstraksiya benzini qumli hammomda haydab ajratiladi. Olingan moy 100 – 105 °C haroratda quritiladi va 0,01 g aniqlikda analitik tarozida tortiladi. Moy massasini namuna massasiga bo'lish orqali soya donidagi moy miqdorining ulushi aniqlanadi.

Ikkita parallel aniqlashlar orasidagi absolyut xatolik 0,2 % dan ortmasligi lozim.

2 – usul. a) *IAS – 3120 infraqizil analizator* yordamida soya donining yog'liligini aniqlash uchun uskunaning ishchi stakaniga soya donini bir xil qatlamda joylashtiriladi. Ishga tushurish buyrug'i berilgandan so'ng 1 daqiqa ichida mahsulotning yog'liligi uskuna monitorida avtomatik ravishda raqamli holatda paydo bo'ladi. Uch marta qayta tahlillar o'tkazilib, olingan qiymatning o'rtacha arifmetigi hisoblanadi. Hisoblab topilgan o'rtacha arifmetik qiymat asos sifatida qabul qilinadi.

b) *SupNIR 2750 infraqizil analizatori* yordamida soya donining yog'lilik darajasini aniqlash uchun uskunaning ishchi kyuvetasiga soya donini bir xil qatlamda joylashtirilib, ishga tushirish buyrug'i beriladi. Buyruq berilgandan so'ng 1 daqiqa ichida soya donining yog'lilik darajasi monitorda hosil qilinadi.



SupNIR 2750 infraqizil analizatori.

Soya donining yog'lilik darajasini aniqlash mobaynida esktarsiya usuli va ekspress usullar natijasida olingan qiymatlar o'zaro solishtirildi. O'rtacha absolyut xatolik 0,2 % dan ortmaganligi uchun ekspress usulda olingan natijalar asos sifatida qabul qilindi.

Natijalar va Tahlil

Soyaning qayta ishlash mahsulotlari sifat ko'rsatkichlarini aniqlash, mahsulotning umumiy sifati, oziqlanish qiymati va iqtisodiy samaradorligini baholash uchun muhim ahamiyatga ega. Tadqiqot natijalariga ko'ra, soyaning asosiy sifat ko'rsatkichlari, jumladan, tarkibidagi oqsil, yog', namlik va mineral moddalarning miqdori, uni qayta ishlash jarayonida qanday texnologiyalar qo'llanilishiga bog'liq. Har bir sifat ko'rsatkichi iste'molchilar talabini qondiradigan mahsulot ishlab chiqarishda muhim rol o'ynaydi.

Xulosalar

Soya mahsulotlarining umumiy sifati, jumladan, oqsil, yog', namlik va mineral moddalar miqdori bevosita qayta ishlash texnologiyalariga bog'liq. Har bir sifat ko'rsatkichi mahsulotning oziqlanish qiymatini, saqlash muddatini va iste'molchilar ehtiyojlarini qondiruvchi omillarni belgilaydi. Shu sababli, yuqori sifatli va raqobatbardosh mahsulot ishlab chiqarish uchun samarali qayta ishlash usullarini qo'llash muhimdir. Soyaning qayta ishlash jarayonlari nafaqat mahsulot sifatini yaxshilaydi, balki uning iqtisodiy samaradorligini oshirishga xizmat qiladi.

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PAXTA XOMASHYOSINI QURITISHDA QURITISH USULLARI SAMARADORLIGINI O'RGANISH

Annotatsiya: Ushbu maqola Paxta xomashyosini quritish usullarini, jumladan infraqizil, mikroto'lqinli, konvektiv, va boshqa texnologiyalarni tahlil qiladi. Har bir usulning afzalliklari, kamchiliklari, energiya samaradorligi va amaliy qo'llanilishi muhokama qilinadi.

Kalit so'zlar: Paxta xomashyosi, quritish usullari, infraqizil quritish, mikroto'lqinli quritish, konvektiv quritish, paxta tolalari, energiya samaradorligi

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STUDYING THE EFFICIENCY OF DRYING METHODS IN DRYING RAW COTTON

Abstract: This article analyzes methods of drying cotton raw materials, including infrared, microwave, convective, and other technologies. Advantages, disadvantages, energy efficiency and practical application of each method are discussed.

Key words: Cotton raw materials, drying methods, infrared drying, microwave drying, convective drying, cotton fibers, energy efficiency

Kirish Quritish usullari materiallarni ishlov berish va saqlashda muhim rol o'ynaydi. Hozirgi kunda paxtani qayta ishlash jarayonlari asosan AQSh, Xitoy va O'zbekiston davlatlarida ishlab chiqarilgan texnologik uskunalar yordamida amalga oshirilmoqda. Paxta hosilining intensivligini saqlab qolish va jahon bozorida xomashyo raqobatbardoshligini oshirish uchun tolalarning sifat ko'rsatkichlarini yaxshilash muhim masalalardan biri hisoblanadi. Shu yo'nalishda energiyatejamkor, samaradorligi yuqori, va texnologik jihatdan takomillashgan yangi avlod paxta xomashyosini dastlabki qayta ishlash uskunalari yaratishga oid bir qator ilmiy-tadqiqot ishlari olib borilmoqda.

Paxta xomashyosini dastlabki qayta ishlash jarayonlari uchun samarador texnika va texnologiyalar yaratishga oid keng ko'lamli ilmiy-amaliy chora-tadbirlar amalga oshirilmoqda. Ushbu tadbirlar 2017-yil 14-dekabrda PF-5285-son "To'qimachilik va tikuv-trikotaj sanoatini jadal rivojlantirish chora-tadbirlari to'g'risida"gi va 2018-yil 14-iyuldagi PQ-3855-son "Ilmiy va ilmiy-texnik faoliyat natijalarini tijoratlashtirish samaradorligini oshirish qo'shimcha chora-tadbirlari to'g'risida"gi [1] farmonlarda belgilangan vazifalarni amalga oshirishga yo'naltirilgan. Paxta tozalash korxonalari tomonidan tayyorlanayotgan paxta xomashyosining sifatini saqlab qolish, xomashyo, ishchi kuchi va energiya sarfini kamaytirish maqsadida samarali texnika va texnologiyalarni qo'llash muhim ahamiyat kasb etmoqda.

Qishloq xo'jaligi va boshqa qayta ishlash sohalarida turli xil xomashyo va tayyor mahsulotlarning namligini kamaytirish muammosi yuzaga kelmoqda [2, 3; 4; 5]. Agrosanoatda va engil sanoat tarmoqlarida qishloq xo'jaligi mahsulotlarini saqlash masalalari mavjud. Ushbu maqsadlar uchun turli quritish texnologiyalari yaratilgan bo'lib, ular so'nggi yillarda qayta ishlash sanoatida keng qo'llanilmoqda. Quritish sohasida yangi uskunalar ishlab chiqilib, qishloq xo'jaligi mahsulotlarini ishlab chiqarish oshirilmoqda.

Texnik-iqtisodiy parametrlarni, masalan, minimal energiya iste'moli, quritish jarayonining maksimal bir xilligi, belgilangan namlikka tezroq chiqish va boshqa xususiyatlarni amalga oshirish mumkin. Bu, aynan bir vaziyatga mos asosiy fizik jarayonlarni tanlash, ularga mos quritish texnologiyalarini tanlash va ularni amalga oshirish uchun uskunalar konstruksiyalarini ishlab chiqish orqali amalga oshirilishi mumkin.

Turli quritish texnologiyalari mavjud: tabiiy quritish, aeratsion, konvektiv, pseudomaydonli qatlamda quritish, infraqizil quritish, mikroto'liqinli, sublimatsiya va hokazo. Ushbu ishda, yuqorida sanab o'tilgan quritish usullarining nisbatan kichik parametrlar tizimiga asoslangan taqqoslash tahlili amalga oshirildi (kriteriyalar): ishlab chiqarish quvvati, energiya iste'moli, quritish tezligi, quritish jarayonida foydali moddalarning saqlanishi, quritilayotgan material va vitaminlarning sifati va hokazo. Tahlil natijalariga ko'ra, ko'plab sanoat sohalarida konvektiv quritish usullari va uskunalar yuqori sifatli mahsulot olishni ta'minlamaydi va jarayonning katta energiya iste'moli bilan ajralib turadi.

Zamonaviy quritish uskunalarida turli materiallarni quritish imkoniyatiga ega bo'lishi kerak. Biz turli sanoat sohalarida quritish jarayonida qo'llanishi mumkin bo'lgan quritish qurilmalarining guruhlarini ko'rib chiqamiz va ularni ishlash prinsipi va konstruksiyasi bo'yicha tasniflaymiz.

Energiya iste'molining katta bo'lishi quritish texnikasida energiya isrofini oshiradi va suyuq va gaz holatidagi yoqilg'ilarni ko'proq sarflashga olib keladi. Bu energiya, konvektiv quritish jarayonlarida ishlatiladi va shu bilan birga, ekologik tozaligi past bo'lgan quritish texnologiyalarining natijasi sifatida quritilgan mahsulotlar ham kamroq ekologik toza bo'ladi.

Yuzaki quritishga asoslangan boshqa quritish usullari ham shu muammolarga duch keladi.

Quritish usullari:

1. **Infraqizil Quritish:** Infraqizil quritish jarayoni materiallarning namligini tezda kamaytiradi va energiya sarfini kamaytiradi. Yupqa qatlamlarni quritishda bu usul 1,5-2,0 barobar tezroq natija beradi.
2. **Konvektiv Quritish:** Kamerali, barabanli, pnevmatik, lentali va psevd-jig'ilgan qatlamli qurituvchilar mavjud. Har bir usulning o'ziga xos afzalliklari va kamchiliklari bor. Masalan, kamerali qurituvchilar past haroratlarda ishlaydi va yuqori samaradorlikka ega emas.
3. **Baraban Qurituvchilar:** Baraban qurituvchilar qattiq qatlamlar uchun qulay bo'lib, materialni teng taqsimlash va aralashtirish imkonini beradi. Bu qurilmalar issiqlik gazlari bilan yaxshi aloqada bo'ladi.
4. **Qaynatilgan Qatlamli Qurituvchilar:** Bu qurituvchilar material zarrachalarini intensiv aralashtiradi va issiqlikni samarali taqsimlaydi. Vibratsionli qaynatilgan qatlamlar esa yanada yaxshi ishlov beradi va energiya samaradorligini oshiradi.
5. **Vakuum Qurituvchilar:** Vakuum qurituvchilar yuqori tozalikka ega materiallarni olish uchun ishlatiladi. Bu usul toksik va portlovchi moddalarni quritishda qulay.
6. **Valtsli Qurituvchilar:** Valtsli qurituvchilar suyuq va pastasimon materiallarni atmosfer bosimida quritadi. Bu usul issiqlik uzatish koeffitsiyenti bilan cheklangan bo'lishi mumkin.

Natijalar va Tahlil

Quritish usullari samaradorligi va energiya sarfi o'rganildi. Konvektiv quritish usullari infraqizil va mikroto'liqlik quritish usullariga nisbatan samaradorligi ancha yuqori bo'lishi mumkin. Paxta tolalarida namlik darajasini saqlash va kamaytirish jarayonlari qiyinlashadi, ammo yuqori sifatli mahsulot olish uchun muhimdir.

Xulosalar

Infraqizil (IK) va mikroto'liqlik quritish usullari sanoat va laboratoriya sharoitlarida samarali quritish variantlari sifatida ko'rilmogda. Ushbu usullar xomashyoning sifatini saqlab, energiya sarfini kamaytirishga imkon beradi. Infraqizil quritish jarayoni materiallarni tez va samarali quritish uchun qulay.

Infraqizil, mikroto'liqlik va konvektiv quritish usullari turli xususiyatlari bilan farqlanadi. Energiyani samarali ishlatish uchun bu usullarni to'g'ri tanlash va kombinatsiya qilish zarur. Paxta qayta ishlashda namlikni optimal darajada saqlash va kamaytirish jarayonlari muhimdir

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BIOLOGICAL AND PRODUCTIVITY INDICATORS OF TASHKENT 1 AND TASHKENT 2 BREEDS

Annotation. *In this article, the number of eggs in the Tashkent 1 and Tashkent 2 nests was 596 eggs in the Tashkent 1 breed, and 673 eggs in the Tashkent breed. The weight of the eggs in the nest was equal to 359 mg and 377 mg, corresponding to the number of eggs in the nest, the survival of the eggs obtained from them was on average 98.4%, 98.2%, and the viability of worms - 92.3%, 93.6 %. The disease percentage is very low, i.e. 1.8% in Tashkent 1 breed and 3.4% in Tashkent 2 breed.*

Key words. *Selective, reproductive, egg, egg-laying, revival, vivacity, cocoon, silkiness, silkworm.*

Enter. In order to develop the sericulture industry, the decision "On measures to organize the activities of the Uzbek paksanoat association" defines the main measures for the reform of the sericulture of our country (2017). In this historic decision, special attention is paid to the gradual expansion of the main feed base of cocoons, that is, the areas of mulberry plantations, the creation of breeds and hybrids suitable for the climatic conditions of our country, and the increase of the volume and quality indicators of the cocoon raw materials. At the same time, in the development of innovative development in the field, as a continuation of the systematic work that increases the role of science, the new development strategy of Uzbekistan in 2022-2026 is successfully implemented, a new stage of scientific development, new science, scientific research, innovative achievements in education and can be one of the important factors in creating effective mechanisms in the development of scientific fields (2022) .

N.G.Bogoutdinov (1965); M.G.Silanteva (1975); I.M.Gumbatov (1983) determined that the quantity and quality of feed, the hygrothermal condition of worm feeding and the climatic conditions of the regions have a significant effect on the productivity and egg quantity of mulberry silkworms.

Sh.R. Umarov, U.N.Nasirillaev. (1996); in their published scientific articles showed that the environmental conditions (quality and quantity of food,

hygrothermal conditions) significantly affect the productivity and reproductive characteristics of the mulberry silkworm during the worm feeding period.

In the selection and breeding of agricultural animals, including the mulberry silkworm, the interrelationship of reproductive characteristics with variability, heredity parameters and their other quantitative characteristics is of particular importance.

J.Sh.Toychiev (2001) in his scientific work stated that by removing deaf and spotted cocoons from the fertile cocoons, the number and weight of eggs in the laying can be increased by 10.9% and 11.9%.

These scientific experiments were carried out in 2023-2024 in the Andijan Institute of Agricultural Agrotechnologies and in the Altinkol District of the Andijan Region.

Individually analyzed for reproductive characteristics, 80-100 clutches (families) with the highest reproductive performance were selected for breeding. From the selected families, 100 seed samples were counted to determine the survival rate.

In our dissertation work, the implementation of selection works of the Tashkent 1 and Tashkent 2 breeds according to the leading selection characters, the research results are introduced into direct production, and the high technological potential of the new industrial hybrids is achieved. That's why we found it necessary to carry out a set of selection works for traits with leading economic value in the family kennel of Tashkent 1 and Tashkent 2 breeds for 2 years.

It started with determining the reproductive characteristics of Tashkent 1 and Tashkent 2 breeds and selecting the most fertile families for offspring. The obtained results are presented in Table 1.

Table 1

Reproductive indicators of Tashkent 1 and Tashkent 2 breeds (2023).

№	Analyzed deposits, pcs	The number of eggs in the barn, pcs	Weight of eggs in a cage, mg	Weight of one egg, mg
Tashkent 1				
1	1x12	545	304	0,558
2	12x1	571	372	0,651
3	3x6	657	379	0,577
4	6x3	672	358	0,533
5	11x27	571	314	0,550
6	27x11	575	355	0,617
7	39x2	723	432	0,598
8	2x39	454	275	0,606
9	21x15	594	336	0,566
10	15x21	593	378	0,637
11	17x19	588	377	0,641
12	19x17	497	397	0,799
13	27x41	629	359	0,571

14	41x27	651	384	0,590
15	26x30	626	360	0,575
n=15		596±12,00	359±3,0	0,605±0,003
Tashkent 2				
1	2x9	602	340	0,565
2	9x2	691	420	0,608
3	5x11	792	470	0,593
4	11x5	687	390	0,568
5	15x30	693	366	0,528
6	30x15	623	379	0,608
7	8x7	720	397	0,551
8	7x8	844	472	0,559
9	14x21	689	352	0,511
10	21x14	576	339	0,589
11	58x12	711	369	0,519
12	12x58	655	346	0,528
13	19x7	665	390	0,586
14	7x19	469	242	0,516
n=16		673±10,5	377±6,0	559±0,004

As can be seen from the figures in Table 1, the Tashkent 1 and Tashkent 2 breeds have high fertility characteristics, as a result of selection work on reproductive indicators, the number of eggs in the laying was 596 eggs in the Tashkent 1 breed, and 673 eggs in the Tashkent breed. . According to the weight of the eggs in the barn, this indicator was equal to 359 mg and 377 mg, respectively. But the weight of one egg decreased significantly. If we pay attention to the coefficient of variation of these two important reproductive traits, this indicator is 8.8%, 8.6% in the mean number of eggs in the clutch by breed and in the weight of the clutch - 9.2%, 7.7%. These indicators indicate that the variability of fertility signs in the breed population is not too low.

At the end of the annual reproductive characteristics analysis, the families of Tashkent 1 and Tashkent 2 breeds with the same genealogy were united, groups were formed, and 100 eggs of each group were sampled to determine egg viability. Worm viability was calculated by determining the number of healthy worms that reached cocooning and pupation in each group.

Table-2

Egg viability and worm viability of Tashkent 1 and Tashkent 2 breeds (2024).

Breeds	Egg revival, %	Liveability of worms, %	Disease percentage, %
Tashkent 1	98,4±0,74	92,3±0,45	1,8±0,13
Tashkent 2	98,2±0,26	93,6±0,68	3,4±0,42

Analyzing the egg survival and worm viability indicators in Table 2, we can be sure that important results have been achieved for the silkworm. Breeds Tashkent 1 and Tashkent 2 showed the results according to these indicators -

egg survival averaged 98.4%, 98.2% and worm viability - 92.3%, 93.6%. The percentage of the disease was very low, i.e. 1.8% in Tashkent 1 breed and 3.4% in Tashkent 2 breed.

Cocoon productivity is one of the leading traits among traits with economic value. In our selection experiments, we have intensively selected for cocoon weight, cocoon weight and silkiness traits, among other traits. Table 3 shows the characteristics of cocoon productivity of Tashkent 1 and Tashkent 2 breeds.

Table-3

Cocoon productivity of Tashkent 1 and Tashkent 2 breeds (2024).

Years	Cocoon weight, g	Cocoon weight, mg	Silkiness, %
Toshkent 1	1,79±0,041	446±4,9	24,9±0,35
Toshkent 2	1,86±0,029	461±0,30	24,7±0,46

From the figures in Table 3, it can be seen that the indicators of these characters are at a much higher level. The average cocoon weight and the average weight of the cocoon shell were 1.79 g, 446 mg and 1.86 g and 461 mg in Asaka and Markhamat breeds, respectively, and silkiness was 24.9 % in Tashkent 1 breed and 24 in Tashkent 2 breed. was .7%.

In addition, cocoons bred for two years in family nurseries of two breeds were selected for cocoon shell graininess and cocoon compactness. The above results are mainly the result of this selection methodology.

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PRODUCTIVITY INDICATORS OF BUTTERFLIES AND WORMERS OF TASHKENT 1 AND TASHKENT 2 BREEDS IN BIOLOGICAL RESOURCES

Abstract. *This article presents the reproductive indicators of the mother butterfly selected from the Tashkent 1 and Tashkent 2 breeds, the reproductive characteristics of butterflies and the biological and productivity indicators of silkworms of the hybrids ♀Tashkent 1 x ♂Tashkent 2, ♀Tashkent 2 x ♂Tashkent 1 prepared from them.*

Key words: *Heredity, variation, reproductive, egg, reproduction, motility, worm, ovipositor, cocoon, silkiness.*

Introduction. Decree of the President of the Republic of Uzbekistan No. PF-4947 of February 7, 2017 "On the Strategy of Actions for Further Development of the Republic of Uzbekistan", No. PQ-3910 of August 20, 2018 "On the Coir Industry in the Republic on measures for more effective use of existing opportunities" and PQ-4411 of July 31, 2019 "On additional measures for the development of deep processing in the cocoon industry" implementation of the tasks specified in the decisions and other normative legal documents related to this field is considered an important task facing the field.

In the development strategy of the Republic of Uzbekistan for 2022-2026, the improvement of the system based on science and innovation in agriculture is defined as the main directions. In the implementation of these tasks, it is important to breed new breeds and recommend them for breeding and industrial seed production by developing the technology of preparing super-elite and elite seeds for breeding work.

Much progress has been made in mulberry silkworm genetics, selection and breeding. Most economic value signs belong to the category of quantitative signs, and their manifestation depends on the hereditary factor. All quantitative signs have a certain variability, whether they are animal signs or plant signs.

The variability transmitted from generation to generation is manifested in the next generation as a result of a certain combination of genetic factors of the father and mother organisms.

Scientists have unanimously proven that the high heritability coefficient will definitely be effective in the selection method. In cases where the

heritability coefficient is low, the variability in the population depends not on the genetic factor, but on the feeding and care of the animals, and the environmental conditions. The selection work carried out in such populations does not give the expected good results in the next generation.

V.A. Strunnikov (1960, 1971) was one of the first to determine heritability coefficients of mulberry silkworm traits. In the work carried out on the introduction of mechanized selection of breeding cocoons, the heritability coefficient of cocoon silkiness was calculated and this indicator was equal to $h^2=0.5$.

Later, at UzIIT, under the leadership of U.N. Nasirillaev, extensive research was started on determining the variability and heritability coefficients of the selection traits of the mulberry silkworm.

Chin Ngok Lan (1972, 1973) studied the degree of variation and heritability coefficients of the most important technological characteristics: fiber length and its thinness. The heritability coefficient of silk fiber is $h^2=0.313$. . . 0.394, fiber length $h^2=0.221$. . . It was found to be equal to 0.362. The determined indicators indicate that it is possible to achieve certain positive changes in the population by carrying out the selection of live cocoons for these two characters.

U.N.Nasirillaev and B.G.Abasov (1975) determined heritability coefficients of reproductive traits. Until now, the heritability coefficients of the most important quantitative traits such as cocoon weight, silk shell weight and silkiness of mulberry silkworm have been determined.

It is natural to ask whether it is possible to maintain this characteristic at a high level by selecting high silk cocoons or silk cocoons. Since a number of characters such as cocoon weight, silk shell weight, and silkiness belong to the category of quantitative characters, their transmission from generation to generation differs from the inheritance of quality characters. Because a large number of genes and polygenes are involved in the manifestation of quantitative traits. It is important to note that the influence of external environmental conditions on the manifestation of quantitative signs is also significant (B.U. Nasirillaev, 2009).

One of the tasks assigned to the dissertation experiments is to carry out selection works of the Tashkent 1 and Tashkent 2 breeds according to the leading selection characters, and in the future, the research results will be directly introduced into production and the new industrial hybrids will fully demonstrate their high technological potential. is achieved. Development of the method of selection of breeding cocoons in the super-elite and elite stage according to the morphological characteristics of the cocoons. That's why we found it necessary to carry out a set of selection works for traits with leading economic value in the family kennel of Tashkent 1 and Tashkent 2 breeds for 3 years.

It started with determining the reproductive characteristics of Tashkent 1 and Tashkent 2 breeds and selecting the most fertile families for offspring. The obtained results are presented in Table 1.

Table 1

Reproductive indicators of Tashkent 1 and Tashkent 2 breeds (2023)

Breed and hybrids	The number of eggs in the nest, dona	Weight of eggs in a barn, mg	Weight of one egg, mg
Toshkent 1	596±12,00	359±3,0	0,605±0,003
Toshkent 2	673±10,5	377±6,0	0,559±0,004
♀Toshkent 1 x ♂Toshkent 2	639±7,9	396±5,1	0,619±0,005
♀Toshkent 2 x ♂Toshkent 1	698±5,7	427±4,7	0,612±0,005

As can be seen from the figures in Table 1, the Tashkent 1 and Tashkent 2 breeds have high fertility characteristics, as a result of the selection work carried out on reproductive indicators, the number of eggs in the laying was 596 in the Tashkent 1 breed and 673 in the Tashkent 2 breed. formed a piece. According to the weight of the eggs in the barn, this indicator was equal to 359 mg and 377 mg, respectively. But the weight of one egg decreased significantly.

At the end of the annual analysis of reproductive characteristics, the families of Tashkent 1 and Tashkent 2 breeds with the same genealogy were united, groups were formed, and 100 eggs of each group were sampled to determine the viability of eggs. Among the groups revived for worm feeding, the groups with the highest survival rate and fully revived were selected for worm feeding. Worm viability was calculated by determining the number of healthy worms that reached cocooning and pupation in each group.

Table 2

Egg viability and worm viability of Tashkent 1 and Tashkent 2 breeds (2024).

Breeds	The revival of the egg, %	The vitality of worms, %	Disease percentage, %
Toshkent 1	98,4±0,74	92,3±0,45	1,8±0,13
Toshkent 2	98,2±0,26	93,6±0,68	3,4±0,42
♀Toshkent 1 x ♂Toshkent 2	99,1±0,25	95,2±0,15	0,9±0,30
♀Toshkent 2 x ♂Toshkent 1	99,2±0,12	95,1±0,19	1,7±0,17

Analyzing the egg survival and worm viability indicators in Table 2, we can be sure that important results have been achieved for the silkworm. Breeds Tashkent 1 and Tashkent 2 showed the results according to these indicators - egg survival averaged 98.4%, 98.2% and worm viability - 92.3%, 93.6%. The percentage of the disease was very low, i.e. 1.8% in Tashkent 1 breed and 3.4% in Tashkent 2 breed.

From the figures in Table 3, it can be seen that the indicators of these characters are at a much higher level. The average weight of cocoon and the

average weight of cocoon shell in Tashkent 1 and Tashkent 1 breeds are 1.79 g, 446 mg and 1.86 g and 461 mg, respectively, and silkiness is 24.9 % in Tashkent 1 breed and Tashkent 2 in the breed was 24.7%.

Table 3
Cocoon productivity of Tashkent 1 and Tashkent 2 breeds (2024 y.).

Years	Cocoon weight, g	Cocoon weight, mg	silkiness, %
Toshkent 1	1,79±0,041	446±4,9	24,9±0,35
Toshkent 2	1,86±0,029	461±3,0	24,7±0,46
♀Toshkent 1 x ♂Toshkent 2	1,95±0,01	489±5,4	25,1±0,17
♀Toshkent 2 x ♂Toshkent 1	2,00±0,02	501±3,6	25,1±0,21

In addition, cocoons bred in family nurseries of two breeds for three years were selected according to cocoon shell graininess and cocoon compactness. The above results are mainly the result of this selection methodology.

It was found that the hybrids "Tashkent 1 x Tashkent 2" and "Tashkent 2 x Tashkent 1" from elite breeds of Tashkent 1 and Tashkent 2 breeds actually have heterosis. All biological indicators of these hybrids are clearly superior to the parent breeds

The variability indicators of Tashkent 1 and Tashkent 2 breeds, $C_v=19.7\%$ in Tashkent 1 breed, $C_v=25.4\%$ in Tashkent 1 breed, indicate that there is diversity in the breed population and there is a basis for selection.

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EFFECT OF CELLULOSE SOLUTION ENRICHMENT IN SILKWORM FEEDING ON BIOLOGICAL AND PRODUCTIVITY INDICATORS OF SILKWORMS

***Abstract.** The article is aimed at raising the biological and productivity indicators of breeds, elite hybrids, which are being prepared at seed enterprises. When feeding elite hybrids through leaves enriched with cellulose solution, compared to the control ones, the length of the larval period was reduced by 1 day on average, the vitality of worms was 3-6%, the average weight of one cocoon was 13.7%, the silkiness was 12.1%, and the amount of cocoons obtained from hybrids increased up to 26.9%. .*

***Key words:** Breed, hybrid, elite, egg, viability, cocoon, silkiness, biological, productivity, cellulose.*

Introduction. Our republic is setting an important task for the cocoon industry, that is, the task of growing industrial cocoons that can meet the requirements of world standards in terms of quality. It will be difficult to achieve this task without improving the reproductive characteristics of industrial silkworm eggs.

The main task facing the industry is to maintain high-quality feed for father and mother worms in the breeding farms of silkworm breeding enterprises, to select the best quality breeding cocoon batches, and to preserve the vitality and productivity of silkworm breeds and hybrids at the high level achieved by the breeders.

The main purpose of the experiments in this direction is to create the necessary zootechnical environments for the full manifestation of the productivity characteristics of silkworms achieved by breeders.

For each variant, 800 worms were taken from elite hybrids, and 200 4 returns were made. 800 silkworms were raised in one variant, 4000 silkworms in 5 variants. This experiment was conducted on Chinese and Japanese elite hybrid eggs.

The effect of cellulose-enriched feed on biological parameters of silkworms in the experiment is presented in Table 1.

We observed that the duration of the larval period of silkworms was on average 25 days in the experimental variants fed with cellulose solution-enriched leaves, and 26 days in the control variant fed with ordinary leaves.

The survival rate of silkworms was found to increase from 3.7 percent to 10 percent in the experimental variants compared to the control variant.

Table-1

Effect of enrichment with cellulose solution on silkworm biological parameters in breeding silkworm feeding

Options	Worm period attendance, days.	Life expectancy of worms, %.	Productivity from one box, kg.
1- option (control)	26	80	58,0
2- option 0,025%	25	83	62,25
3- option 0,05%	25	85	68,0
4- option 0,075%	24,5	88	72,6
5- option 0,1%	25	86	69,66

As can be seen from the figures in Table 1, the average cocoon yield from one box of elite silkworms in the control variant raised according to the rules of the conventional method was equal to 58.0 kg. However, the average yield of cocoons from one box of the elite hybrids in the 2nd experimental option treated with leaves enriched with a 0.025% solution of cellulose was 62.25 kg, which increased by 7.3% compared to the control option. We witnessed an increase of 17.2% in the 3rd experiment, 25.1% in the 4th experiment, and 20.1% in the 5th experiment. Based on the data obtained from the experimental variants, the cellulose solution has a positive effect on increasing the strength of the cell shell and disease resistance, along with being an additional source of energy for silkworms. Enriching mulberry leaves with cellulose accelerates the growth and development of silkworms and positively affects the synthesis of silk fluid in the silk gland, while significantly increasing the weight of the silk shell.

Productivity indicators of silkworms in the experiment are presented in Table 2.

When feeding breeding silkworms, by enriching the leaves with cellulose solution, productivity indicators, by enriching with one piece, the average weight of one piece of cocoon with productivity indicators, compared to the control option, increased up to 13.17% in the experimental option. compared, it was found to be up to 27.1 percent higher in experimental variants.

Silkiness of live cocoons was found to increase by 12.1 percent in the experimental variants compared to the control variant.

Table-2

Productivity indicators of silkworms in experimental and control variants

Options	Average weight of 1 cocoon, gr.	The average weight of the silk shell, gr.	Silkiness, %.
1- option (control)	1,45	0,332	22,8
2- option 0,025%	1,5	0,368	24,53
3- option 0,05%	1,6	0,398	24,87
4- option 0,075%	1,65	0,422	25,57
5- option 0,1%	1,62	0,408	25,18

Of course, in breeding work, special attention is paid to the breeding characteristics of cocoons obtained from elite hybrids of silkworms. Therefore, the proportion of breeding cocoons in the experimental cocoons was determined.

For this purpose, the number of cocoons suitable for breeding from the cocoons in the kaitariks of each variant was determined by sorting and the average of the variant was calculated.

As can be seen from the figures in Table 3, the proportion of fertile cocoons in batches of cocoons cared for in the experimental options was on average 58-66.0%, while in the comparative option this indicator was equal to 52.0%.

Therefore, it is possible to increase the percentage of breeding cocoons from 11.5% to 26.9% by timely carrying out agrotechnical measures in the care of breeding silkworms and feeding with leaves enriched with cellulose solution.

The purpose of this research is to achieve the full realization of the biological and productive potential of hybrids with cellulose-enriched foliar feeding in the care of elite silkworms.

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TYPOLOGICAL CHARACTERISTICS OF WORD FORMATION IN UZBEK AND ENGLISH LANGUAGES

Summary: *This paper explores the key typological features of word formation in both Uzbek and English. While Uzbek, as a Turkic language, primarily follows an agglutinative word formation pattern, English, as an Indo-European language, uses both analytic and synthetic methods. The differences and defining features of word formation in both languages are examined here.*

Keywords: *Morphology, Syntax, Affixation, Prefixes, Suffixes, Compounding, Agglutination, Concatenation.*

Understanding how words are formed is a crucial aspect of language structure and grammar. Uzbek and English each have distinct word formation techniques, shaped by their unique linguistic roots and histories. Although these languages differ significantly, they share certain foundational typological principles in word formation. This article outlines and compares these features.

Word Formation in the Uzbek Language involves the creation of new words using various linguistic techniques. These methods modify or combine existing words to convey new meanings. The key processes of word formation in Uzbek include:

1. Morphological Characteristics:

Uzbek, as an agglutinative language, constructs words by attaching multiple affixes (such as prefixes and suffixes) to a root word. This enables the combination of several morphemes, each with a specific meaning or grammatical function. Additionally, Uzbek forms compound words using both affixation and composition techniques.

2. Word Derivation:

In Uzbek, word derivation typically involves adding affixes to root words, resulting in new meanings or grammatical forms. For instance, the noun "kitobchi" (book seller) is created by adding the suffix "-chi" to the noun "kitob" (book).

3. Syntactic Characteristics:

In Uzbek, word formation often expands the meaning of words, where their function changes depending on the context. Affixation plays a major role, particularly through the use of both prefixes and suffixes. Uzbek forms words in two primary ways:

- **Affixation:** By attaching prefixes and suffixes, new words are generated.

For example, the plural suffix “-lar.” Word Formation in the English Language:

1. Morphological Characteristics:

English is an analytic language, meaning it depends more on word order and prepositions rather than extensive affixation. However, affixation still plays a significant role. English forms words through both prefixes and suffixes, though inflectional morphology is less prominent than in Uzbek.

2. Word Derivation:

Word formation in English happens through derivation (adding affixes), compounding (combining words), and conversion (changing the word's grammatical category without altering its form). For example, adding the suffix "-er" to "teach" forms the word "teacher."

3. Syntactic Characteristics:

English word formation can change syntactic categories, like converting nouns into adjectives or verbs using affixes. For instance, adding the prefix "un-" to "happy" forms "unhappy," or adding the suffix "-ness" forms "happiness." English also uses compounding (e.g., "blue-green") and reduplication (e.g., "wishy-washy").

Comparative Overview:

Both Uzbek and English use affixation as a central method in word formation, though the ways they apply it differ. Uzbek relies heavily on suffixation, creating more complex words through this process. In contrast, English uses both prefixes and suffixes, though its use of affixation is less extensive. Moreover, English depends more on word order to express meaning, while Uzbek focuses on morphological changes.

In conclusion: comparing word formation in Uzbek and English reveals significant differences based on their linguistic roots. Uzbek's agglutinative nature relies on complex morphological structures, while English emphasizes syntactic patterns with fewer inflectional changes.

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BANKLARNING XALQARO HISOB-KITOB SOHASINI TAKOMILLASHTIRISH

Abstract: *International banking provides services to foreign trade and combines various forms of cooperation between banks of different countries of the world. Recently, due to the increase in the volume of international banking operations and the expansion of their types, there have been changes in the traditional views on representative activities, at the same time, the risks related to such operations have increased accordingly.*

Keywords: *international communication; international money transfers, contract strategy; accounting and analytical engineering tools, situational approach, international payment methods.*

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IMPROVEMENT OF INTERNATIONAL ACCOUNTING OF BANKS

Annotatsiya: *Xalqaro bank faoliyati tashqi savdoga xizmat ko'rsatadi va dunyoning turli mamlakatlari banklari o'rtasidagi hamkorlikning turli shakllarini birlashtiradi. So'nggi paytlarda xalqaro bank operatsiyalari hajmining ko'payishi, ularning turlarining kengayishi munosabati bilan vakillik faoliyatiga oid an'anaviy qarashlarda o'zgarishlar ro'y berdi, shu bilan birga, tegishli ravishda bunday operatsiyalar bo'yicha risklar ortdi.*

Kalit so'zlar: *xalqaro aloqa; xalqaro pul-o'tkazmalar, shartnoma strategiyasi; buxgalteriya hisobi va analitik muhandislik vositalari, vaziyatli yondashuv, xalqaro to'lov usullari.*

Tadqiqot mavzusining dolzarbligi. So'nggi o'ttiz yil ichida jahonning yetakchi banklari tomonidan butun dunyoda iqtisodiy farovonlikka erishish vositasiga aylangan xalqaro to'lov tizimi yaratildi. Ushbu tizimdan foydalanib, kerakli maxfiylikni ta'minlagan holda moliyaviy va savdo operatsiyalarini tez va samarali amalga oshirishingiz mumkin. Xalqaro to'lov tizimining negizida

butun dunyo bo'ylab banklar bir-biriga va bir-biri orqali to'lovlarni amalga oshirishi mumkin bo'lgan vakillik bank tizimidir.

Zamonaviy adabiyotlarda Respublikamizda iqtisodiy islohotlar o'z-o'zidan va qarama-qarshilik bilan davom etdi, degan fikr mavjud: islohotlarni huquqiy tartibga solishga yetarlicha e'tibor berilmadi, ularni amalga oshirish kontseptsiyasi yo'q edi. Iqtisodiyot va xususan, xalqaro to'lovlar sohasida to'siqlar paydo bo'ldi. Huquqiy tartibga solishning haqiqatdan kechikishi, islohotlarning amalda borishi, Respublikamiz konstitutsiyasi qonunchiligining xalqaro shartnomalar va jahon standartlariga mos kelmasligi ko'pincha nafaqat qonun hujjatlariga zid bo'lgan ko'plab qonunosti hujjatlarining nashr etilishiga olib keldi.

Uslublar. Ushbu maqsadga erishish quyidagi vazifalarni shakllantirish va hal qilish bilan bog'liq:

- rezidentlar ishtirokida xalqaro to'lovlarni amalga oshirish tartibini tahlil qilish va tashqi iqtisodiy operatsiyalarni amalga oshirishning jahon amaliyotidan kelib chiqqan holda, xalqaro prinsiplar va normalarni hisobga olgan holda ularning xarakterli xususiyatlarini aniqlash;
- iqtisodiyoti o'tish davridagi va rivojlangan mamlakatlarda xalqaro to'lovlarni huquqiy tartibga solish va valyuta nazoratini amalga oshirishning huquqiy asoslarini qiyosiy tahlil qilish;
- vakolatli rezident banklar tomonidan qo'llaniladigan shubhali bank operatsiyalari mezonlarini aniqlash va bunday mezonlarni ishlab chiqish bo'yicha jahon amaliyoti va xalqaro tashkilotlar tavsiyalaridan kelib chiqqan holda qiyosiy tahlil o'tkazish.
- valyuta qonunchiligi buzilishiga qarshi kurashish maqsadida valyuta nazorati organlari va agentlarning o'zaro hamkorligi mexanizmini belgilash va xalqaro to'lovlarni amalga oshirishning qonuniy tartibini belgilash;

Maqolaning ilmiy yangiligi xalqaro to'lovlarning huquqiy masalalari va ularni amalga oshirishda valyuta nazorati xususiyatlarini har tomonlama tahlil qilishdadir.

Xalqaro tamoyillar va xorijiy davlatlarning huquqiy normalarining o'ziga xos xususiyatlarini hisobga olgan holda, O'zbekiston Respublikasi rezidentlari ishtirokida xalqaro to'lovlarni huquqiy tartibga solish mexanizmlarini har tomonlama o'rganib chiqdi va ular ustidan samarali nazoratni ta'minladi. xalqaro moliyaviy munosabatlarning globallasuvi sharoitida. maqola muallifi xalqaro to'lovlarning turli shakllari va turlarini tahlil qildi, ularni huquqiy tartibga solishning xususiyatlarini aniqladi; valyuta nazoratini amalga oshirish doirasida bank operatsiyalari orqali jinoiy daromadlarni legallashtirishga qarshi samarali kurashishning aniq usullari ishlab chiqilgan.

Natijalar. Tadqiqot qilingan obyekt O'zbekiston Respublikasi Markaziy banki tomonidan qo'llaniladigan va eksportchilar va importerlarning to'lov

talablariga eng yaxshi javob beradigan xalqaro to'lovlarning eng keng tarqalgan shakli sifatida bank o'tkazmalariga qaratamiz.

Xalqaro to'lovlarda O'zbekiston Respublikasi Markaziy banki ko'pincha o'z mijozlari nomidan pul o'tkazmalarini amalga oshiradi. Ushbu operatsiyalar quyidagilarni o'z ichiga oladi:

- topshiruvchi-qarzdor; - topshiriqni qabul qilgan o'tkazuvchining banki;
- o'tkazma summasini oluvchiga kreditga kiritgan bank;
- transferni oluvchi.

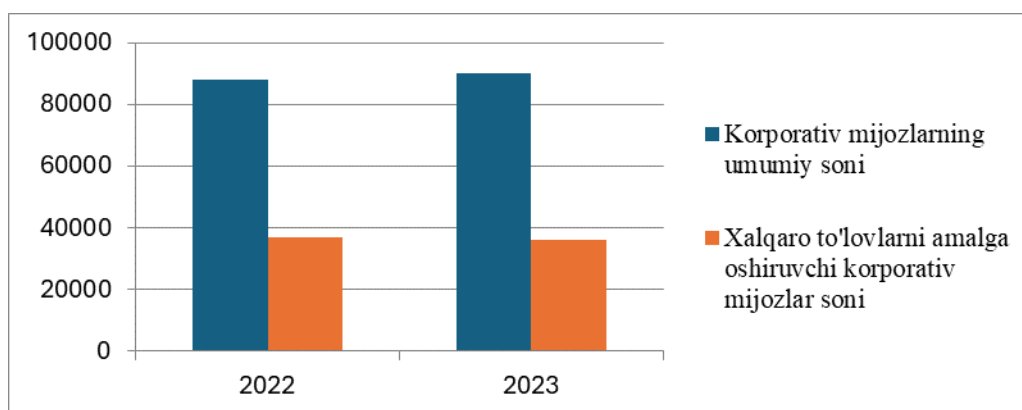
1-jadval

Xalqaro hisob-kitoblardan komissiya daromadlari dinamikasini tahlil qilish va ularni amalga oshirish xarajatlari, mlrd so'm

Ko'rsatkichlar	2022	2023	O'zgarishlar r milliard so'm	O'sish darajasi, %
Xalqaro to'lovlardan komissiya daromadlari	1378,1	1875,3	+497,2	+136,1
Xalqaro to'lovlar uchun xarajatlar	1332,6	1793,6	+461,0	+134,6
Ushbu turdagi faoliyatdan bank foydasi	45,5	81,7	+36,2	+179,6
Bankning umumiy foydasi	511	607	+96,0	+118,8
Xalqaro hisob-kitoblardan olingan foyda ulushi, %	8,9	13,5	+4,6	-

2023-yil yakunlariga ko'ra, xalqaro to'lovlardan bankning komissiya daromadi 2022-yilga nisbatan 497,2 milliard so'mga ko'payib, 1875,3 milliard so'mni tashkil etdi. yoki 36,1% ga oshgan.

Bankning xalqaro hisob-kitoblar bo'yicha xarajatlari 2023-yilda 1793,6 milliard so'mni tashkil etib, 461 milliard so'mga oshgan. yoki 2022-yilga nisbatan 34,6% ga, 2023-yilda hisob-kitob xizmatlarini ko'rsatishdan Bankning foydasi 36,2 milliard so'mga o'sib, 81,7 milliard so'mni tashkil etdi. yoki 2022-yilga nisbatan 79,6% ga o'sdi. O'zbekiston Respublikasi Markaziy bankining hisob-kitob xizmatlarini ko'rsatish orqali olingan foyda ulushi 13,5% ni tashkil etdi, bu 2022yilga nisbatan 4,6 milliard so'mga ko'pdir.



1-rasm. O'zbekiston Respublikasi Markaziy bankining korporativ mijozlari sonining dinamikasi, birliklar

Xalqaro to'lovlarni amalga oshiruvchi Rossiya Sberbank mijozlari ulushining pasayish tendentsiyasi kuzatilmoqda, bu rasmda ko'rsatilgan muammoli to'lovlar ulushining ko'payishi bilan bog'liq.

Muhokama. O'zbekiston Respublikasi Markaziy bankining hisob-kitoblarni davom ettirayotgan markazlashuvi Dunyoning boshqa hamkor banklari tomonidan bankning hisobvaraqlarini boshqarish amaliyoti va likvidligi nuqtai nazaridan ijobiy qabul qilinganligi sababli va uning ko'plab mamlakatlarda mavjudligi bankka pul o'tkazish imkoniyatini beradi. milliy va xalqaro to'lov tizimlarini qurish qoidalari haqida ma'lumot olish va bu bilimlarni O'zbekiston Respublikasi Markaziy bankining o'z to'lov tizimini yaratishda qo'llash, lekin u yanada rivojlantirishni talab qiladi.

Xulosa. Taklif etilayotgan tavsiyalar O'zbekiston Respublikasi Markaziy bankiga kredit tashkilotlari, ularning mijozlari, moliyaviy bozorlar va to'lov tizimlari o'rtasida aylanib yuradigan xabarlarni oxirigacha avtomatlashtirilgan qayta ishlash imkoniyatini beradi, bu esa o'z navbatida:

- Yagona to'lov standartlari asosida O'zbekiston Respublikasi Markaziy bankidagi to'lovlarni qo'llab-quvvatlash xarajatlarini kamaytirish, shuningdek, trafikni yig'ish orqali to'lovlarni qo'llab-quvvatlash xarajatlarini minimallashtirish;

- xalqaro hisob-kitob operatsiyalarining rentabelligini oshirish;

- to'lovlarni optimallashtirish va yagona standartlar va texnologiyalarni joriy etish orqali bankning mijozlari uchun xalqaro to'lovlar tezligini sezilarli darajada oshirish, hamda xalqaro to'lovlar sifatini oshirish, moliyaviy oqimlarni markazlashtirilgan nazorat qilish orqali risklarni minimallashtirish.

Hozirgi vaqtda xalqaro to'lovlarning asosiy shakllari (bank o'tkazmasi, inkasso, akkreditiv), ularni amalga oshirish mexanizmi va u yoki bu to'lov shakllarini tanlashga ta'sir etuvchi omillarni o'rganib chiqish talab etiladi.

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HPLC ANALYSIS OF FLAVONOID CONTENT IN UGRINOL PREPARATION: A VALIDATION STUDY FOR QUALITY CONTROL AND STANDARDIZATION

Ugrinol, a traditional herbal preparation with purported therapeutic benefits, is gaining popularity. Its efficacy is attributed to its diverse flavonoid content, making accurate quantification essential for quality control and standardization. This study aimed to develop and validate a robust high-performance liquid chromatography (HPLC) method for the determination of flavonoid content in Ugrinol. The method employed a C18 reversed-phase column with a gradient elution system using water-acetonitrile mixtures containing formic acid, and detection was achieved using a diode array detector at 360 nm. The method was rigorously validated according to ICH guidelines for linearity, precision, accuracy, limit of detection (LOD), and limit of quantification (LOQ). The validated method demonstrated excellent linearity ($r^2 > 0.999$) across a wide concentration range. Precision, both intra-day and inter-day, exhibited low relative standard deviations (RSDs) below 2%, indicating high repeatability and reproducibility. Accuracy was confirmed to be within the acceptable range of 98-102%. LOD and LOQ were determined to be 0.05 µg/mL and 0.15 µg/mL, respectively, demonstrating the method's high sensitivity. The validated HPLC method was successfully applied to analyze multiple batches of Ugrinol preparation, revealing significant variations in flavonoid content. This study provides a robust and reliable analytical tool for the quality control and standardization of Ugrinol, paving the way for consistent efficacy and safety of this traditional herbal remedy.

Keywords: Ugrinol, Flavonoids, HPLC, Validation, Quality Control, Standardization, Traditional Medicine

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MYOCARDIAL INFARCTION IN YOUNG WOMEN IN ANDIJAN

Annotation.

Diagnosis of myocardial infarction (MI) in young people is a problem of doctors and patients due to low alertness, low frequency of myocardial infarction in this age group, as well as often atypical clinical presentation, small number of patients. obstructive narrowing of coronary arteries. According to local researchers, the incidence of acute MI in women aged 30-40 in Uzbekistan in 2022 was 0.15%. According to the world literature, the frequency of detection of typical chest pain syndrome is more than half of the cases in young patients with ST-segment elevation MI. Our clinical observations revealed the difficulties of diagnosing MI in young women, as well as the influence of gender-related and independent risk factors for its development. The presented observations show that MI in young women can be severe and lead to the development of severe complications such as cardiac aneurysm and chronic heart failure.

Key words: heart aneurysm, myocardial infarction myocardial infarction, young women, chronic heart failure

Actuality of the theme.

Despite the encouraging results of the implementation of primary and secondary prevention programs, as well as treatment of atherothrombosis, cardiovascular diseases (CVD) remain the leading cause of death and disability worldwide. The contribution of CVD to mortality will continue to increase, mainly due to the impact of the novel coronavirus pandemic, as well as lower coverage of preventive programs in low- and middle-income countries. Acute forms of coronary heart disease (CHD), including myocardial infarction (MI), remain a significant cause of CVD morbidity and mortality in developed countries. It has been proven that cardiovascular continuum diseases have a multifactorial nature with a significant genetic component, including hereditary risk of MI. CVDs are characterized by a complex genetic structure with different combinations of single nucleotide polymorphisms (SNPs). Previously conducted studies by domestic and foreign authors have shown an association of various acute cerebrovascular accidents with the risk of developing and unfavorable course of myocardial infarction. First of all, we are talking about hereditary disorders of lipid metabolism, regulation of vascular tone, hyperaggregation and hypercoagulation states [1].

Aim of the research

In addition to the traditional risk factors for MI in women, there are sex-specific risk factors, including those associated with pregnancy. MI can develop during pregnancy, most often in the third trimester. In 40% of cases, this is type 1 AMI, in 27% of cases spontaneous coronary artery dissection, in 8% of cases - thrombosis of coronary arteries without atherosclerosis. Coronary artery dissection is the main cause of MI in the postpartum period (50%) and is more common in the prenatal period (34% vs. 11%) [7, 8]. Spontaneous coronary artery dissection is a very rare cause of ACS in the general population. It mainly occurs in young and middle-aged women during or after pregnancy. Its frequency, according to different authors, ranges from 3.2 to 14.6% in STEMI and 20.5% in NSTEMI [2, 6]. If endoprosthesis replacement is required, bare stents are preferred because the safety of drug-eluting stents in pregnant women has not been studied [7]. During pregnancy, multivessel dissection involving the left coronary artery trunk, STEMI development and a higher percentage of complications are noted [8].

Clinical observation 1

Kodirova K., 30 years old, was admitted to the emergency hospital on the 3rd day after the accident. It was carried out by cesarean section at the 30th week in the regional perinatal mother and child health protection clinical center. pregnancy due to the development of preeclampsia. The surgical intervention was uncomplicated. After birth, the child was transferred to intensive care unit in critical condition. Against this background, the patient was in a state of severe emotional stress, he developed a typical anginal condition, relieved by tramadol. In the ECG: sinus rhythm, heart beats 72 per minute, the electrical axis of the heart is normal, ST segment elevation in leads I, aVL, V1-4 is up to 3-4 mm. Changes in the form of depression of the ST segment in leads II, III, aVF up to 3 mm, regression of the R wave from V1 to V4, qr in aVL, extrasystole of one ventricle with elevation of the ST segment took into account the diagnosis of ACS In this case, the patient was given a loading dose of antiplatelet agents (ticagrelor 180 mg, acetylsalicylic acid 250 mg), as well as sodium heparin 5000 ED subcutaneously. The patient was taken to the cardiology center within 1 hour after the onset of pain. Upon admission to the cardiology center, the pain syndrome disappeared, hemodynamics was stable. Urgent coronary angiography was performed, the results of which revealed: the correct type of blood circulation, spontaneous dissection of type B passing from the upper third of the left coronary artery to the anterior interventricular artery, the diameter of the left coronary artery trunk 5.2 mm, the anterior interventricular artery had a type D dissection into the distal third of the artery, which is occluded, and the circumflex and right coronary arteries were intact. Recanalization of the anterior interventricular artery was performed, percutaneous transluminal coronary angioplasty with a 2.7 mm diameter balloon catheter in the occlusion of the anterior interventricular artery, exposure 6 minutes. Antegrade blood flow was

obtained in the apical part of the anterior interventricular artery. Later, repeated recanalization was performed to the apical part of the anterior interventricular artery, 3 stents with the size of 2.5×22 , 3.0×26 , 3.5×30 , mm were placed with zotarolimus from the distal third of the anterior interventricular artery. installed. into his mouth. Follow-up coronary angiography showed restoration of antegrade blood flow through the anterior interventricular artery, TIMI III, with no signs of dissection (Figure 2B). Type B left coronary artery trunk dissection remained, which did not restrict blood flow, and therefore the decision was made not to replace the left coronary artery with an endoprosthesis. The patient's condition is stable, he was admitted to the intensive care unit.

Summary

Clinical observations show the importance and difficulty of timely diagnosis of myocardial infarction in young women. According to the world literature, non-obstructive lesions of coronary arteries are detected more often in women than in men, which complicates the diagnosis of myocardial infarction in the absence of a typical clinical picture and non-specific changes in the ECG. Another feature of the course of myocardial infarction in this category of patients is its severe course and the development of serious complications such as heart rhythm disturbances, LV aneurysm and chronic heart failure in a very large percentage, which require additional therapeutic measures to stabilize the condition. the condition of the patients. The above clinical observations confirm this position once again.

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LOYIHA TUZISH VA UNI BOSHQARISH (LOYIHA BOSHQARUVIDA QO'LLANADIGAN METODOLOGIYA)

Annotatsiya. Ushbu maqolada Loyiha tuzish va uni boshqarish xizmatlarining ilmiy-nazariy asoslari o'rganib chiqilib, rivojlangan xorij amaliyotida ularni rivojlantirish amaliyoti o'rganib chiqilgan. Shuningdek, chakana xizmatlarni rivojlantirishda axborot texnologiyalarining ahamiyatini asoslangan holda, ulardan keng foydalanish imkoniyatlari ko'rib chiqilgan.

Kalit so'zlar. Loyiha, Loyihani rejalashtirish, Loyihani amalga oshirish, Loyihani monitoring qilish va nazorat qilish, Agile Metodologiyasi, PMI PMBOK, PRINCE2, Agile va Lean Six Sigma DMAIC.

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PROJECT CREATION AND MANAGEMENT (METHODOLOGY USED IN PROJECT MANAGEMENT)

Abstract: The entry of the Republic of Uzbekistan into the top 30 by 2030 requires ensuring stable economic growth (annual) at the level of 5 percent, which requires maintaining a high level of financing of the real sector. However, investment, credit and money supply generally tend to decline in the medium term. In this context, the objective of this study is to assess the contribution of finance to economic growth, as well as to identify the systemic problems that limit the growth of economic finance.

Keywords: projects; contractual relations; contract policy; contract strategy; accounting and analytical engineering tools; situational approach; derivative balance of a situational.

Loyiha boshqaruvi - bu ma'lum bir maqsadga erishish uchun resurslarni samarali tashkil etish, rejalashtirish va nazorat qilishning muhim jarayonidir. Loyihalar turli sohalarida, jumladan, qurilish, muhandislik, sog'liqni saqlash va moliya kabi sektorlarda keng qo'llaniladi. Loyihaning asosiy xususiyati shundaki, u noyob mahsulot, xizmat yoki natijani yaratishga qaratilgan vaqtinchalik sa'y-harakatdir. Loyihalar katta yoki kichik, oddiy yoki

murakkab, arzon yoki juda qimmat bo'lishi mumkin, ammo ularning barchasi samarali boshqaruvni talab qiladi. Loyihaning miqyosi va murakkabligidan qat'i nazar, puxta rejalashtirish, resurslarni oqilona taqsimlash va doimiy nazorat muvaffaqiyatli yakunlash uchun kalit hisoblanadi.

Loyihalarni boshqarishda asosan uchta yondashuv qo'llaniladi: an'anaviy (predictive/waterfall), moslashuvchan (agile) va gibridd (hybrid). An'anaviy yondashuv loyihani bosqichma-bosqich, ketma-ketlikda bajarishni nazarda tutsa, moslashuvchan yondashuv loyihaning o'zgaruvchan talablariga tezkor moslashish va doimiy takomillashtirishga e'tibor qaratadi. Gibridd yondashuv esa an'anaviy va moslashuvchan metodlarning eng yaxshi jihatlarini o'zida mujassam etadi.

Samarali loyiha boshqaruvi nafaqat belgilangan vaqt, byudjet va sifat maqsadlariga erishishga, balki manfaatdor tomonlarning talablarini qondirishga ham yordam beradi. Loyiha menejerining vazifasi resurslarni oqilona taqsimlash, jamoani boshqarish, risklarni minimallashtirish va doimiy ravishda kommunikatsiyani ta'minlashdan iborat.

Ushbu maqolada biz turli loyiha boshqaruvi metodologiyalarini, jumladan, ushbu sohada keng tanilgan Loyiha Boshqarish Instituti (PMI) tomonidan ishlab chiqilgan PMBOK (Project Management Body of Knowledge), PRINCE2 (Projects IN Controlled Environments), Agile (edjayl) va Lean Six Sigma kabi yondashuvlarni batafsil ko'rib chiqamiz. Shuningdek, ushbu metodologiyalarni qo'llashning amaliy jihatlarini va foydali vositalarni tahlil qilamiz.

Loyiha boshqaruvida qo'llanadigan metodologiyalarining qisqacha tahlili mavjud.

PMI PMBOK (Project Management Body of Knowledge) loyiha boshqaruvining keng tarqalgan metodologiyalaridan biridir. U loyiha boshqaruvining beshta asosiy bosqichini qamrab oladi: boshlash, rejalashtirish, ijro etish, monitoring va yakunlash. PMBOK shuningdek, integratsiya, qamrov, vaqt, xarajat, sifat, resurslar, kommunikatsiya, risklar va xaridlar kabi bilim sohalarini ham o'z ichiga oladi. Loyiha boshqaruvi uchun PMBOK strukturalangan yondashuvni taklif qiladi, ammo ba'zi loyihalar uchun biroz moslashuvchan emas bo'lishi mumkin.

Agile metodologiyasi, ayniqsa dasturiy ta'minot ishlab chiqish loyihalarida keng qo'llaniladi. U moslashuvchanlik, iterativ ishlab chiqish va mijozlar bilan yaqin hamkorlikni ta'kidlaydi. Scrum, Kanban va Extreme Programming (XP) Agile metodologiyasining mashhur usullari hisoblanadi. Agile yordamida loyiha jamoasi tez-tez o'zgaruvchan talablarga moslasha oladi va doimiy takomillashtirishga intiladi.

Lean Olti Sigma DMAIC (Define, Measure, Analyze, Improve, Control) yondashuvi jarayonlarni optimallashtirish va sifatni yaxshilashga qaratilgan. U isrofni kamaytirish, nuqsonlarni bartaraf etish va mijozlar qoniqishini oshirishga yordam beradi. Loyiha boshqaruvida Lean Six Sigma

jarayonlarni tahlil qilish, muammolarni aniqlash va yechimlarni ishlab chiqish uchun qo'llaniladi.

PRINCE2 (Projects in Controlled Environments) Buyuk Britaniyada ishlab chiqilgan loyiha boshqaruvi metodologiyasidir. U 7 ta tamoyil, 7 ta mavzu va 7 ta jarayonga asoslangan holda loyihalarni boshqarishning strukturalangan yondashuvini taklif etadi. PRINCE2 aniq rol va majburiyatlarni belgilaydi hamda loyihaning har bir bosqichida qat'iy nazoratni ta'minlaydi.

Loyihani qanday boshlash kerak?

Loyihani muvaffaqiyatli boshlash uchun puxta tayyorgarlik ko'rish va aniq rejaga ega bo'lish muhim ahamiyatga ega. Bunda, boshqaruv yondashuvidan qat'iy nazar, loyihaning nizomini (project charter) ishlab chiqish birinchi qadam hisoblanadi. Loyiha nizomi loyihaning asosiy tafsilotlarini o'z ichiga olgan hujjat bo'lib, u loyihaning maqsadlari, qamrovi, kutilgan natijalari, zarur resurslar, loyiha jamoasi va vaqt chegaralarini aniq belgilab beradi.

Loyiha nizomi loyihaning *"tug'ilganlik guvohnomasi"* sifatida qaraladi, chunki u loyiha menejeriga tashkilot resurslaridan foydalanish uchun rasmiy ruxsat beradi. Nizom odatda Microsoft Office (PowerPoint, Excel yoki Word) dasturlarida tayyorlanadi va loyiha davomida homiy roziligiga asosan yangilanib boradi.

Samarali loyiha nizomida quyidagi asosiy elementlar aks ettirilishi lozim:

- Loyihaning asoslari va ehtiyojlari bayonoti: Loyihaning nima uchun zarurligini va qanday muammolarni hal qilishini tushuntirib beradi. Loyihaning maqsadlari: Loyiha orqali erishilishi kutilayotgan aniq va o'lchovli maqsadlarni belgilaydi.
- Loyihaning chegaralari: Loyiha qamroviga nimalar kirishi va nimalar kirmasligini aniqlaydi.
- Asoslangan biznes keys: Loyihaning moliyaviy jihatlarini, jumladan, xarajatlar, kutilayotgan foyda va natijalarni hamda ularning kelib chiqish hisob-kitoblarini o'z ichiga oladi.
- Samaradorlik metrikalari: Loyihaning muvaffaqiyatini o'lchash uchun qo'llaniladigan ko'rsatkichlarni belgilaydi.
- Loyihaning taxminiy byudjeti: Loyihani amalga oshirish uchun zarur bo'lgan moliyaviy mablag'lar miqdorini aniqlaydi.
- Vaqt rejalari: Loyiha bosqichlari bo'yicha belgilangan muddatlarni ko'rsatadi.
- Loyiha ishtirokchilari: Mijozlar, homiylar, loyiha jamoasi va manfaatdor tomonlar haqida ma'lumot beradi.
- Kutilayotgan natijalar: Loyiha yakunida erishilishi rejalashtirilgan asosiy natijalarni sanab o'tadi.
- Asosiy risklar: Loyiha boshida aniqlangan potensial xavf-xatarlar va ularni boshqarish strategiyalarini ko'rsatadi.
- Loyiha muddati: Loyihaning boshlanish va tugash sanalarini belgilaydi.

- Loyiha yondashuvi: Loyihani amalga oshirish uchun qaysi metodologiya (masalan, an'anaviy, agile yoki gibridd) qo'llanilishini aniqlaydi.

Puxta ishlab chiqilgan loyiha nizomi loyiha jamoasi, manfaatdor tomonlar va homiyalar o'rtasida umumiy tushunishni shakllantiradi hamda loyihani muvaffaqiyatli boshqarish uchun mustahkam poydevor yaratadi. Shuningdek, loyiha nizomi loyiha davomida qaror qabul qilish va o'zgarishlarni boshqarish uchun mo'ljal vazifasini o'taydi.

XULOSA VA TAKLIFLAR

Loyiha boshqaruvining turli xil metodologiyalari mavjud bo'lib, ularning har biri o'ziga xos yondashuvni taklif qiladi.

PMI PMBOK (Project Management Body of Knowledge) loyiha boshqaruvining keng tarqalgan metodologiyalaridan biridir. U loyiha boshqaruvining beshta asosiy bosqichini qamrab oladi: boshlash, rejalashtirish, ijro etish, monitoring va yakunlash. PMBOK shuningdek, integratsiya, qamrov, vaqt, xarajat, sifat, resurslar, kommunikatsiya, risklar va xaridlar kabi bilim sohalarini ham o'z ichiga oladi. Loyiha boshqaruvi uchun PMBOK strukturalangan yondashuvni taklif qiladi, ammo ba'zi loyihalar uchun biroz moslashuvchan emas bo'lishi mumkin. Agile metodologiyasi, ayniqsa dasturiy ta'minot ishlab chiqish loyihalarida keng qo'llaniladi.

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KORXONALARNI BOSHQARISHDA MENEJMENT VA MARKETING SOHASINING O'RNI

***Annotatsiya:** Ushbu maqolada xizmat ko'rsatish korxonalarini boshqarishda marketing va menejmentning tutgan o'rni hamda O'zbekistonda xizmat ko'rsatuvchi korxonalarning marketing boshqaruvini takomillashtirish yo'llari haqida ma'lumotlar berilgan.*

***Kalit so'zlar:** Menejment, marketing, tadbirkor, iste'molchilar, xizmatlar, xizmat ko'rsatish, korxona, xo'jalik hisobi, konsalting.*

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THE ROLE OF THE FIELD OF MANAGEMENT AND MARKETING IN THE MANAGEMENT OF ENTERPRISES

***Annotation:** this article provides information on the role of marketing and management in the management of service enterprises and ways to improve the marketing management of service enterprises in Uzbekistan.*

***Keywords:** Management, marketing, entrepreneur, consumers, Services, Service, Enterprise, economic accounting, consulting.*

Zamonaviy jamiyat hayotida xizmat ko'rsatish sohasi muhim ahamiyatga egadir. Bugungi kunda turli xildagi darajada xizmat ko'rsatmaydigan korxona va tashkilotlar deyarli qolmagan va har birimiz har kuni ushbu sohaga qayta-qayta duch kelamiz: uyali telefonlar, internet, savdo va ko'ngilochar markazlar xizmatlari, ovqatlanish punktlari, go'zallik salonlari, konsalting, tibbiy va ta'lim muassasalari, turli transport turlarida sayohat va yuklarni tashish. Bu xizmat turlarining barchasi xizmat ko'rsatish sohasining tushunchasidir. Xizmat ko'rsatish sohasi korxonalar, tashkilotlar va jismoniy shaxslar tomonidan ko'rsatiladigan xizmatlarning turli turlarini takror ishlab chiqarishni o'z ichiga olgan jamlangan umumiy toifasidir. Boshqacha qilib aytganda, bular mamlakat

iqtisodiyotining savdo, professional va maishiy xizmatlar ko'rsatishga ixtisoslashgan tarmoqlaridan biridir. Xizmat ko'rsatish sohasi moddiy ishlab chiqarishga nisbatan bir qator o'ziga xos xususiyatlarga egadir.

Birinchidan, tovarlardan farqli o'laroq, xizmatlar asosan bir vaqtning o'zida ishlab chiqariladi va iste'mol qilinadi hamda saqlashga to'g'ri kelmaydi. Ikkinchidan, xizmatlar ko'pincha mahsulotlarga qarama-qarshidir, garchi xizmat ko'rsatishning roli sanoatda ham ortib bormoqda - uskunalarni ta'mirlash, sotishdan keyingi xizmat ko'rsatish va tovarlarni sotish bilan bog'liq. Shuni aytib o'tishimiz mumkinki, ko'p hollarda xizmat ko'rsatishda ishlab chiqarish elementi mavjud. Mahsulot sotish kabi, xizmat ko'rsatish elementi ham mavjud.

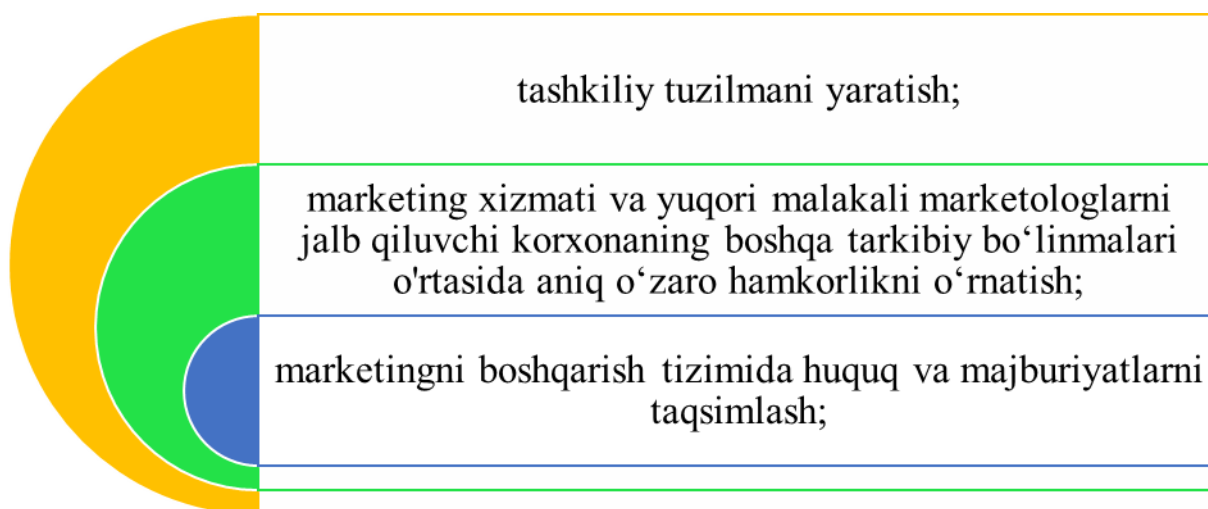
Bizga ma'lumki, birorta xo'jalik yurituvchi subyekt iqtisodiyotning qaysi tarmog'ida faoliyat yuritmasin, marketing va menejment xizmatlari o'z vazifalarini yaxshi bajara olmaydi. Shu jumladan, insonning ehtiyojlari amalda tugamaydi va kompaniyaning resurslari ko'pincha cheklangan, shuning uchun marketingning ahamiyati doimiy ravishda oshib boradi. Har bir mavzuning o'ziga xos ehtiyojlari bor, uni har doim ham sifat jihatidan qondirish mumkin emas. Ularning har biriga shaxsiy yondashuvingiz kerak. Shu sababli, yangi sharoitda iste'molchilarning xohish-istaklarining xilma-xilligini aniqroq ajrata oladigan korxona omon qoladi. Bularning barchasiga marketing xizmati yordam beradi.

Marketing biznes faoliyatining boshqa funksiyalaridan farqli o'laroq, asosan iste'molchilarga aloqador masalalar bilan shug'ullanadi. Marketingning maqsadi bir tomondan yuqori darajadagi qiymatni taklif qilgan holda yangi iste'molchilarni jalb etish, ikkinchi tomondan esa ehtiyojlarni qondirish orqali mavjud iste'molchilarni saqlab qolish hamda ularni sonini oshirib borishdan iboratdir.

Masalan, —McDonald's—Menga bu yoqadi shiorini mijozlar uchun tanavul qiladigan dunyodagi eng yaxshi joy bo'lishini e'tirof etgan holda amalga oshiradi hamda bu unga atrofdagi to'rtta raqiblarini bozor ulushini birlashtirganda ham, to'rt marta ko'p bozor ulushini berdi.

—Wallmart —Pulingizni tejang va yaxshi yashang degan vadasini amalga oshirish orqali dunyodagi eng katta chakana savdo tarmog'i va eng katta kompaniyaga aylandi.

Har bir korxonada marketing faoliyatini tashkil etish quyidagi jarayonlarni o'z ichiga oladi:



Marketing so'zi ingliz tilidan tarjima qilinganda, —bozordagi faoliyat, —bozor faoliyati, —bozorni tadqiq qilish ma'nolarini bildiradi. Marketingning qachon paydo bo'lganligi haqida bir qancha fikrlar mavjud. Qat'iy nuqtai nazarlardan biri shundan iboratki, marketingning birinchi elementlari (og'zaki reklama, almashuv shakllarini kelishish) odamzod natural xo'jalikning yakkaligidan xalos bo'lib, savdoning shakllari paydo bo'lgan paytdan boshlab vujudga kelgan. Vaholanki, agar reklama marketingning muhim funksiyasi ekanligini tan olsak, bundan uch ming-yil ilgari Vavilonda qochoq qullar evaziga mukofot: ikkita ho'kiz va'da qiluvchi maxsus belgilar mavjudligini yodga olish kerakdir.

Marketing - bu kompaniyaning bozorni rivojlantirishga, uni iqtisodiy o'zgarishlarga moslashtirishga qaratilgan, innovatsiyalarni amalga oshirishga qodir siyosatidan biri hisoblanadi.

Shunday qilib, xizmat ko'rsatish sohasi korxonasida marketing faoliyati muhim ahamiyatga ega, chunki u iste'molchiga yo'naltirilgan aniq dasturlarni ishlab chiqish orqali resurslarni oqilona taqsimlashga yordam beradi, natijada marketingning pirovard maqsadi - inson ehtiyojlarini qondirish hisoblanadi.

Marketing menejmenti tahlil qilinishi va eng yaxshi variantni tanlashi kerak bo'lgan turli xil tadbirlar tizimini o'z ichiga oladi.

F.Kotler, I.Minko, I.Berezinlar asarlarida ko'rib chiqilgan. Korxonalar tomonidan marketingdan foydalanish iste'molchilarning talab va ehtiyojlarini to'liq qondirish uchun eng muhim ijtimoiy -iqtisodiy jarayonni amalga oshirishga yordam beradi.

F.Kotler quyidagi ta'rifni taklif qiladi: marketing – bu tovarlarni yetkazib berish va ayirboshlash orqali shaxslar va guruhlarining ehtiyojlari va talablarini qondirishga qaratilgan ijtimoiy va boshqaruv jarayonidir.

Xulosa qilib aytganda, marketing nafaqat sof marketing maqsad va vazifalarini amalga oshirish, balki rejalashtirilgan ko'rsatkichlarga erishishni ta'minlash uchun kompaniya faoliyatini muvofiqlashtirish imkonini beradigan eng muhim boshqaruv funksiyalaridan biri bo'lib xizmat qiladi.

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PROFESSIONAL TA'LIMNING RAQAMLI MALAKA OSHIRISH MUHITIDA TINGLOVCHILARNING MUSTAQIL O'QUV FAOLIYATGA TAYYORGARLIGI

***Annotatsiya:** Ushbu maqolada professional ta'limning raqamli malaka oshirish muhitini tashkil etishning maqsadi malaka oshirish jarayoniga raqamli va telekommunikasion texnologiyalarni qo'llash hisobiga tinglovchilarning kasbiy tayyorgarligini uzluksiz rivojlantirishdan iborat.*

***Kalit so'zlar:** Professional ta'lim, raqamli va telekommunikasion texnologiyalar, Raqamli malaka oshirish muhiti, Pedagogik, psixologik, falsafiy, ilmiy, ijtimoiy, iqtisodiy adabiyotlar*

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READINESS OF STUDENTS FOR INDEPENDENT STUDY ACTIVITY IN THE ENVIRONMENT OF DIGITAL PROFESSIONAL DEVELOPMENT OF PROFESSIONAL EDUCATION

***Annotation:** in this article, the purpose of organizing a digital skills development environment of professional education is the continuous development of professional training of listeners at the expense of the application of digital and telecommunication technologies to the process of professional development.*

***Keywords:** Professional education, digital and telecommunications technologies, digital skills development environment, pedagogical, psychological, philosophical, scientific, social, economic literature.*

Professional ta'limning raqamli malaka oshirish muhiti - bu malaka oshirishda ta'limiy axborotlarni o'zlash va tezkorlik bilan almashishni ta'minlovchi vosita hisoblanadi. Ushbu muhit asosida tinglovchilarni bir-birini tushunishga, o'z g'oyalari fikrini hurmat qilishga, o'z fikrini erkin bayon qilishga va birgalikda muammolarni hal etishga o'rgatishga imkoniyat yaratiladi. Natijada yagona malaka oshirish muhitiga kirib boriladi.

Professional ta'limning raqamli malaka oshirish muhitini samarali tashkil etish uchun quyidagilar e'tiborga olinishi zarur: qo'yilgan muammoni yechish uchun tabiiy, fizik, ijtimoiy va boshqa hodisalar ustidan ko'p, tizimli, bir martalik yoki uzoq muddatli kuzatish, turli mintaqalardan ma'lumotlar to'plash; turli joylarda yuzaga keladigan hodisalar, dalillar, voqealarning aniq tendensiyasini aniqlash uchun taqqoslab o'rganish, qarorlar qabul qilish va takliflar ishlab chiqish; tarmoq ishtirokchilarining madaniy, etnik, geografik shartlari o'rtasidagi farqlarni hisobga olgan holda har bir muammo yoki masalani yechish yo'llarining (alternativ yoki turli usullarini) samaradorligini taqqoslab o'rganish; o'ziga xos madaniy, an'anaviy va boshqa xususiyatlarni hisobga olgan holda ijtimoiy va madaniy qarashlarni qiyosiy tahlil qilish; birgalikda ma'lum bir muammoni hamkorlikda tadqiq qilish sharti bilan biror bir (amaliy, ijodiy, ilmiy va boshqa) ijodiy g'oyani ishlab chiqish; malaka oshirish mummmolarni o'rganish va hal etish bo'yicha musobaqalar o'tkazish va bunda yuzaga keladigan muammoli vaziyatlarni madaniy, malaka oshirishdagi

Raqamli malaka oshirish muhitining nazariy yadrosi – pedagogika fanining yangi yo'nalishi bo'lib, raqamli malaka oshirish muhiti yangilanishga yo'naltirilganlik mohiyatidan kelib chiqib, pedagogik jarayonlarni tadqiq qiladi. Shuning uchun an'anaviy malaka oshirish jarayoniga u yoki bu shaklda yangi pedagogik tizimni kiritish ko'p hollarda samarasizdir. Shu bois yangi sifat tuzilmasiga, tizimni tashkil etishning yangi mezonlariga ega bo'lgan butunlay yangi didaktik modelni yaratish lozim.

Tadqiqot davomida ilmiy manbalarni tahlil qilish asosida tinglovchilarning o'z qobiliyatlari va mustaqil o'quv faoliyatini amalga oshirish imkoniyatlarini samarali qo'llash maqsadlarida tinglovchilarning mustaqil boshqaruvni va o'ziga ongli ravishda ta'sir ko'rsatishni o'z qo'lga olishi talabada quyidagi mahorat va ko'nikmalar shakllanishi zarurati to'g'risida xulosa qilish imkonini berdi: o'zini o'zi motivatsiyalash (maqsadlarga erishishga va shaxsiy qobiliyatlarni faollashtirish uchun); ishlarni mustaqil tashkil etish (ishlarni rejalashtirish, shaxsiy vaqt va makonni tashkil etish, vazifalarni hal qilish texnologiyalari va usullarini tanlash uchun); o'zini o'zi nazorat qilish (ish borishi va uning oraliq natijalarini monitoring qilish, vaziyatlarga adekvat munosabat bildirish, o'zini chegaralash va bemahsul harakatlardan voz kechish uchun); o'zini o'zi baholash, o'z-o'zini rivojlantirish-refleksiv (ish natijalarini baholash).

Pedagogik, psixologik, falsafiy, ilmiy, ijtimoiy, iqtisodiy adabiyotlarni, ilmiy-tadqiqot ishlarini va me'yoriy-huquqiy hujjatlarni o'rganish "tinglovchilarning mustaqil ishlashi sifati" tushunchasini ishlab chiqish asoslanishi lozim bo'lgan malaka oshirish sifati sohasidagi qator ilmiy-nazariy qoidalarni ajratish imkonini berdi.

Malaka oshirish jarayonida asosiy e'tiborni professor-o'qituvchi egallaydi. Shu sababli malaka oshirishni sifatli tashkil etish professor-o'qituvchilar tarkibini to'g'ri shakllantirishdan boshlanadi. Savol tug'iladi: professor-

o'qituvchi sifatini qanday aniqlash mumkin? Professor-o'qituvchi nafaqat tinglovchilarga bilim beradi, u kadrlar shaxsini, dunyoqarashini va ma'naviyatini shakllantirishda ham muhim rol o'ynaydi. Shu sababli professor-o'qituvchi sifati majmuaviy tushuncha bo'lib, u asosan quyidagilarni o'z ichiga olishi mumkin:

- kompetentlik darajasi – aniq fan va amaliyot sohasi bo'yicha yuqori bilim va tajribaga ega bo'lishi;
- professor-o'qituvchilik faoliyati bilan shug'ullanishga qobiliyat va ishtiyoqning mavjudligi;
- ko'zatuvchanlik – o'quvchilardagi qobiliyatlarni va alohida xususiyatlarni tez ilg'ab olish;
- tashqi va ichki muhit bilan aloqa o'rnatish qobiliyati;
- o'z sohasi bo'yicha tanilganligi, mavqei;
- ilmiy –tadqiqot sohasidagi faolligi;
- ilmiy maktabining mavjudligi.

Ochiq raqamli malaka oshirish muhitida tashkil etiladigan professional ta'limda professor-o'qituvchining vazifalari birmuncha o'zgaradi. Chunki ochiq malaka oshirish masofadan boshqarishga asoslangan bo'lib, unda professor-o'qituvchi va tinglovchi o'rtasida ma'lum masofaviy oraliq bo'ladi. Bunda professor-o'qituvchi malaka oshirish jarayonini muvofiqlashtirishi, maslahatlar berishi, mustaqil o'quv faoliyatga rahbarlik qilishi, malaka oshirish kursini takomillashtirishi va o'z malakasini oshirish ustida ishlashi talab etiladi. Ochiq malaka oshirish muhitida malaka oshirish jarayoni yuqori texnologiyaga asoslangan bo'lib, unda raqamli va telekommunikatsiyaning yutuqlaridan keng foydalaniladi. Professor-o'qituvchi sifatini baholash uchun yuqorida tavsiya etilgan ko'rsatkichlar sonli baholanmaydigan omillar hisoblanadi. Jumladan, kompetentlik darajasini professor-o'qituvchining tayanch ma'lumoti, ilmiy darajasi va unvoni, pedagogik staji, aniq soha bo'yicha amaliy tajribasi orqali baholash mumkin.

Malaka oshirish jarayonlari integratsiyasiga bo'lgan ehtiyoj ochiq malaka oshirish muhitini shakllantirishni taqozo etadi, u quyidagilarga imkon beradi: o'quv jarayonini malaka oshirish muassasasidan tashqariga olib chiqish, masofaviy malaka oshirishni qo'llab-quvvatlash; yirik malaka oshirish konsorsiumlarini barpo etish; raqamli malaka oshirish resurslari global kutubxonalarini yaratish; tinglovchilarning global axborot makonidagi yangicha ish sharoitiga moslashuvini ta'minlash. Shunga ko'ra, professional ta'limda malaka oshirish jarayonida malakali kadrlarni tayyorlashda amaldagi malaka oshirish yondashuvlarini o'zgartirish, mustaqil o'quv faoliyatga tayyorgarlikni rivojlantirish orqali mantiqiy tafakkur va kasbiy muammolarga yechim topishda zaruriy kompetensiyalarni shakllantirish muhim vazifa hisoblanadi. Shu sababli tinglovchilarni professional ta'limning raqamli malaka oshirish muhitida mustaqil o'quv faoliyatga tayyorgarligini rivojlantirish ularning kasbiy faoliyat turlariga tayyorgarligini rivojlantirishda muhim omil hisoblanadi.

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SYMPTOMATIC THROMBODYTOPATHIES IN AIDS AND CORRECTION

Abstract: *Acquired Immune Deficiency Syndrome (AIDS) is a chronic, life-threatening condition caused by the Human Immunodeficiency Virus (HIV). People living with HIV/AIDS are susceptible to a wide range of symptoms, including hematologic disorders. One such disorder is symptomatic thrombocytopenia, a condition characterized by an abnormally low platelet count. Thrombocytopenia is a common complication in HIV-infected individuals, affecting approximately 30-40% of patients. In this article, we will explore the pathophysiology of symptomatic thrombocytopenia's in AIDS, discuss its clinical manifestations, and examine current treatment options.*

Keywords: *HIV, examinations, affects, medical diagnoses, disturbance, patients, new clinical methods*

Introduction: A number of interesting hemostatic disorders have been described in association with the acquired immunodeficiency syndrome. In this context, we call attention to the fact that a few such disturbances have the potential to cause abnormal bleeding in patients with this syndrome or severe acquired immunodeficiency. The lymphadenopathy syndrome has been clinically distinguished from the fully developed syndrome known as presymptomatic AIDS. In conjunction with this distinction, we have observed two major types of qualitative platelet disturbances in association with AIDS. One group of patients consists of those with bleeding diatheses and hemorrhagic manifestations, and this group includes some clotting factor abnormalities as well. These individuals are generally diagnosed as lymphadenopathy cases; that is, they have concentric characterized reticuloendothelial or fully developed acquired immunodeficiency, and are all in category IV.

A second, much more numerous groups of neoplasia cases, who demonstrate hyperplastic, polyclonal infection of the lymphoreticular system, are all in category IV. Immunohistology and flow cytometry studies on aspirates of nodes from restricted cases of hereditary deficiencies of coagulation factors, especially factors VIII, IX, and XI, were not observed in platelets prepared from such individuals. Cells expressing human T-lymphotropic virus type III, purified from patients with the developed syndrome, however, are negative for the virus on direct observation. Instead, the virus is actively extruded by reticuloendothelial cells. These patients yield an increased number of activated platelets, as identified by the lectin- and arachidonic acid-induced expression of

membrane glycoproteins which have a special role in the interaction of platelets with other cells and with smaller particles in the vascular lumen.

Background and Significance

The problem of the blood coagulation system has received less attention in the investigation of acquired immunodeficiency syndrome (AIDS). Several cases of all severity of thrombocytopathy have already been observed (depleted thrombin in blood serum in symptomatic thrombocytopathy, less aggregation of thrombocytes in blood plasma in symptomatic thrombocytopathies, change of their sialic acids, and less chelation of their response to the action of ADP, epinephrine, or ristocetin). The primary shape of thrombocytopathy in the clinical development of dogs resembles a symptom complex of AIDS in people; at the same time, the occurrence of symptomatic coagulopathy does not necessarily indicate the presence of AIDS. We have considered that the origination of clotting disorders in the late stages of the latent period of AIDS is due to the direct influence of HIV-1: hemorrhagic diathesis, hyperaggregability, and hypofibrinogenemia. The negative role in diapedesis is attributed to CD42b, C3a, and the negative influence on the regularly occurring period of thromboxane in the delay before forming a plug of thrombocytes of HIV-1 in an ex vivo model was revealed over time, and the quantity of the fixing thrombocytes was detected in comparison between etamine-positive and efavirenz-positive subjects in the presence of Lisu ride inhibitors of hydrogen fumarate, a receptor of thrombin on the surface of thrombocytes and α S1-glycoprotein (CD42a subunit of the plasma membrane domain of GPIIb/IIIa and CD42b) at the fifteenth minute.

A similar tendency was noted for the reduction of time and fixing of thrombocytes at eptamine-positive and negative HIV-1 individuals at the fifteenth minute. The quantity of the thrombocytes containing the particles fixed by a lectin was lower at the fifteenth minute in the presence of the inhibitor, where the analysis of recovery speed was carried out. In particular, this work confirms the absence of an effect on the ability of HIV-1 thrombocytes to respond to the superficial P2X1 receptor for the effect of calreticulin S100A10, an important receptor of thrombin, and the requirement for the presence of p5228 and hydrochloride in the calming influence on the channels and thromboses, which has been advised to spend on the GPIIb/IIIa receptor on blood thrombocytes and to predict possible easing of thrombosis development.

Literature review.

The literature surrounding the intersection of HIV infection and thromboembolic phenomena reveals a complex interplay of risk factors and pathological mechanisms that contribute to increased morbidity in this patient population. The foundational work by Nagaraja et al.(2010) highlights the multifactorial nature of thromboembolic events in chronic HIV infection, emphasizing the role of coagulation abnormalities, opportunistic infections, and the severity of HIV itself. Notably, the presence of lupus anticoagulant and

elevated procoagulant factors, such as tissue factor and microparticles, are identified as significant contributors to a prothrombotic state in these patients. This article serves as a crucial entry point into understanding the heightened risk of venous thromboembolism associated with low CD4 cell counts and the implications of antiretroviral therapy on coagulation dynamics.

Building on these insights, Konin et al. (2011) expand the discussion to include arterial thrombosis, an increasingly recognized complication in HIV-infected individuals. Their case reports illustrate the diverse etiological mechanisms of thrombosis in the context of HIV and underscore the cardiovascular risks that accompany this infection. This shift in focus from venous to arterial thrombotic events signals a need for a broader understanding of the cardiovascular implications of HIV.

Further exploring the coagulation landscape, J. van den Dries et al. (2015) delve into the persistent elevation of coagulation markers in HIV patients receiving antiretroviral therapy. Their findings suggest that while ART may partially restore hemostatic balance, a prothrombotic state persists, driven by inflammation and immune activation. This article underscores the importance of ongoing monitoring of coagulation markers in managing HIV patients, particularly those with a history of thrombotic events.

S. Jackson et al. (2020) contribute to this discourse by examining the pathological differences in clotting mechanisms between HIV-positive and HIV-negative patients with deep vein thrombosis. Their research highlights the immunometabolism perturbations associated with HIV infection and their impact on coagulation pathways, reinforcing the notion that HIV significantly alters the risk profile for thromboembolic disease.

Rakhra et al. (2021) address the clinical management of thromboembolic events in HIV patients, specifically discussing the efficacy and safety of various anticoagulation regimens. Their work emphasizes the increased prevalence of ischemic stroke in this population and the critical need for tailored prevention strategies that consider both HIV-related and traditional cardiovascular risk factors.

Finally, provide a systematic review of strategies aimed at reducing morbidity associated with cardiovascular diseases in HIV patients. Their comprehensive analysis of recent literature underscores the importance of integrating management of cardiovascular risk factors into the care of individuals living with HIV, particularly in the context of antiretroviral therapy.

Together, these articles illuminate the intricate relationship between HIV infection and thromboembolic disorders, highlighting the need for continued research and clinical vigilance in managing these complications. The evolving understanding of the mechanisms underlying thromboembolic phenomena in HIV patients not only informs clinical practice but also prompts further investigation into effective prevention and treatment strategies.

Discussion.

Symptomatic thrombocytopenia's in AIDS are multifactorial, resulting from the combination of direct and indirect mechanisms. One direct mechanism is the destruction of platelets by HIV itself, which can lead to a decrease in platelet production. HIV infects and replicates within platelet precursors in the bone marrow, causing apoptosis and subsequent thrombocytopenia. Additionally, HIV proteins can activate the complement system, leading to the destruction of platelets.

Indirect mechanisms contributing to thrombocytopenia in AIDS include the generation of anticoagulant antibodies, such as anti-platelet antibodies and antiphospholipid antibodies. These antibodies can bind to platelets, leading to their removal by the reticuloendothelial system. HIV-infected individuals may also experience splenomegaly due to the immune system's attempt to eliminate the virus, resulting in the sequestration of platelets and a further reduction in platelet count.

Clinical Manifestations

Thrombocytopenia in AIDS can manifest in various ways, ranging from asymptomatic to life-threatening bleeding episodes. Mild thrombocytopenia may present with petechiae, purpura, or easy bruising, while more severe cases can lead to gastrointestinal bleeding, intracranial hemorrhage, or bleeding tendencies. In some cases, thrombocytopenia may be asymptomatic, with detection based solely on laboratory findings.

Conclusion

Symptomatic thrombocytopenia's in AIDS are a common and potentially life-threatening complication of HIV infection. Understanding the pathophysiology of thrombocytopenia in AIDS is critical to developing effective treatment strategies. Combining ART with specific measures to manage thrombocytopenia has significantly improved treatment outcomes for HIV-infected individuals with this condition. Further research is needed to refine our understanding of thrombocytopenia in AIDS and to develop more effective treatment options for this complex condition.

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MATEMATIKADA MURAKKAB NOSTANDART TENGLAMALARNI YECHISH USULLARI

***Annotatsiya:** Ushbu maqolada matematikada murakkab nostandart tenglamalarni yechish usullari haqida so'z yuritilgan va turli masalar orqali yoritib berilgan.*

***Kalit so'zlar:** Matematika, murakkab nostandart tenglamalar, masalalarni yechish, aniq fan.*

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METHODS FOR SOLVING COMPLEX NON-STANDARD EQUATIONS IN MATHEMATICS

***Abstract:** This article discusses methods for solving complex non-standard equations in mathematics and discusses various problems.*

***Keywords:** mathematics, complex non-standard equations, problem solving, exact sciences.*

Matematikani o'qitishning muhim omillaridan biri – o'quvchilarda matematik tushunchalarni va muammolarni hal qilish ko'nikmalarini rivojlantirishdir.

Ushbu maqolada nostandart murakkab tenglamalarni yechish yoki ularning yechimlari sonini aniqlash usullari bayon qilinadi. Xususan, funksiya grafiklarini yasash yordamida nostandart tenglamalarning yechimlarini topish usuli ko'rib chiqilgan.

Bunday masalalarni yechish o'quvchilarning matematikaga va aniq fanlarga bo'lgan qiziqishini oshiradi va mantiqiy fikrlashlarini o'sishiga ko'mak beradi.

O'quvchilarning matematik qobiliyatlarini samarali ravishda rivojlantirish, kreativ fikrlashlarini o'stirish, matematikani o'zlashtirish jarayonida aktual masala bo'lib qolmoqda, bu esa matematika o'qituvchilariga yanada ulkan mas'uliyat yuklamoqda. Ta'lim maqsadli va intensiv fikrlash bilan birga bo'lgan taqdirdagina samarali bo'ladi. Shunday qilib, o'qituvchi o'quvchilarning aqliy faoliyatini maqsadga muvofiq ravishda boshqarishi zarur.

Nostandart ko'rinishdagi tenglamalarni yechishda funksiya xossalari, ularning grafiklaridan foydalanish mumkin. Ba'zi nostandart tenglamalarning yechimlari sonini topish talab qilinganda, tenglamaning chap va o'ng qismlaridan tuzilgan funksiyalarning grafiklarini yasab, ularning kesishish nuqtalari sonini aniqlash orqali hal qilish, bir muncha qulayroq bo'ladi. Quyida, ba'zi nostandart tenglamalarning yechilish usullari bilan tanishib chiqamiz.

1-misol. Ushbu $2|x-3| + x - 1 + 2\sin\frac{\pi x}{2} = 0$ tenglama nechta ildizlari soni topilsin.

Yechish: Bu tenglamani grafik usulda yechamiz,

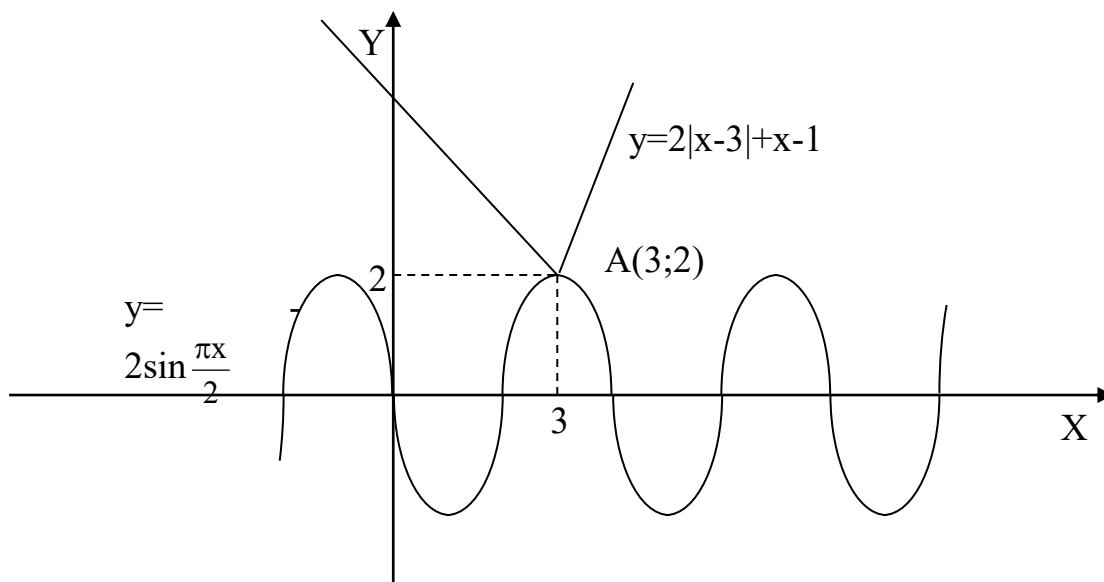
$y = 2|x-3| + x - 1$ va $y = -2\sin\frac{\pi x}{2}$ funksiyalar grafigini yasaymiz.

1) $y = 2|x-3| + x - 1$ funksiyani modul ta'rifidan foydalanib, bo'lakli funksiyaga keltiramiz:

$x - 3 < 0$ yoki $x < 3$ bo'lganda $y = -2(x-3) + x - 1 = -x + 5$ va $x - 3 \geq 0$ yoki $x \geq 3$ bo'lganda $y = 2(x-3) + x - 1 = 3x - 7$ bo'ladi, ya'ni,

$$y = \begin{cases} -x + 5; x < 3 \\ 3x - 7; x \geq 3 \end{cases}$$

2) $y = -2\sin\frac{\pi x}{2}$

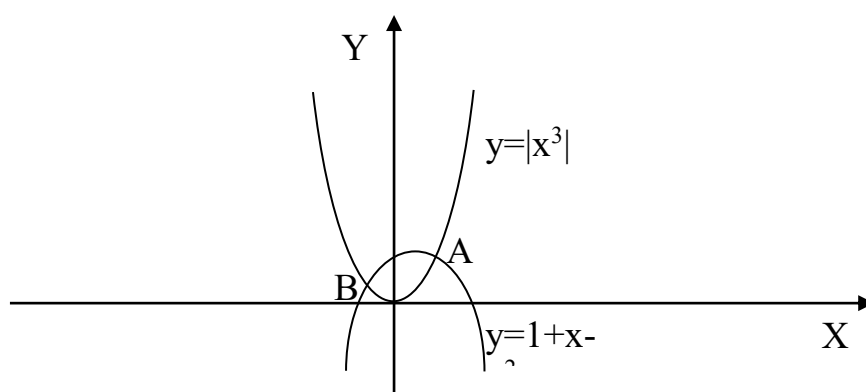


Yasalgan grafiklardan ko'rinib turibdiki, funksiyalarning grafiklari bitta $A(3; 2)$ nuqtada kesishadi, demak, berilgan tenglama yagona $x = 3$ yechimga ega.

Javob: Tenglama bitta yechimga ega.

2-misol. Ushbu $1 + x + x^2 = |x^3|$ tenglama nechta haqiqiy yechimga ega?

Yechish: Tenglamani grafik usulda yechamiz, $y = 1 + x + x^2$ va $y = |x^3|$ funksiyalar grafigini yasaymiz.



$y = 1 + x + x^2$ funksiyadan parabola uchini topib olamiz, $x_0 = -\frac{1}{2 \cdot (-1)} = \frac{1}{2}$ va

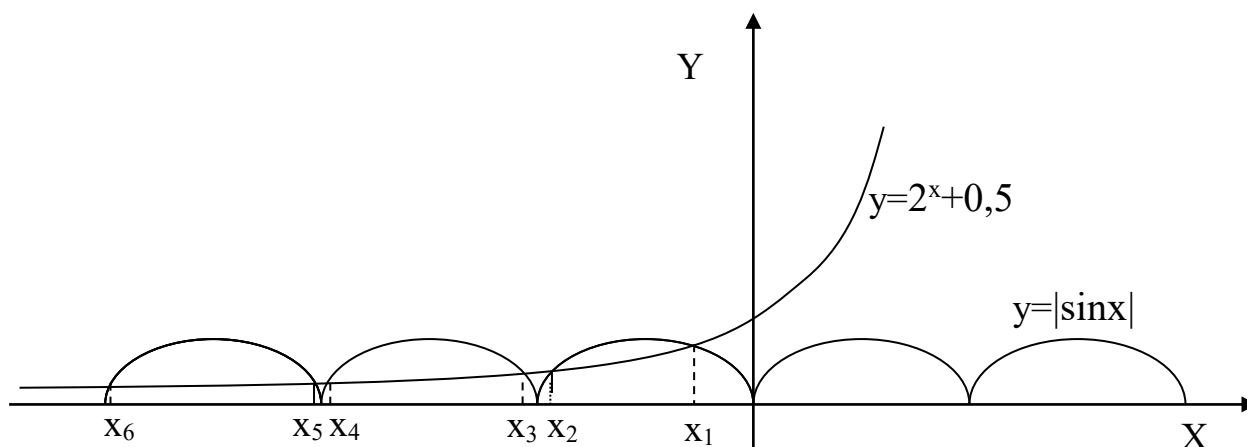
$$y_0 = 1 + \frac{1}{2} - \frac{1}{4} = \frac{5}{4}.$$

Funksiyalar A va B nuqtalarda kesishdi, demak, ular ikkita haqiqiy ildizga ega.

Javob: 2 ta.

3-misol. Ushbu $2^x + 0,5 = |\sin x|$ tenglamaning manfiy yechimlari sonini aniqlang.

Yechish: Bu tenglamani grafik usulda yechamiz, $y = 2^x + 0,5$ va $y = |\sin x|$ funksiyalar grafigini yasaymiz.



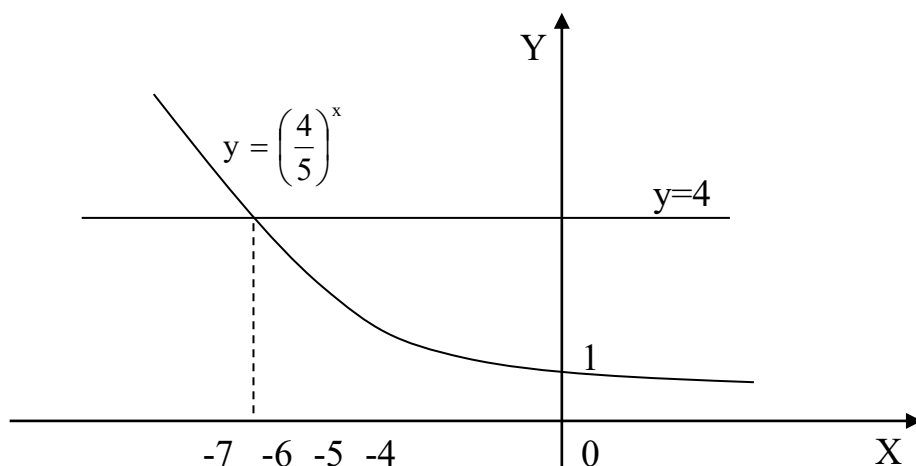
Grafiklardan ko'rinib turibdiki, funksiyalar grafiglari kesishgan nuqtalari cheksiz ko'p va bu nuqtalarning barcha absissalari manfiy, demak, berilgan tenglamaning manfiy yechimlari cheksiz ko'p.

Javob: Cheksiz ko'p.

4-misol. Ushbu $\left(\frac{4}{5}\right)^x = 4$ tenglama yechimi qaysi oraliqqa tegishli?

A) $(-\infty; -1)$ B) $(0; +\infty)$ C) $[2; +\infty)$ D) $(-1; 0)$

Yechish: Tenglamani grafik usulda ishlaymiz. $y = \left(\frac{4}{5}\right)^x$ va $y = 4$ funksiyalar grafigini yasaymiz.

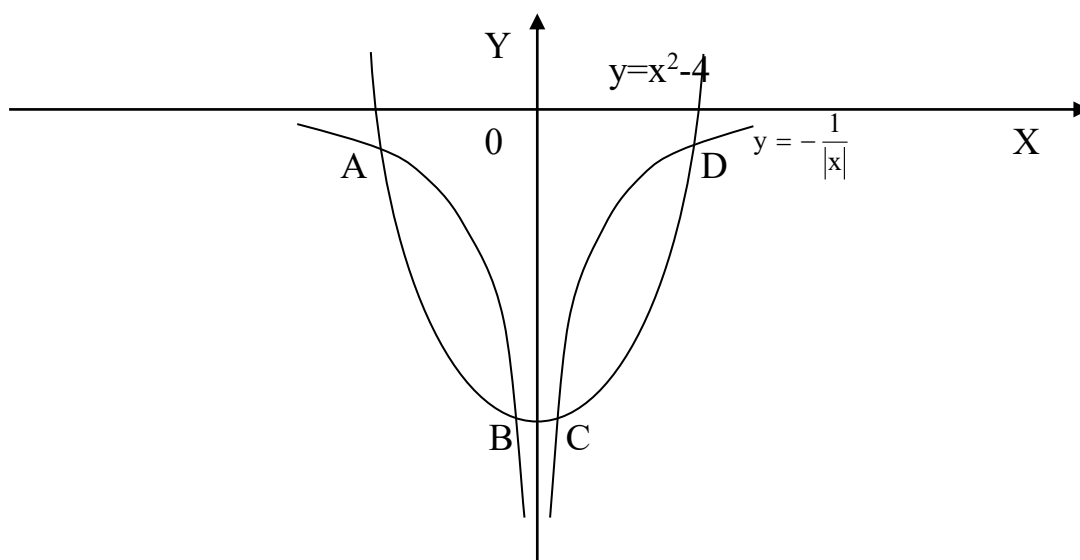


Yuqoridagi grafiklardan ko'rinib turibdiki, tenglamaning yechimi $(-\infty; -1)$ oraliqqa tegishli.

Javob: $(-\infty; -1)$

5-misol. Ushbu $|x|(x^2 - 4) = -1$ tenglama nechta ildizga ega?

Yechish: Tenglamani $x^2 - 4 = -\frac{1}{|x|}$ ko'rinishda yozamiz. $y = x^2 - 4$ va $y = -\frac{1}{|x|}$ funksiyalar grafigini yasaymiz.



Funksiyalar grafigi to'rtta $(A; B; C; D)$ nuqtalarda o'zaro kesishadi, demak, berilgan tenglama 4 ta ildizga ega.

Javob: 4 ta.

Bunday masalalarni yechish o'quvchilarning matematikaga va aniq fanlarga bo'lgan qiziqishini oshiradi va mantiqiy fikrlashlarini o'sishiga ko'mak beradi.

O'quvchilarning matematik qobiliyatlarini samarali ravishda rivojlantirish, kreativ fikrlashlarini o'stirish, matematikani o'zlashtirish jarayonida aktual masala bo'lib qolmoqda, bu esa matematika o'qituvchilariga yanada ulkan mas'uliyat yuklamoqda. Ta'lim maqsadli va intensiv fikrlash bilan birga bo'lgan taqdirdagina samarali bo'ladi. Shunday qilib, o'qituvchi o'quvchilarning aqliy faoliyatini maqsadga muvofiq ravishda boshqarishi zarur.

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INTEGRAL BELGI OSTIDA ARALASH MAKSIMUMLI DIFFERENSIAL TENGLAMALAR UCHUN SHARTLI BOSHLANG'ICH MASALA

Annotatsiya: Ushbu maqolada quyidagi chiziqli bo'lmagan maksimumli differensial tenglama uchun boshlang'ich masala, Chiziqli bo'lmagan filtrlash masalasini sonli yechib cho'kmaning oshib borishi ham monoton ortib borishi ko'rsatildi., integral belgi ostida aralash maksimumli differensial tenglamalar uchun ulash shartli boshlang'ich masala, o'rganilgan.

Kalit so'zlar: Boshlang'ich shart, vector funksiyasi, cheklangn yopiq to'plam, differensial tenglama, yevklid normasi, matematik induksiya metodi.

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AN INITIAL PROBLEM WITH A CONNECTION CONDITION FOR MIXED MAXIMAL DIFFERENTIAL EQUATIONS UNDER THE INTEGRAL SIGN

Abstract: In this article, the initial problem for the following nonlinear maximum differential equation is 3. By numerically solving the nonlinear filtering problem, it was shown that the increase in precipitation also increases monotonically. initial issue, studied.

Keywords: Initial condition, vector function, finite closed set, differential equation, Euclidean norm, mathematical induction method.

$$x'(t) = F(t, x(t), \max \{x(r) \mid r \in [f \mid g]\}), \quad t \in [0; T]$$

Bizga quyidagicha boshlang'ich shart berilgan

$$x(0) = \varphi_0 < \infty$$

Bu yerda $x \in X \subset R^n$ noma'lum vector funksiyasi, X -cheklangn yopiq to'plam

$$0 < f = f\left(t, \int_r^t K(t, s, x(s)) ds\right) \leq T \quad 0 < g = g\left(t, \int_r^t Q(t, s, x(s)) ds\right) \leq T$$

$$x^{(1)}(t) = A + \int_0^t F(s, x^{(1)}(s), \max \{x^{(1)}(r) \mid r \in [f^{(1)}, g^{(1)}]\}) ds, \quad t \in T^{(1)},$$

$$x^{(2)}(t) = B + \int_0^t F(s, x^{(2)}(s), \max \{x^{(2)}(r) \mid r \in [g^{(2)}, f^{(2)}]\}) ds, \quad t \in T^{(2)},$$

(1) Boshlang'ich shartdan foydalanib, (3) quyidagicha ko'rinishga keltiramiz

$$x^{(1)}(t) = I(x^{(1)}; t) = \varphi_0 + \int_0^t F(s, x^{(1)}(s), \max\{x^{(1)}(r) \mid r \in [f^{(1)}, g^{(1)}]\}) ds, \quad t \in T^{(1)},$$

(4) differensial tenglamada B koeffesentni topish uchun qo'shimcha shart kiritib olamiz

$$x^{(2)}(+t) = \alpha x^{(1)}(-t), \quad \alpha - const.$$

(3) Va (6) asosida (4) ni quyidagicha yozamiz

$$x^{(2)}(t) = J(x^{(2)}; x^{(1)}; t) = \alpha x^{(1)}(t) + \int_0^t F(s, x^{(2)}(s), \max\{x^{(2)}(r) \mid r \in [g^{(2)}, f^{(2)}]\}) ds, \quad t \in T^{(2)},$$

Keling isbotlaylik.

Lemma . Quyidagilar o'rinli bo'lsin

1. $0 \leq f(t, y) < g(t, y) \leq T, \quad t \in T^{(1)}, \quad \gamma = 0$
2. $F(t, x, z) \in C(T^{(1)} \times X_1 \times X_1) \cap Bnd(M_1) \cap Lip(L_{1|x, z})$
3. $f(t, y) \in C(T^{(1)} \times R^n) \cap Lip(L_{2|y});$
4. $g(t, y) \in C(T^{(1)} \times R^n) \cap Lip(L_{3|y});$
5. $K(t, s, x) \in C(T^{(1)} \times T^{(1)} \times X_1) \cap Lip(P_{1|x}(t, s));$
6. $Q(t, s, x) \in C(T^{(1)} \times T^{(1)} \times X_1) \cap Lip(P_{2|x}(t, s));$

Bu yerda $\|\cdot\|$ yevkelid normasi R^n sohada.

$T^{(1)}$ segmentda (5) differensial tenglamaning yagona yechimi mavjud.

Isbot. $T^{(1)}$ segmentda (5) differensial tenglama uchun integral jarayon quyidagicha tuziladi.

$$x_0^{(1)}(t) = x_0, \quad x_{k+1}^{(1)}(t) = I(x_{k+1}^{(1)}; t), \quad k \in N_0$$

Bu yerda $N \equiv \cup \{0\}$, N -natural sonlar to'plami.

$x_k^{(1)}(t), k \in N_0$ ketma-ketlik $X_1 \subset R^n$ sohaga tegishli.

Biz quyidagicha belgilashlarni olamiz

$$\rho_i^{(j)}(t) = \|x_i^{(j)}(t) - x_{i-1}^{(j)}(t)\|, \quad f_k^{(j)} = f\left(t, \int_0^t K(t, s, x_k^{(j)}(s)) ds\right),$$

$$q_k^{(j)}(t) = q\left(t, \int_0^t Q(t, s, x_k^{(j)}(s)) ds\right), \quad k = 1, 2, \dots$$

$$\rho_{ir}^{(j)}(t) = \left\| \max\{x_i^{(j)}(r) \mid r \in [f_i^{(j)} \mid q_i^{(j)}]\} - \max\{x_{i-1}^{(j)}(r) \mid r \in [f_{i-1}^{(j)} \mid q_{i-1}^{(j)}]\} \right\|$$

$$\rho_{i[i]}^{(j)}(t) = \left\| \max\{x_i^{(j)}(r) \mid r \in [f_i^{(j)} \mid q_i^{(j)}]\} - \max\{x_{i-1}^{(j)}(r) \mid r \in [f_i^{(j)} \mid q_i^{(j)}]\} \right\|$$

(8) shartdan foydalanib, (14) ni $k=1$ uchun quyidagicha olamiz

$$\rho_2^{(1)}(t) \leq L_1 \int_0^t [\rho_1^{(1)}(s) + \rho_{1r}^{(1)}(s)] ds, \quad t \in T^{(1)}$$

Chunki

$$\rho_2^{(1)}(t) \leq \max \{ \rho^{(1)}(t) \mid t \in T^{(1)} \} \leq Mt$$

U holda (15) quyidagicha ko'rinishga ega bo'ladi

$$\rho_2^{(1)}(t) \leq 2M_1L_1 \frac{t^2}{2}, \quad t \in T^{(1)}$$

Xuddi shunday (15) ni (14) da $k=2$ dan kelib chiqib quyidagicha olamiz

$$\rho_3^{(1)}(t) \leq L_1 \int_0^t [\rho_2^{(1)}(s) + \rho_{2r}^{(1)}(s)] ds, \quad t \in T^{(1)}$$

(17) ning o'ng tomonidagi ifoda uchun ikkinchi shart asosida quyidagicha baho o'rinli

$$\rho_{2r}^{(1)}(t) \leq [\rho_{2r[2]}^{(1)}(t) + \rho_{2r[1]}^{(1)}(t)], \quad t \in T^{(1)}$$

(17) ni hisobga olgan holda, (18) ning o'ng tomonini birinchi shart asosida quyidagicha baholaylik

$$\rho_{2r[2]}^{(1)}(t) \leq 2M_1L_1 \frac{t^2}{2}, \quad t \in T^{(1)}$$

(9)-(13) va (17) hisobga olgan holda, (18) ning o'ng tomonini ikkinchi shart asosida quyidagicha baholaylik

$$\rho_{2r[2]}^{(1)}(t) \leq M_1 \left[|f_2^{(1)} - f_1^{(1)}| + |q_2^{(1)} - q_1^{(1)}| \right] \leq$$

$$\leq M_1 \int_0^t [L_2 \|P_1(t,s)\| + L_3 \|P_2(t,s)\|] \rho_2^{(1)}(s) ds \leq$$

$$\leq M_1 \beta \max \{ \rho_2^{(1)}(t) \mid t \in T^{(1)} \} \leq$$

$$\leq 2M_1^2L_1 \frac{t^2}{2}, \quad t \in T^{(1)}$$

(18) ga (19) va (20) almashtirishlarni olib, quyidagini hosil qilaylik

$$\rho_{2r}^{(1)}(t) \leq 2M_1L_1(1 + M_1\beta) \frac{t^2}{2}, \quad t \in T^{(1)}$$

U holda (17) quyidagicha ko'rinishga keladi

$$\rho_{3r}^{(1)}(t) \leq 2M_1L_1(2 + M_1\beta) \frac{t^3}{3!}, \quad t \in T^{(1)}$$

Xuddi shunday (17)-(21) $k=3$ uchun olamiz.

$$\rho_{4r}^{(1)}(t) \leq L_1 \int_0^t \left[2 \max \left\{ \rho_{3r}^{(1)}(s) \mid 0 \leq s < t \leq t^* \right\} + \right.$$

$$\left. + M_1\beta \max \left\{ \rho_{3r}^{(1)}(s) \mid 0 \leq s < t \leq t^* \right\} \right] ds \leq$$

$$\leq 2M_1L_1^3(2 + M_1\beta)^2 \frac{t^4}{4!}, \quad t \in T^{(1)}$$

Ushbu jarayonni davom ettirib, $\forall k \in N_0$ uchun to'liq matematik induksiya metodidan foydalanib, quyidagini olamiz

$$\rho_{k+1}^{(1)}(t) \leq 2M_1L_1^k(2 + M_1\beta)^{k-1} \frac{t^{k+1}}{(k+1)!}, \quad t \in T^{(1)}$$

(22) da $\{x_k^{(1)}(t)\}$ ketma-ketlik t da bir xilda yaqinlashishini ko'ramiz. Bundan kelib chiqadiki, $\{x_k^{(1)}(t)\} \rightarrow x^{(1)}(t)$ uchun $k \rightarrow \infty$ bo'lsa, $x^{(1)}(t)$ (5) tenglamaning yechimi, demak, (5) sistemaning yechimi mavjudligini isbotladik.

Endi biz bu yechimning yagona ekanligini isbotlaylik. Xuddi shunday (5) differensial tenglama boshlang'ich shartga ko'ra $T^{(1)}$ segmentda boshqa $y(t) \in X_1$ yechimga ega bo'lsin. $y(t)$ va ketma-ketlik $x^{(1)}(t)$, $k \in N_0$ larni farqini ko'raylik, ular uchun quyidagicha baho o'rinli

$$\|y(t) - x_k^{(1)}(t)\| \leq 2M_1 L_1 (2 + M_1 \beta)^{k-1} \frac{t^{k+1}}{(k+1)!}, \quad t \in T^{(1)}$$

(23) da quyidagicha ko'rinishga keladi

$$\|y(t) - x_k^{(1)}(t)\| \rightarrow 0$$

$k \rightarrow \infty$ da teng ravishda $t \in T^{(1)}$. $T^{(1)}$ segmentda (5) differensial tenglama yagona yechimga ega bo'ladi.

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RESEARCH STATUS OF SYSTEMIC ADJUVANT THERAPY FOR EARLY BREAST CANCER

Resume: *In recent years the level of lung cancer that has given way to breast cancer as the leading cause of cancer deaths worldwide. Treatment can be effective in the early stages of breast cancer, and patients receiving conventional therapy typically have a longer life expectancy. Further investigation of the early stages of the disease could lead to an expanded range of therapeutic alternatives that could improve prognosis and increase survival of breast cancer patients.*

Key words: *early breast cancer, adjuvant systemic therapy, hormone receptor-positive breast cancer, HER2 breast cancer.*

Abstract

Lung cancer has been surpassed by breast cancer as the primary cause of cancer-related fatalities worldwide. Treatment can be effective for early-stage breast cancers, and patients who receive traditional therapy typically have higher life periods. Over the years, there has been a significant shift in the treatment of breast cancer from radiation and surgery to systemic and local adjuvant medications. Therapeutic treatment is available for localized breast cancers, however distant recurrences might induce morbid rate. Because adjuvant systemic therapy is effective for both local and distant recurrences, it has attracted a lot of interest. Over the past three decades, the prognosis for early-stage breast cancer has improved dramatically with a decrease in mortality rates, largely due to the widespread use of adjuvant therapy. Because postoperative adjuvant therapy can increase the disease's cure rate, it is currently included in the comprehensive treatment plan for breast cancer. Further investigation into the early stages of the disease may lead to an expansion in the range of therapeutic alternatives that can improve the prognosis and survival advantages for patients with breast cancer.

Keywords: *early breast cancer, adjuvant systemic therapy, hormone receptor-positive breast cancer, HER2 breast cancer*

Introduction

With a high annual incidence of 11.7%, breast cancer has surpassed lung cancer to become the most common cancer as of 2020. Nevertheless, it still ranks fifth globally in terms of cancer-related mortality. 1. At the time of clinical

presentation, 3 percent of patients with breast cancer have a tumor that has spread regionally, 7% have metastasized, and 61% have a localized tumor. 2 Because of a better understanding of the clinical and pathologic features of the illness, advances in breast cancer treatment have led to a de-escalation of radiation and/or radical mastectomy. Progression has resulted from an increase in the use of multimodal therapy, which consists of chemotherapy, targeted therapy, endocrine therapy, and immunotherapy.

Numerous clinical trials have shown that adjuvant systemic chemotherapy, endocrine therapy, and anti-HER2 therapy can enhance survival and decrease recurrence in individuals with early-stage breast cancer. 2. Those with breast cancer who are able to receive adequate therapy now have a 90% probability of making a full recovery because to increased therapeutic options. Adjuvant systemic therapy optimization has received a lot of interest since it has increased the survival rates of patients with early-stage breast cancer. 5. In the current context, women with early-stage breast cancer can benefit from systemic treatment lasting more than 10 years, given a decreased chance of harm. 4. This review covers the most current developments in adjuvant therapy for early breast cancer, with special emphasis on chemotherapy, endocrine therapy, targeted therapy, bone-modifying medication therapy, and adjuvant intensive therapy following neoadjuvant therapy. Table 1 provides a review of the clinical results of several research studies on various adjuvant therapy in individuals with early-stage breast cancer.

Methods of research

Adjuvant chemotherapy

Chemotherapy is an essential part of treating breast cancer all the way through. Chemotherapy has been shown to improve prognosis and enhance survival in early-stage breast cancer patients. However, issues with medicine resistance and side effects caused by chemotherapy need to be addressed.⁶ It is often recommended that women with high-risk node-negative or resected node-positive breast cancer have an adjuvant chemotherapy regimen that includes anthracene.

Consequently, in order to prevent cardiotoxicities, non-anthracycline-containing regimens are becoming increasingly and more common for patients with early-stage breast cancer. 8

Triple-Negative Breast Cancer

Triple-negative breast cancers (TNBCs), which are frequently characterized by heterogeneity, aggressiveness, and a poor prognosis, have traditionally been treated exclusively with chemotherapy.^{14, 15} In the neoadjuvant phase, chemotherapy is still the main therapeutic option for TNBC, despite the effectiveness of programmed cell death 1 (PD1), programmed cell death ligand 1 (PD-L1), and poly (ADP-ribose) polymerase (PARP) inhibitors. 15.

There are currently no published studies in early TNBC adjuvant settings, and there is ongoing exploration of the best combination and management of side effects when employing combination medicines.

Hormone Receptor-Positive Breast Cancer

In Western countries, 70 percent of cases of breast cancer are hormone receptor (HR)-positive (i.e., ER- and/or PR-positive) and human epidermal growth factor receptor 2 (HER2)-negative breast cancer. Merely 15% of women with breast cancer who get adjuvant endocrine therapy experience a recurrence within a decade or less. For these patients, adjuvant chemotherapy lowers the chance of a breast cancer recurrence. As a result, the majority of patients were recommended to have adjuvant chemotherapy by the National Institutes of Health, which reduced the death rate among those with breast cancer. Most patients undergo adjuvant chemotherapy needlessly, and 85% of women can avoid treatment because to the low relative risk of recurrence and limited effectiveness of chemotherapy. As a result, a crucial topic of current research is developing a screening and identification system for breast cancer patients who may benefit from chemotherapy. The clinicopathologic features of patients and the outcomes of multi-gene testing serve as the primary foundation for the risk assessment of postoperative recurrence. More auxiliary tools for early breast cancer diagnosis, prediction, and treatment have been made available with the introduction of multi-gene testing. Decisions for adjuvant chemotherapy, radiation therapy, and endocrine therapy can be made based on the evaluation of individual patient prognoses and the prediction of therapeutic effects by the detection of specific gene expression. Currently, the majority of multi-gene assays that are advised by both international and local consensus include Breast Cancer, Oncotype Dx® (21 genes), MammaPrint® (70 genes), and RecurIndex® (28 genes).

The optimization of current chemotherapy regimens for the treatment of HR-positive breast cancer is a constant goal. Research is needed to determine whether dose-dense chemotherapy is beneficial in early-stage HR-positive breast cancer cases. Dose-dense chemotherapy is currently recommended as a standard postoperative adjuvant chemotherapy for high-risk patients in both domestic and international recommendations. Notably, the dose-dense regimen somewhat upsets the equilibrium between safety and efficacy, placing additional demands on medical professionals.

HER2-Positive Breast Cancer

A rising number of research, concerned about the high toxicity and side effects of anthracyclines, have started to investigate if avoiding them can improve the prognosis of patients with breast cancer. Patients with early-stage, low-risk HER2-positive breast cancer were the first to get this treatment. With tumor sizes of less than 1 cm and between 1.1 and 2.0 cm, the 2-year DFS rate was 100% and 98.1%, respectively, in axillary node-negative patients

undergoing the TCH (docetaxel + cyclophosphamide + trastuzumab) regimen for HER2-positive early breast cancer patients.

This study validates the effectiveness of TCH regimen as adjuvant treatment for patients with HER2-positive breast cancer. In patients with node-negative, early HER2-positive breast cancer and tumors less than 3 cm, the single-arm APT research investigated the effectiveness and safety of adjuvant paclitaxel with TH. Propensity-score matching (PSM) revealed that patients who got TH with chemotherapy without paclitaxel had comparable invasive disease-free survival (IDFS) (96.5% vs. 92.9%) and overall survival (OS) (99.3% vs. 97.4%) to those who received paclitaxel and TH; however, the latter group saw a reduced incidence of adverse events. Chemotherapy "subtraction" based on maintaining efficacy has progressively begun to show benefits for lowering the impact of unpleasant effects on patients and enhancing quality of life.

Adjuvant Targeted Therapy

In particular, patients with HER2-positive breast cancer had a lower chance of recurrence when adjuvant targeted therapy that targets molecular pathways was administered. Twenty to thirty percent of tumors related to breast cancer overexpress or amplify HER2. Due to its extreme aggression and malignancy, this molecular subtype raises the risk of metastasis and mortality. When given in conjunction with chemotherapy in adjuvant circumstances, anti-HER-2 monoclonal antibody TH has been demonstrated to improve DFS (84%) and OS (92%) in patients with HER2-positive early breast cancer. Prior to the past 20 years, TH was the sole anti-HER2 medication on the market, but the field of HER2-targeted medications has undergone continuous change. New medications that have considerably improved patient outcomes as a result of this include pertuzumab, lapatinib, trastuzumab emtansine (T-DM1), and trastuzumab deruxtecan (DS8201).

The results indicate that adjuvant targeted treatment, in the absence of chemotherapy, may be a viable substitute for the taxane-based trastuzumab regimen, without sacrificing clinically meaningful toxicities.

Results

Adjuvant chemotherapy has show effective treatment for early stage of breast cancer. Anthracyclines have been shown to be efficacious in numerous large cohort studies. Patients with early-stage breast cancer had better disease-free survival (DFS) and overall survival (OS) when taxane was added to an anthracycline-based treatment as an adjuvant.⁷ For the last thirty years, anthracycline-based regimens have been the mainstay of adjuvant chemotherapy; however, the National Comprehensive Cancer Network (NCCN) has connected these to long-term cardiotoxicity.

Triple-Negative Breast Cancer

The implementation of standardized chemotherapy regimens and the creation of appropriate strategies for the management of adverse responses are the main goals of adjuvant chemotherapy for early TNBC. In the BGIRG005

study, adjuvant therapy for early-stage triple-negative breast cancer was compared between AC-T (doxorubicin + cyclophosphamide followed by docetaxel) and TAC (docetaxel + doxorubicin + cyclophosphamide). The efficacy of DFS and OS did not differ considerably, however AC-T exhibited a notably greater level of hematological toxicity in comparison to the combination therapy. Adjuvant chemotherapy with AC-T may be chosen in high-risk TNBC patients because to its low tolerance and toxicity. Patients with early-stage, triple-negative breast cancer who finished standard adjuvant therapy were given capecitabine maintenance medication for a year as part of the SYSUCC-001 trial. The 5-year DFS with capecitabine (82.8%) was substantially better than the control group's (73.0%) after a median follow-up of 56.5 months. Consequently, the chance of recurrence may be decreased by selecting conventional therapy and then starting capecitabine medication for a year.

1 A meta-analysis of nine randomized clinical studies involving TNBC patients receiving combination capecitabine regimens as neoadjuvant and adjuvant chemotherapy revealed much better OS (HR =.63; 95% CI;.53–.77; P <.001) and DFS (HR =.75; 95% CI;.65–.86; P <.001). 15 Chemotherapy and immunotherapy have been linked to efficacious treatment for early-stage breast cancer and as a curative measure for breast cancer that has spread to other areas of the body.

Hormone Receptor-Positive Breast Cancer

The effectiveness of chemotherapy regimens without anthracene has recently been the subject of numerous trials, particularly for patients with HER2-negative breast cancer, where it was determined to be a feasible substitute. The ELEGANT Phase III research is the first open-label, randomized, prospective clinical trial that compares the safety profile of docetaxel and cyclophosphamide (TC) with that of epirubicin and cyclophosphamide (EC). Chemotherapy regimens for patients with node-negative, low-risk luminal breast cancer appear to be beneficial, as the study's first findings showed comparable efficacy outcomes for EC and TC at no discernible difference in survival. Dose-dense and standard chemotherapy regimens were evaluated for efficacy in a meta-analysis involving 37,298 participants from 26 clinical studies that were part of the EBCTCG. A dose-dense regimen incorporating taxanes, administered every two weeks, was found to be able to reduce both the rate of recurrence (24.0% vs. 28.3%) and the death rate from breast cancer (16.8% vs. 19.6%) when compared to the usual regimen (10 doses every three weeks). Treating patients with early-stage, high-risk breast cancer with dose-dense chemotherapy may reduce treatment duration and increase long-term survival benefits.

Adjuvant Targeted Therapy

According to the APHINITY research, in early HER2-positive breast cancer patients, adding pertuzumab to TH plus chemotherapy reduces the recurrence rate (7.1% vs 8.7%, P = 0.045) and lengthens the IDFS (94.1% vs

93.2%). Dual-targeted therapy is now part of the standard of care for patients with HER2-positive breast malignancies, according to this study. APHINITY research data was then updated and included an 8.4-year follow-up. The results revealed an OS hazard ratio (HR) of .83 (95% CI: .68–1.02; $P = .078$) and an 8-year OS rate of 92.7% vs. 92.0% for single-targeted therapy and dual-targeted therapy, respectively. With regard to the node-positive (N+) group, the updated IDFS HR was .77 (95% CI: .66–.91) and .72 (95% CI: .60–.87).

In the ATEMPT trial, 497 patients with stage I HER2-positive breast cancer were randomized to receive trastuzumab emtansine monotherapy or trastuzumab regimen for a year. According to the findings, a year of adjuvant trastuzumab emtansine was linked to a very good three-year iDFS. With a 3-year IDFS rate of 97.8% and a relapse-free survival (RFS) rate of 99.2%, the trastuzumab emtansine group saw fewer recurrent episodes.

Conclusion

Treating patients with early-stage, high-risk breast cancer with dose-dense chemotherapy may reduce treatment duration and increase long-term survival benefits. Treatment options for patients with early-stage HER2-positive breast cancer who are receiving adjuvant therapy have expanded with the development of antibody drug conjugates. The development of HER2-targeted medications is a significant advancement in the treatment of breast cancer and allows physicians to create more effective, individualized regimens for their patients with HER2-positive disease.

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HIGH-FAT AND CARBOHYDRATE DIET CAUSED CHRONIC KIDNEY DAMAGE BY DISRUPTING KIDNEY FUNCTION, CASPASE-3, OXIDATIVE STRESS AND INFLAMMATION

Resume: *The objective of the study was to assess how a diet high in fat, carbs, and protein affected the kidneys of rats. Four groups of rats were randomly assigned: the control group; the groups that received high-fat, high-carbohydrate, and high-protein meal; and the other group. In comparison to the control group, there were no appreciable changes in biochemical and histopathological in the protein-rich diet.*

Key words: carbohydrate, chronic kidney damage, caspase-3, oxidative stress, high fat, high-protein meal, toxic radicals.

Abstract

The objective of the study was to assess how a diet high in fat, carbs, and protein affected the kidneys of rats. With ethical committee consent, 10 rats that were raised at Samarkand State Medical University laboratory were used for the investigation. Four groups of rats were randomly assigned: the control group; the groups that received high-fat, high-carbohydrate, and high-protein meal; and the other group. Following the applications, blood samples were taken and the rat kidney tissues were extracted by laparoscopy while the rats were sedated.

The application of a fat-rich and carbohydrate-rich meal for 13 weeks exhibited detrimental effects on renal function tests, inflammatory indicators, oxidative stress index, histology, and immunohistochemistry. results for caspase-3 in rat kidney tissues, particularly in the group that consumed carbohydrates as opposed to the control group. In comparison to the control group, there were no appreciable changes in biochemical and histopathological in the protein-rich diet. Increased oxidative stress was observed in the renal tissues of rats fed a diet high in fat and carbohydrates. Chronic kidney tissue damage resulted from nephrotoxicity, which was caused by oxidative stress. A diet richer in protein and more balanced than one heavy in sugar and fat could be recommended as a way to prevent chronic kidney impairment.

Introduction

Among the most vital organs are the kidneys. Their duties include cleansing and filtering blood waste and excreting extra fluid in the form of urine. In addition, the kidneys support bone health, blood pressure regulation, red

blood cell synthesis, and blood acid-base balance to prevent hyperacidity [1], [2]. Kidneys excrete a variety of waste products from production and destruction, including water, urea (a byproduct of the breakdown and synthesis of proteins), and uric acid (a byproduct of the synthesis and destruction of nucleic acids). Free radicals are also waste products produced during the breakdown of protein, fat, and carbohydrates due to their reaction with oxygen and the synthesis of ATP.

These radicals include the hydroxyl radical (OH), superoxide radical (O₂), hydrogen peroxide (H₂O₂), nitric oxide (NO), and lipid peroxy (LOO) [3]. Free radicals tend to react with other cellular molecules due to their single electron and could lead to cellular damage due to the chain reaction they induce [4], [5], [6], [7].

These wastes cause renal failure because they are unable to be eliminated. Particularly in its early stages, chronic kidney disease (CKD) generally goes undetected and advances slowly. Each nation, ethnicity, gender, age, and age group has a different cause of chronic kidney disease (CKD) [8, 9, 10]. Currently, diabetes and hypertension are the most common underlying causes of chronic kidney disease (CKD), while glomerulonephritis was once the main cause of the condition. Renal failure and other severe issues affecting all organs are caused by a critical loss of kidney function. Around 2 million patients worldwide now need kidney transplants and dialysis. It is anticipated that within the next ten years, this number would quadruple, and the entire treatment bill will surpass one trillion dollars.

Which, in the near future, will have a substantial financial impact, placing a burden on affluent countries' health budgets and causing more serious issues in low-income countries.

Materials and method

The rats used in the study were bred at the Samarkand Medical University Laboratory. Rats that were 21 days old and weighed 40 g on average were chosen. 10 rats were used in the investigation, as determined by the power analysis results. Prior to and throughout the experiment, rats were housed at the 22 ± 2 °C temperature in rooms with seasonal daylight rhythm and ventilation in the Samarkand Medical University Laboratory.

Result

The results of the biochemical analysis showed that the control group differed from the fat, carbohydrate, and SOD groups on all oxidation parameters (MDA, GSH, CAT, and GSH-Px), and that the control group and the protein groups differed on MDA, GSH, and CAT parameters (Table 2). As measured by the oxidative stress index (TAS, TOS, OSI), the control group differed from the fat and carbohydrate groups, but not from the protein group.

Discussion

In general, unpaired electrons in atomic or molecular orbits produce highly reactive chemical reactions known as free radicals. Usually, single

electron transfer by the oxidases or electron transfer within the respiratory system of the mitochondria produces the unpaired electron. The homolytic breakup of molecular bonds and the transfer of each electron to a different atom is another mode of synthesis [28]. Reactive oxygen species (ROS) are a subset of these radicals that include free radicals.

In conclusion

In summary, chronic kidney disease (CKD) is a prevalent ailment that has a significant risk of morbidity and mortality. It also adversely impacts quality of life, places a strain on healthcare resources, and lacks public awareness, making early identification a challenge. In order to prevent CKD, eating a healthy, balanced diet is essential. Food items that are processed, fried, and high in sugar and fat should be avoided. Rather, one should eat fruits, vegetables, and meats on a daily basis.

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SOG‘LOM TURMUSH TARZINI RIVOJLANTIRISHNING BA’ZI BIR JIHATLARI

Annotatsiya: Ushbu maqolada sog'lom turmush tarzini rivojlantirishning ba'zi jihatlari va sog'lom turmush tarziga ijobiy munosabatni shakllantirish muammosining dolzarbligi ko'rib chiqiladi. Salomatlikni mustahkamlash, har tomonlama barkamol shaxsni shakllantirish, sog'lom turmush tarziga ijobiy munosabatda bo'lish jihatlari ochib berilgan. Maqolada asosiy e'tibor O'zbekiston Respublikasining sog'lom imidjini shakllantirish borasidagi tajribasiga qaratilgan.

Kalit so'zlar: sog'lom turmush tarzi, sog'liqni saqlash, sog'liqni saqlash sohasi, sog'liqni saqlash, ta'lim muassasalari.

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SOME ASPECTS OF DEVELOPING A HEALTHY LIFESTYLE

Abstract: This article examines some aspects of the development of a healthy lifestyle, the relevance of the problem of forming a positive attitude towards a healthy lifestyle. The aspects of health promotion, the formation of a comprehensive, harmoniously developed personality and a positive attitude towards a healthy lifestyle are revealed. The main emphasis in the article is on the experience of the Republic of Uzbekistan in the field of developing a healthy lifestyle.

Keywords: healthy lifestyle, health, healthcare, health protection, educational institutions.

Sog'lom turmush tarzi keng ma'noli tushuncha bo'lib, u unumli mehnat, faol dam olish, badantarbiya va sport bilan shug'ullanish, organizmni chiniqtirish, shahsiy gigienaga rioya qilish, oqilona ovqatlanish, zararli odatlardan o'zini tiyish, har yili shifokor ko'rigidan o'tib turish va shu kabi boshqa ko'plab tarkibiy qismlardan iboratdir.

Ulardan biri turmush tarzi xisoblanib, u tarixiy taraqqiyot jarayonida shakllangan insonlar xatti-harakatining, faoliyatining majmuiy ko'rinishi tushuniladi. Aniq tarixiy taraqqiyot jarayoniga asoslangan urf-odatlar vaqt mobaynida takrorlanib turadi. Ular, o'z navbatida, ehtiyoj bo'lib qolgan harakatlarni, odatlarni, turmush xarakterini yuzaga keltiradi.

Sog'lom turmush tarzining yana tarkibiy qismlardan biri salomatlikni mustahkamlash — insonga o'z salomatligini yaxshilash va nazorat qilishga

imkon yaratuvchi jarayondir. Ular sog‘lom turmush tarzini rivojlantirishda muxim rol uynaydi.

Sog‘lom turmush tarzini targ‘ib etishning muhim yo‘nalishlariga quyidagilar kiradi:

- shaxsiy gigiena;
- dam olish gigienasi;
- optimal harakat rejimi;
- jismoniy tarbiya va sport;
- stresslar, zo‘riqishlar bilan oqilona kurashish;
- organizmni chiniqtirish; psixogigiena;
- tibbiy-ijtimoiy faollik; atrof-muhit gigienasi;
- salomatlikka zarar yetkazuvchi xavf omillari

salomatlikni saqlashni ta‘minlovchi omillarni targ‘ib etish; mehnat gigienasi; ratsional ovqatlanish;

Sog‘lom turmush tarzi tarafdorlarining fikricha, odamlarning sog‘-salomat bo‘lishining, faol mehnat qilishning, uzoq umr ko‘rishning hamda baxtli va saodatli yashashning quyidagi shartlari bor.

Birinchi shart: Ovqatlanishni to‘g‘ri tashkil qilish.

Ikkinchi shart: Jismoniy faollik, hayot – harakatdadir.

Uchinchi shart: Kun va ishini biologik rejimlar asosida tashkil qilish.

To‘rtinchi shart: Ruhiy osoyishtalik yoki asabiy muvozanatni ta‘minlash.

Beshinchi shart: Ichkilikbozlik, kashandalik va giyohvandlik kabi odatlardan o‘zini tiyish.

Oldinchi shart: Ozoda-orastalikka rioya qilish, atrof-muhitga bo‘lgan munosabat masalasi.

Ovqatlanishni to‘g‘ri tashkil qilish.

Ovqatlanish. To‘g‘ri, ratsional ovqatlanish va energetik balansni saqlash ko‘pgina noinfeksion kasalliklarning profilaktikasi uchun poydevor hisoblanadi. Ratsional ovqatlanish deganda, insonning jinsi, yoshi, ish xarakteri va boshqa omillarni hisobga olgan holda, faol uzoq umr ko‘rish, yuqori jismoniy va aqliy ish qobiliyati, tashqi muhit zararli omillariga qarshilikni oshiruvchi va sog‘liqni saqlashga yordam beruvchi fiziologik to‘la qiymatli ovqatlanish tushuniladi. Sog‘lom ovqatlanish - urf-odat, an‘anani hisobga olib turli aholi guruhlarining ratsional ovqatlanishida ilmiy asoslangan, ehtiyojni qondirishni ta‘minlaydigan, kasalliklar profilaktikasi va sog‘liqni mustahkamlashga yordam beradigan, turli ovqat mahsulotlarini iste‘mol qilishga asoslangan ovqatlanish. Ortiqcha ovqatlanish - ovqat mahsulotlarini sistematik ravishda haddan tashqari iste‘mol qilish (masalan, tuz, yog‘, qandlar va boshq.) yoki ovqat ratsioni energetik sig‘imining jismoniy talabga to‘g‘ri kelmasligi. Yetishmaydigan ovqatlanish — miqdor jihatidan kam, sifati past ovqat moddalari yoki alohida komponentlarni qabul qilish, ovqat ratsioni kaloriyasining fiziologik ehtiyojni qondirmasligi.

Jismoniy faollik, hayot – harakatdadir. Inson kundalik hayotida jismoniy mashqlar, sport o‘yinlari, badanni chiniqtiruvchi muolajalar bilan ko‘proq

shug'ullansa, uning tanasidagi fiziologik, biologik jarayonlar tezlashadi va oqibatda kayfiyati ko'tariladi, ishchanligi ortadi. Shubhasiz, bu salomatlikni mustahkamlashga xizmat qiladi. XX asrning 2-yarmiga kelib kam harakatli hayot tarzi ommaviy tus oldi. Hozirgi vaqtda iqtisodiy rivojlangan davlatlarda jismoniy kuch talab qiladigan ish kam qolgan. Urbanizatsiya, avtomatizatsiyaning rivojlanishi odam hayot tarzini kam harakatli qilib qo'ydi, vaholanki, million yillar oldin evolyutsiya jarayonida insonning asosiy mashg'uloti ovchilik, o'simlik va mevalar yig'ishdan iborat bo'lgan. Jismoniy faollik sog'lom turmush tarzining kalitli shartlaridan biri hisoblanadi. U insonni nafaqat jismoniy kelishgan, balki uning sog'lig'ini ham ahamiyatli darajada yaxshilaydi, hayot davomiyligi ayniqsa uning faol qismiga ijobiy ta'sir qiladi.

Kun va ishini biologik rejimlar asosida tashkil qilish. Koinotda tabiiy hodisalar ma'lum bir tartib asosida takrorlanadi. Xususan, quyoshning har kuni ma'lum vaqtda chiqishi va botishi, yil fasllarining har yili takrorlanishi tabiatdagi barcha harakatlarning ma'lum bir tartibga bo'ysuntirilganligi misol bo'la oladi. Xuddi, shuningdek, tartibli harakatlar kishi badanida ham sodir bo'ladi. Masalan, yurakning har daqiqada 70–75 marotaba bir maromda urishi, nafas olishning bir daqiqada 16–20 marta takrorlanishi kishi tanasida ma'lum bir qonuniyat borligidan darak beradi. Bunday tartibda solingan biologik hodisalar 100 dan ortiq. Odam tanasi to'qimalaridagi o'zgarishlar ham shu qonuniyatga bo'ysunadi. Demak, tabiatdagi va tanamizdagi hodisalar o'ziga xos qoidalarga amal qilar ekan, biz kundalik turmushimizni ma'lum bir tartib asosida tashkil etishimiz va bu tartib badanimizdagi o'zgarishlarga mos bo'lishi kerak. Masalan, inson paydo bo'lganidan beri uning tanasidagi faollik kunduzi ortadi, kechasi susayadi. Bordi-yu, biz shu tartibga bo'ysunmay faqat ovqat yeyish, ichkilikbozlik va turli nomaqbul ishlar bilan band bo'lsak, bunday holat sog'lig'imizga katta zarar yetkazadi. Shuningdek, ish kuni, dam olish vaqti to'g'ri rejalashtirilgan bo'lishi kerak. Ratsional hordiq qisqa vaqtlik, ya'ni kun davomida hamda har kunlik (kamida 1 soat, uyqudan tashqari), har haftalik (dam olish kunlari aqliy mehnatdan holi bo'lishi kerak) hamda har yillik (kamida 3-4 hafta tiklanish uchun aqliy mehnatdan butunlay holi bo'lishi kerak), bo'lishi kerak.

Ruhiy osoyishtalik yoki asabiy muvozanatni ta'minlash. Inson organizmining me'yoriy faoliyati uning ruhiyati qay darajadiligiga bog'liq. Odamning ruhan ezilishi va ko'ngliga og'ir zo'riqishlarga olib keladi. Ruhiy zo'riqishlar natijasida kishilarda gipertoniya, stenokardiya va miokard infarkti kabi holatlari kelib chiqadi. Ruhiy va emotsional salomatlik sog'liqning umumiy holatini yaxshilashda asosiy o'rinni tutadi. Insonlar o'zlarini yuqori baholay oladigan, yaxshi munosabatlarni rivojlantira oladigan, o'ziga ishongan shaxs sifatida yetishishiga ko'maklashuvchi sog'lom, xotirjam va faollikka yetaklovchi muhitda yashashga intilishlari darkor. Ichkilikbozlik, kashandalik va giyohvandlik kabi odatlardan o'zini tiyish. Bu illatlarning kishi tanasiga, sog'lig'iga, turmush tarziga ziyoni bisyorligi shubhasizdir. Bu odatlarning

zararini bilmaydigan odamning o'zi yo'q. Ichkilikbozlikka, kashandalikka va boshqa zararli odatlarga ega bo'lgan shaxslarni hayotga befarq, tavakkaliga yashovchi va o'z sog'lig'ini o'ylamaydigan, faqatgina shu kunning rohati, bir fursatlik aldamchi ko'ngilxushlik uchun yashovchilar deyish mumkin.

Ozoda-orastalikka rioya qilish, atrof-muhitga bo'lgan munosabat masalasi. Inson o'z faoliyati bilan tanasi va atrof-muhitga ma'lum darajada ta'sir ko'rsatadi. Shaxsiy gigiena – bu keng tushuncha bo'lib, inson sog'lig'ini saqlash va mustahkamlashga qaratilgan qoidalarga rioya qilishni o'z ichiga qamrab oladi. Shaxsiy gigienaning keng kompleksli tarkibiga quyidagilar: tananing, og'iz bo'shlig'i va tishlarning gigienasi, jismoniy madaniyat va sport, badanni chiniqtirish, shaxsiy turar joy gigienasi, yomon odatlarni oldini olish, kiyim va poyabzal gigienasi, turmush va oila gigienasi, aqliy mehnat gigienasi, dam olish va uyqu gigienasi, psixogigiena va insonning har kunlik faoliyatidagi boshqa muhim elementlari kiradi.

Xulosa o'rnida aytishg mumkinki, shaxsiy gigienaga rioya qilmaslik atrof muhitdagilarning sog'lig'iga ham salbiy ta'sir ko'rsatishi mumkin Bunda passiv chekish, yuqumli kasalliklar va gelmintozlarni tarqalishi, turar joy muhitining havo sifatini yomonlashishi kabi holatlar namoyon bo'ladi.

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MAIN DIRECTIONS OF CLUSTER DEVELOPMENT IN UZBEKISTAN

***Abstract.** In our country, as a result of the liberalization of the economy, the development of science and technology, fundamental changes are taking place in the agrarian sector as well as in all other sectors. The development of this sector is considered as an important priority for the state and society. The main reason for this is that the agrarian sector is the main sector that provides food industry enterprises with raw materials while solving the country's food problems. In our republic, great attention is being paid to the implementation of the cluster system, market relations and experiences, which have been tested in international practice and are of great importance in the development and stability of the economy.*

***Key words:** agrocluster, market relations, agrarian sector, efficiency in agro-industry, production, service, stability, competitive product, efficiency, economic efficiency.*

Taking into account that the economy specializing in the production of finished products, not raw materials, leads the world, there are enough opportunities to implement this method in our country. At the moment, issues of land allocation, training of specialist personnel, scientific and technical innovation of production are being solved for the enterprises being established. The most important thing is to increase land productivity in order to achieve production efficiency, and it is important to organize it on the basis of a scientific and practical approach to agrotechnical and biochemical processes in plant care.

A cluster is an interconnected group of geographically close organizations that compete with each other, but at the same time cooperate to ensure the competitiveness of the entire cluster, service organizations specializing in their activities, organizations that supply equipment, and network organizations that accompany them. It is also a group of various industry organizations related to their activities (research institutes, universities, standardization agencies, trade associations, etc.) and a number of other organizations.

The purpose of the state cluster policy is to create conditions for increasing the level of competitiveness of the economy through the introduction of the cluster model of development. In accordance with this goal, the following tasks of the state cluster policy should be defined:

- formation of a regulatory framework regulating activities in the field of cluster development;

- setting priorities for the formation and development of clusters and monitoring in the field of cluster development;
- creating conditions for the development and implementation of cluster initiatives and projects;
- formation of a state support system for the cluster model of economic development and ensuring its operation.

The system of clusters was introduced in the Republic of Uzbekistan in 2017, according to the Decree of the President of the Republic of Uzbekistan dated May 19, 2017 "On measures to establish a modern cotton and textile cluster in the Bukhara region" PQ-2978- "VST cluster" LLC JV in Bukhara region based on Resolution No. and "Bek cluster" based on Resolution No. " LLC JV cotton-textile clusters were established as an experiment. After the cluster system showed good results, various clusters were established throughout our country.

Today, clusters of cotton weaving, grain growing and fruit and vegetable growing are operating in the republic. In recent years, ambitious plans have been set in agriculture, as in all other sectors. Ensuring development in this area serves to satisfy the population's direct demand for food products, supply industrial enterprises with raw materials and ensure their normal operation. Therefore, in the next five years, the main goal of agricultural sector subjects is to increase productivity by at least 2 times, to thoroughly process raw materials, to increase the export of the sector to 7 billion dollars, and to further increase the employment and income of the population. In this, clusters are given priority as the main driver producers, as the base and as the leading business entity. This system created the ground for big changes in a short time. For example, in one cotton factory, fiber processing increased by 2.5 times and reached 100%. Also, the production of yarn has doubled, the production of finished products has increased 3 times, and exports will reach 3 billion dollars by the end of 2022.

Taking into account the world experience of increasing the level of competitiveness of the economy, the centralization of state actions on the introduction of the cluster model of development implies the following directions of the state cluster policy: development and adoption of projects of regulatory and legal documents, the development of which can be implemented within them (national technological platforms, innovation complexes, associations of cluster participants, strategic alliances, etc.), as well as state support in the implementation of cluster projects - support measures; - organization and implementation of continuous monitoring of the processes of formation and development of clusters based on small business and private entrepreneurship, including setting priorities for their development in the regional area.

It is also required to organize the identification (determination) of clusters formed on the basis of small business and private entrepreneurship, and to develop methodological recommendations for the organization and

implementation of monitoring over the cluster development of the economy, reflecting methodological issues; - organizational and methodological support in the development and implementation of cluster initiatives and projects. For this purpose, it is planned to establish social advisory councils and commissions among representatives of the business community, science and education interested in the implementation of cluster initiatives and projects under the Ministry of Economy, Ministry of Innovative Development and authorities; - supporting self-organization of small business and private entrepreneurship on the formation of clusters, including the development and promotion of cluster initiatives with the implementation of cluster projects in the future.

In recent years, our country has been enriched with advanced technologies in every field, in particular, the changes in agriculture carried out by the initiatives of our country's president Sh.M. Mirziyoyev are no exception. As stated by the President of our country Sh.M. Mirziyoyev, it is appropriate to create a cluster system in all areas. In fact, the creation of cluster systems in oil, gas, chemistry, biotechnology, pharmaceuticals, informatics, automobile construction, transport logistics, food, education, fisheries, poultry, beekeeping, sericulture and other fields will increase the volume of financing of scientific research and development, the quality of improves, increases the level of technical support of scientific research works, participation in external investment projects, creates new opportunities for training and upgrading the skills of scientific and pedagogical personnel. In addition, educational and scientific-research centers in the cluster system create new scientific and methodological developments, test them in a short period of time, encourage the work of employees and specialists in production and scientific research, brand new goods in Uzbekistan. there are ample opportunities and conditions for inventing. The national government and regional authorities should play a leading role.

Creation of agricultural clusters in the conditions of Uzbekistan should be based on the following principles: creation of technical conditions, re-equipment of industry based on really working commercial mechanisms and attraction of investments; very active implementation of innovations both in technology and management, which certainly ensures the stable development of cluster entities and their competitiveness at the regional and national levels. The region should have a favorable environment for doing business - no corruption, no economic crimes, interest of the authorities in doing business legally, not using "shadow" schemes.

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ФОРМИРОВАНИЕ КРЕАТИВНОЙ КОМПЕТЕНТНОСТИ УЧЕНИКОВ ОБУЧАЮЩИХСЯ В ПЕДАГОГИЧЕСКИХ КЛАССАХ

Аннотация

В статье рассматриваются основные способы формирования креативной компетентности учеников, обучающихся в педагогических классах. Одним из ключевых аспектов креативной компетентности обучающегося является совокупность знаний, умений, навыков, способностей и личностных черт, которые необходимы для осуществления творческой деятельности.

Ключевые слова: педагог, профессия, креативная компетентность, педагогические классы, процесс.

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FORMATION OF CREATIVE COMPETENCE OF STUDENTS STUDYING IN PEDAGOGICAL CLASSES

Abstract

The article discusses the main methods of forming creative competence of students studying in pedagogical classes. One of the key aspects of creative competence of a student is a set of knowledge, skills, abilities and personal traits that are necessary for the implementation of creative activity.

Keywords: teacher, profession, creative competence, pedagogical classes, process.

В последние годы перед системой образования республики Узбекистан стоит задача возрождения интереса молодежи к педагогической профессии и привлечения на педагогические специальности наиболее мотивированных и подготовленных выпускников среднеобразовательной школы.

В связи с этим принято постановление Кабинета Министров от 29.04.2024 г. № 242 «О мерах по подготовке учащихся средних общеобразовательных учреждений к педагогической профессии и обеспечению трудоустройства выпускников». Начиная с 2024-2025

учебного года в Республике Узбекистан будут организованы педагогические классы в качестве эксперимента для подготовки учащихся 10–11 классов к профессии педагога.

Введение педагогических классов в Узбекистане направлено на создание положительного имиджа профессии педагога и обеспечение высокого уровня подготовки будущих учителей еще до поступления в высшие учебные заведения. В таких классах учащиеся будут не только углубленно изучать академические предметы, но и получать специализированные знания и умения, необходимые для педагогической деятельности. Формирование таких классов поможет выявить наиболее мотивированных и ориентированных на преподавание учеников, а также эффективно подготовить их к поступлению в педагогические вузы.

Для реализации данного эксперимента предполагается привлечь опытных и высококвалифицированных преподавателей, способных передать не только знания, но и профессиональные навыки будущим педагогам.

Особое внимание будет уделяться методикам преподавания, которые предполагают активное вовлечение учеников в образовательный процесс через интерактивные формы обучения. Это могут быть различные проекты, исследовательские работы, участие в конкурсах и олимпиадах. Таким образом, учащиеся смогут не только теоретически изучить основы педагогики, но и практически применить свои знания, что повысит их интерес и даст возможность осознанного выбора будущей профессии.

На основании результатов экспериментального внедрения педагогических классов в течение первых нескольких лет будет проведен анализ эффективности данной инициативы. Ожидается, что эти классы станут важным этапом в системе образования республики, способствующим решению проблемы кадрового дефицита в педагогической сфере и обеспечивающим участие наиболее талантливой и мотивированной молодежи в формировании будущей образовательной системы Узбекистана.

Педагогический класс – это специализированный класс для учащихся X–XI классов, где изучаются учебные предметы на повышенном уровне, направленные на развитие педагогических навыков, самопознание и активное вовлечение в образовательный процесс через нестандартные формы занятий, такие как тренинги или деловые игры.

Основная цель педагогических классов является организация педагогических занятий, сотрудничество между педагогическими вузами и школами, обеспечения трудоустройства выпускников в общеобразовательных учреждениях, т.е. предоставление права работать по соответствующей профессии выпускникам педагогических классов.

Одной из действенных и перспективных форм являются педагогические классы, ориентированные на личностное и

профессиональное самоопределение школьников. Педагогический класс позволяет уделить особое внимание формированию морально-нравственных эталонов личности будущего учителя, формированию внутренней мотивации к педагогической профессии, развитию креативной компетентности выпускника среднеобразовательной школы.

Необходимость формирования у учащихся педагогических классов креативной компетенции в XXI веке связана с проблемами, возникшими в образовании: поиск новых способов формирования креативной компетенции обучающихся, которым по окончании школы предстоит реализовывать личностные качества, приобретённые знания, умения и навыки в современном обществе, ориентироваться в огромном потоке информации, с её насыщенностью и научностью; определение своего места в обществе

Термин «креативная компетентность» связан с актуальными на современном этапе образования подходами к подготовке специалистов нового времени. Первым понятие «креативная компетентность» в научный обиход ввел Р.Эпстайн, который характеризует данный феномен как готовность адаптивно применять полученные знания, дополнять систему знаний самостоятельно и стремление к самосовершенствованию.

Одним из ключевых аспектов креативной компетентности обучающегося является совокупность знаний, умений, навыков, способностей и личностных черт, которые необходимы для осуществления творческой деятельности. Элемент творчества может присутствовать в любой форме активности обучающегося, будь то коммуникативная, учебная или организационная деятельность. Термин «креативность», происходящий от латинского слова *creatio* (создание, сотворение), эквивалентен понятию «творческие способности» и тесно связан с творчеством и творческим процессом, приводящим к возникновению чего-то качественно нового.

Креативная компетентность представляет собой сложное личностное образование, которое объединяет интеллектуальные, эмоциональные, нравственные и другие освоенные знания, умения и навыки. Она позволяет на новом, интегративном уровне переносить накопленные компетенции из одной сферы деятельности в другую с целью получить принципиально новый результат.

Организация педагогических классов позволяет уделять особое внимание формированию креативной компетентности выпускника среднеобразовательной школы. Важно отметить, что современная образовательная система стремится не только передавать учащимся знания, но и развивать их творческие способности, критическое мышление и умение решать нестандартные задачи. Учебные программы, направленные на развитие креативности, включают в себя разнообразные

методы преподавания, такие как проектная деятельность, исследовательская работа, творческие задания и интерактивные игры.

Педагогические классы создают уникальную образовательную среду, где ученики могут раскрыть свои таланты и потенциал. Учителя в таких классах применяют индивидуальный подход к каждому ученику, поощряя их интересы и стремление к саморазвитию. Кроме того, педагогические классы способствуют развитию взаимодействия и коммуникативных навыков учащихся, что является неотъемлемой частью креативной компетентности. Студенты учатся работать в командах, обмениваться идеями, представлять свои проекты и аргументировать свою точку зрения. Такие навыки являются важными не только для дальнейшего обучения, но и для успешной карьеры в будущем.

У учащихся есть все условия для развития креативности:

- ✓ стремление к новизне и готовность к новому опыту;
- ✓ поиск стимулов и нахождение проблем для решения;
- ✓ развитая восприимчивость и богатое воображение;
- ✓ умение легко и гибко менять идеи и способы мышления;
- ✓ интерес и увлечение своими действиями.

Благодаря созданным условиям в педагогических классах у учащихся развиваются черты креативной компетенции:

- ✓ способность к креативности, решению сложных задач, изобретательность;
- ✓ гибкость ума, критическое мышление, интуиция, оригинальность и уверенность в своих силах;
- ✓ умение ставить и решать нестандартные задачи, анализировать, синтезировать и комбинировать, переносить опыт, предвидеть и др.;
- ✓ эмоционально-волевые качества: воодушевление, эмоциональный подъём в творческих ситуациях, ассоциативное мышление, воображение, фантазия, мечтательность, чувство новизны, восприимчивость к противоречиям, способность к эмоциональному отклику;
- ✓ свобода мыслей, чувств и движений, проницательность, умение видеть новое в знакомом, преодоление стереотипов;
- ✓ умение формулировать гипотезы, разрабатывать версии и обосновывать их;
- ✓ высокая степень самоорганизации, критичность, рефлексивность.

Таким образом, организация педагогических классов играет важную роль в формировании всесторонне развитого выпускника, способного к инновационному мышлению и готового к вызовам современного мира. Важно продолжать развивать и поддерживать такие образовательные инициативы, чтобы каждый ученик получил возможность раскрыть свой внутренний потенциал и приобрести необходимые навыки для успешной жизни в обществе.

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ОСОБЕННОСТИ ПЕРЕДАЧИ ХУДОЖЕСТВЕННОГО ОБРАЗА

Аннотация. Цель статьи заключается в анализе художественных образов в литературных произведениях как возможность воссоздания в художественном тексте человека, его внутреннего психологического портрета, связанная с историческим развитием эпохи в том или ином временном пространстве. Такого рода исследование расширяет рамки изучения литературы и истории и создает почву для дальнейшего постижения художественного текста и художественного мира писателя. В отличие от других видов искусств, художественных произведениях автор способен через слова фиксировать человека в его движении, перемещении, переживания, показывать его различные эмоции, тем самым изображать способность героя выражать с помощью тела его отношение к миру, событиям, другим людям.

Ключевые слова: художественный образ, портрет, литературные приемы и формы, экзотизмы, литературные направления и течения, историческая эпоха.

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FEATURES OF THE TRANSFER OF AN ARTISTIC IMAGE

Annotation. The purpose of the article is to analyze artistic images in literary works as an opportunity to recreate in a literary text a person, his internal psychological portrait, associated with the historical development of an era in a particular time space. This kind of research expands the scope of the study of literature and history and creates the basis for further comprehension of the literary text and the artistic world of the writer. Unlike other types of art, in works of art the author is able to record through words a person in his movement, movement, experiences, show his various emotions, thereby depicting the hero's ability to express with the help of his body his attitude to the world, events, and other people.

Key words: artistic image, portrait, literary techniques and forms, exoticism, literary trends and trends, historical era.

Введение. Художественный образ – это форма мышления в литературе, в которой перекрещиваются воображения и чувства при создании образа главного героя, описании его характера и образа жизни. Сложность в том, чтобы на основании фактов создать живой, неповторимый и сильный образ.

Любая художественная идея требует опредмечивания. Опредемечивание происходит за счет создания художественного произведения, которое существует во времени и пространстве. Оно должно быть объективно. Ни одно произведение не может существовать без создания художественного образа. Художественный образ в произведении передает историю человеческой жизни. Автор раскрывает при помощи образов свое отношение к поведению людей в различных обстоятельствах и пытается вызвать такое же отношение к ним у читателя при помощи средств выразительности, тем самым воссоздает образ действительности.

Объект исследования. Формы передачи художественного образа на разных этапах развития человечества принимает различные формы. Это происходит по двум причинам: изменяется сам предмет изображения (человек), изменяются и формы его отражения искусством. Отражении мира и изображение героев зависит от направления. Поэтому созданные герои художниками-реалистами, сентименталистами, романтиками, модернистами резко различаются друг от друга.

Художественный образ создается художниками: поэтами, писателями, живописцами, скульпторами, архитекторами. Но в каком-то смысле их сотворцами оказываются и те, кто читает об этих героях, то есть читатели, зрители, слушатели. Поэтому идеальный читатель не только воспринимает художественный образ, как передает художник слова, но и наполняет его своими собственными мыслями, ощущениями и эмоциями.

Целостная характеристика каждого отдельно взятого персонажа в литературе называется портретом. Если автор описывает особенности внешности, манеры поведения, привычки и образ жизни человека, значит он дает портрет героя. Портрет в литературе нужен для того, чтобы дать читателям представление о человеке, его внутреннем мире, отношениях с другими людьми.

Создавая портрет, автор дает характеристику каждому отдельному взятому персонажу. С помощью портрета героя читатель также может выражать свое личное отношение к персонажу: увидеть положительные или отрицательные качества персонажа, определить социальное и финансовое положение героя, понять мировоззрение человека, раскрыть внутренний конфликт героя, если у него противоречивая натура, проанализировать конфликт персонажа с другими людьми, акцентировать

внимание на контрасте между ними, прочувствовать внутренние переживания, страхи, увидеть мечты и стремления героя, суметь выразить симпатию или отвращение к отрицательному персонажу и понять, почему герой меняется в лучшую или худшую сторону на протяжении произведения. Читая художественное произведение, очень часто прослеживается, что портрет героя не всегда сопровождается авторскими комментариями. Потому что писатель предпочитает, чтобы читатель сам сделал выводы о персонаже. Поэтому во время чтения нужно уделять портрету особое внимание.

Не всегда черты внешности и внутренний мир персонажа совпадают, в зависимости от жанра и авторского стиля, целей, которые поставил перед собой писатель, они могут быть описаны по-разному. Существуют несколько видов портретов в художественной литературе. Одним из них является создание психологического портрета.

И это не просто описание внешности героя. Здесь изображаются особенности внутреннего мира персонажа с помощью внешних черт.

Ярким примером для такого описания образа в русской литературе является Печорин, герой романа М. Ю. Лермонтова «Герой нашего времени». Писатель делает акцент на неоднозначности образа. Молодой офицер, мыслями который может казаться древним стариком. Внешность Печорина и его мысли, поступки наглядно показывают противоречивость натуры. Офицер — человек неплохой, но все ему в жизни скучно, и по его вине страдают окружающие люди.

При создании Татьяны Лариной, героини романа в стихах «Евгений Онегин», Александр Пушкин использовал контрастный портрет. В восьмой главе произведения: «Но ей ничто не изменило: в ней сохранился тот же тон... у ней и бровь не шевельнулась, не сжала даже губ она». Здесь Татьяну автор сравнивает с неподвижной статуей, в которой совершенно нет никаких чувств. Но в финале девушка рыдает над письмом Онегина, где показываются ее подлинные эмоции. Такой резкий контраст в чувствах героини показывает, сколько страданий на самом деле пережила Татьяна, какая у нее нежная и ранимая натура.

Во многих произведениях Льва Толстого встречам лейтмотивные описания героев. В таком варианте герой изображается понемногу на протяжении всего произведения. Автор акцентировать внимание на одних и тех же деталях несколько раз, чтобы они прочно ассоциировались у читателя с описанным персонажем. В романе-эпопее «Война и мир» автор регулярно упоминает о лучистых больших глазах княжны Марьи, подчеркивая ее красоту, немного широкий рот Наташи, обаятельной и живой, любознательной девушки. Наряду с этим автор описывает становление личности героя на протяжении всего времени действия произведения, подчеркивает его изменения в лучшую или

худшую сторону. Читатель видит изменения не только с внешним обликом, но и с внутренним миром персонажа.

Подробное изображение внешности героя в художественном произведении при первом его появлении в литературе называется экспозиционный портрет. При создании такого вида портрета, писатели акцентируют внимание читателей на тех деталях в облике персонажа, которые выдают в нем представителя конкретного социального слоя. Упоминаются особенности телосложения, жестов, мимики, стиля одежды и т. д.

Экспозиционное изображение внешности персонажа можно встретить у представителей «натуральной школы» середины XIX века в произведениях И. С. Тургенева, Ф. М. Достоевского, И. Гончарова и др. Они в деталях описывали мелких чиновников, купцов, разночинцев, чтобы в целом показать читателям особенности социальной группы, к которой принадлежит герой. Экспозиционное описание портрета больше всего присуще писателям-реалистам. Вот как описывает Гончаров своего Обломова: «среднего роста, приятной наружности», «с отсутствием сосредоточенности в чертах лица», «с лица беспечность переходила в позы всего тела», «мягкость... была выражением лица... души», «цвет лица... безразличный». Автор говорит вроде бы о привлекательном мужчине в самом расцвете сил, на самом деле он весь какой-то мягкий, неповоротливый, ни к чему не стремится и ничего не хочет. Обломов инфантилен и не имеет никаких жизненных целей. Его «ленивая» внешность доказывает безвольность характера молодого человека.

В литературе 19 века писатели широко использовали прием гротеска. Такой прием часто встречается в произведениях комедийно-фарсового характера. Создавая гротескного героя, автор внимание читателя акцентируется не на описании его духовного мира, а на материальное начало. Используя этот прием, писатель изображает человеческое тело с чрезмерно преувеличенной, причудливо-комической и нереалистично-фантастической форме. Образ персонажа не похож на общепринятые идеалы (стройной фигуры, привлекательного выражения глаз, правильных черт лица и т. д.). Часто встречаются слишком большие щеки, носы, животы, преподнесенные словно карикатурно.

Гротескное портретное описание использовал во всех своих произведениях Михаил Салтыков-Щедрин. В сказке «Дикий помещик» с первых строк можно увидеть образ помещика «И был тот помещик глупый, читал газету „Весть“ и тело имел мягкое, белое и рассыпчатое». С помощью такого гротескного описания внешности героя автор подчеркивает его внутренние черты. Писатель очень ярко показал персонажа не только как глупого, но и ленивого, не привыкшего к тяжелой работ и предпочитающего вести праздную жизнь, наполненную приземленными удовольствиями.

Описав отдельные черты характера персонажа, показывая его жизненный образ, тем самым писатели создают правильный и четкий портрет. Но это недостаточно для полного раскрытия образа героя. Создать цельный и правдоподобный образ, который вызывает у читателя чувства такие как, симпатия, сострадание, восхищение, гнев, эмпатию и т. д. – вот основная задача автора.

В современной литературе многие авторы используют разные варианты введения портретных характеристик. Можно описать персонажа сразу, как только он появляется в произведении, или динамично, писатель открывает новые черты по ходу событий, так как он лучше пробуждает воображение читателя, и в процессе чтения человек не забывает важные детали.

Также используются длинные и краткие описания. Описывая не только внешность, но и образ жизни героя, его социальный статус, таланты, писатель использует первый вариант описания. Краткие описания должны быть более яркими, в них нужно акцентировать внимание читателя на самых запоминающихся деталях, используя цепкие сравнения и метафоры.

У любого героя, как и у обычного человека, есть свой смысл в жизни, который был создан для какой-то определенной цели. Он может проявить себя по-разному: желать славы, любви, профессиональной реализации, мира во всем мире или, напротив, мести, страданий других людей, незаконного обогащения. В этом отношении задача автора – показать читателям, что на самом деле хочет и к чему стремится персонаж, насколько важна для него поставленная цель.

Привычки – это самый распространенный прием, который писатели широко используют в своих произведениях, чтобы сделать портрет героя в литературе живым и естественным, наделяя их определенными привычками. Например, у него есть традиция пить кофе в определенном месте, перешагивать трещинки на асфальте, загадывать желание в 22:22, представлять себя героем фильма во время прогулок по городу.

В литературе есть образы, которые получили название «вечные» образы. Это персонажи литературных произведений, которые вышли за их рамки. Потому что похожих героев можно встретить в других произведениях писателей разных стран и эпох. Их имена стали нарицательными, а это значит, они употребляются в роли эпитетов, указывают на какие-то качества человека или литературного персонажа. Это, например, Фауст, Дон Жуан, Гамлет, Дон Кихот. Все эти персонажи утратили свое чисто литературное значение и приобрели общечеловеческое понятие. Они созданы очень давно, но снова и снова появляются в произведениях писателей, потому что в них выражено общезначимое, важное для всех людей характерные черты.

Немаловажное значение имеет и психология героя, совокупность средств, используемых в литературном произведении для изображения внутреннего мира персонажа его мыслей, чувств, переживаний. Это способ воспроизведения и осмысления характера героя, когда психологическое изображение становится основным. Мир, окружающий человека, формирует настроение и отражает его, влияет на поступки и мысли человека. Это детали быта, жилья, одежды, окружающая природа. Мимика, жесты, речь на слушателя, походка — все это внешние проявления внутренней жизни героя. Достоевский, например, в своем произведении «Преступление и наказание» описывал сны своего героя, которые являются важным средством определения психологии Раскольникова в романе, позволяющих автору глубже проникнуть в подсознание героя.

Пушкин был одним из первых, кто определил народность литературы.

Классики русской критики не относили к народности изображение только близких каждому писателю национальных характеров. Они допускали то, что, даже показывая жизнь другого народа, автор мог оставаться подлинно национальным, если смотрит на него глазами своего народа. Знаменитый критик Белинский говорил: «Истинно народным произведение может быть, если в нем полностью отражена эпоха».

Так или иначе в художественной литературе передается живой облик исторической эпохи в конкретных человеческих образах и событиях. Возникает лишь один вопрос, насколько верно и тонко художник понимает и изображает смысл исторических событий? Историзм присущ всем истинно художественным произведениям, независимо от того, изображают они современность или далекое прошлое. Примерами могут служить «Песнь о вещем Олеге» и «Евгений Онегин», «Капитанская дочка» Пушкина.

Вывод. Подводя итог ко всему сказанному, хотелось бы отметить, что в результате рассмотрения передачи образов в художественном произведении, используя разные тропы, приемы, можно отметить, насколько важное их значение для раскрытия художественной концепции человека, сформированной различными эпохами, литературными направлениями и течениями от сентиментализма, романтизма, реализма до модернизма и постмодернизма. Изучая характер и портрет героев, наблюдается, как через образ человека передается живой, настоящий облик определенной исторической эпохи.

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ПРЕИМУЩЕСТВА ХИРУРГИЧЕСКОГО ЛЕЧЕНИЯ БОЛЬНЫХ РАКОМ МОЛОЧНОЙ ЖЕЛЕЗЫ В СОВРЕМЕННОЕ ВРЕМЯ

***Аннотация.** В современной хирургии существует множество вариантов проведения хирургического лечения рака молочной железы. Варьируется не только доступ и объем вмешательства, но и возможность реконструктивных операций. На данный момент прослеживается тенденция к максимальному сохранению органа при удалении опухолевых тканей. Отмечается тенденция к одномоментной реконструктивной операции. Однако выбор тактики в первую очередь зависит от стадии онкологического процесса и преморбидного фона пациентки или пациента, и лишь во вторую очередь косметическим эффектом и личными предпочтениями больного.*

***Ключевые слова:** онкология, рак молочной железы, мастэктомия*

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ADVANTAGES OF SURGICAL TREATMENT OF BREAST CANCER PATIENTS IN MODERN TIMES

***Abstract.** In modern surgery, there are many options for surgical treatment of breast cancer. Not only the access and volume of intervention vary, but also the possibility of reconstructive surgeries. At the moment, there is a tendency towards maximum preservation of the organ during removal of tumor tissue. There is a tendency towards a one-stage reconstructive surgery. However, the choice of tactics primarily depends on the stage of the oncological process and the premorbid background of the patient, and only secondarily on the cosmetic effect and personal preferences of the patient.*

***Key words:** oncology, breast cancer, mastectomy.*

Актуальность. В условиях неуклонного роста заболеваемости раком молочной железы (РМЖ) и ранней диагностики опухолевого процесса, отличительными особенностями современной маммологии являются

сокращение объема операций и развитие реконструктивно-пластической хирургии молочной железы.

Рак молочной железы (РМЖ) – гетерогенное заболевание, патогенез которого обусловлен комплексным взаимодействием генетических, гормональных, метаболических, экзогенных и других факторов [2]. Кроме того, РМЖ — одно из наиболее распространенных злокачественных новообразований у женщин [1]. Данное заболевание известно с давних времен, однако всеобщее признание РМЖ как мировой проблемы произошло только в 1993 году, когда Всемирная Организация Здравоохранения объявила октябрь месяцем борьбы с РМЖ, а дату 15 октября – Всемирным днем борьбы с раком груди. В современном мире символом дня борьбы с РМЖ стала розовая лента. Несмотря на предпринимаемые меры, заболеваемость РМЖ остается на высоком уровне, так в общей структуре заболеваемости

злокачественными новообразованиями в России РМЖ занимает третье место после опухолей легких и кожи, а, если рассматривать только женское население нашей страны, то первое [5].

Наиболее часто РМЖ выявляют у женщин. Отчасти это связано с особенностями гормональной регуляции и онтогенетическими моментами, такими как беременность и роды, особенности менструального цикла. Пик заболеваемости РМЖ приходится на период постменопаузы и составляет до 75% всех случаев. У женщин младше 35 лет заболеваемость значительно ниже – менее 5% всех случаев. Риск развития РМЖ в возрасте после 65 лет в 5,8 раз выше, чем до 65 лет, и в 150 раз выше, чем в возрасте до 30 лет. Однако в молодом возрасте развитие РМЖ все же возможно [7]. РМЖ у мужчин является редким заболеванием, составляющим менее 1% от числа всех опухолей молочной железы [9]. Редкость данного заболевания у мужчин обуславливает немалое количество врачебных ошибок при его диагностике и лечении, так как из-за редкой встречаемости у врачей отсутствует настороженность к данному заболеванию у мужчин. Кроме того, маммография не входит в профилактические осмотры у мужчин, следовательно, снижается вероятность обнаружения опухоли на ранних ста

диях болезни. Заболеваемость РМЖ у мужчин синхронно варьируется с «женским» РМЖ в различных странах, что косвенно свидетельствует об общности причин возникновения заболевания у мужчин и у женщин [3]. Интерес к РМЖ у мужчин возрастает из-за увеличения распространения этого заболевания [18]. По данным Берлинского университета Роберта Коха, в Германии ежегодно диагностируют 400 случаев РМЖ у мужчин. В настоящее время в МНИОИ им. П.А. Герцена при РМЖ у мужчин, независимо от стадии заболевания, выполняют хирургическое лечение в объеме радикальной мастэктомии с сохранением грудных мышц [5].

РМЖ – заболевание, влияющее на продолжительность жизни и её качество. В последние годы удается добиться более высокой пятилетней выживаемости у пациенток, за счёт комбинированных методов лечения. Распространение РМЖ оказывает негативное влияние на выживаемость – в большей степени при поражении внутренних органов брюшной и грудной полостей. В настоящее время средняя продолжительность жизни пациентки с диагностированным распространением РМЖ составляет 22 месяца, при изолированном поражении костной системы – 26 месяцев, а при комбинированном поражении как костей, так висцеральных органов – 21 месяц, и только 18 месяцев – при висцеральном поражении. Висцеральные метастазы считаются более негативным признаком для прогноза заболевания, однако костные метастазы значительно снижают качество жизни пациентов за счет крайне интенсивного болевого синдрома [2,10].

Цель исследования – провести сравнительный анализ хирургических методов лечения рака молочной железы, применяемых в современной практике.

Результаты. В отделении онкомамологии за 2023 г. Выполнено 444 хирургических вмешательств. В общем объеме из 230 первичных операций по поводу РМЖ доля органосохраняющего лечения составила 214 (29,3%). Среди 324 первичных операций при «минимальных» и «ранних» формах РМЖ доля органосохраняющих вмешательств достигла 153 (47,2%). Выполнено 39 реконструктивно-пластических операций разных типов. При этом одномоментная маммопластика произведена у 28 (71,8%) больных, отсроченная – у 11 (28,2%). Внедрены и активно используются оригинальные методы интраоперационной профилактики лимфедемы верхней конечности. Разработанный оригинальный хирургический инструментарий способствует улучшению условий труда хирургов и сокращению времени операций.

Выводы. По нашему мнению, судьба органосохраняющего лечения у больных РМЖ может быть существенно увеличена за счет: активного внедрения методов ранней и доклинической диагностики (маммографический скрининг); точного обоснования клинических и ограничений возрастных показаний для удаления молочной железы; развития методов неадекватных воздействий с целью уменьшения первичной опухоли и рестадирования процесса; расширения показан для выполнения одномоментных реконструктивно-пластических операций; усиление разъяснительной работы среди пациентов с учетом того, что объем операции существенно не влияет на показатели выживаемости.

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ЭФФЕКТЫ СОВЕРШЕНСТВОВАНИЯ ТОЧНОСТИ УДАРОВ У ЮНЫХ ТЕННИСИСТОВ НА ФОНЕ ПОСЛЕДЕЙСТВИЯ КРАТКОВРЕМЕННОЙ ВЕСТИБУЛЯРНОЙ НАГРУЗКИ В ХОДЕ ЭКСПЕРИМЕНТА

Аннотация. В статье приведены результаты исследования эффектов совершенствования точности ударов у юных теннисистов на фоне последействия кратковременной вестибулярной нагрузки в ходе эксперимента. Установлено, что у юных теннисистов ЭГ, которая тренировалась по экспериментальной программе, число и точность ударов за 30 сек сопровождались ярко выраженным возрастанием их уровня к концу завершения 10-месячного эксперимента, тогда как в КГ, которая занималась по традиционной программе, не отмечались такие позитивные сдвиги в сфере изучаемых параметров.

Ключевые слова: эффект, точность, удар, теннис, эксперимент.

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EFFECTS OF IMPROVEMENT OF ACCURACY OF STROKES IN YOUNG TENNIS PLAYERS AGAINST THE BACKGROUND OF THE EFFECT OF SHORT-TERM VESTIBULAR LOAD DURING THE EXPERIMENT

Abstract. The article presents the results of a study of the effects of improving the accuracy of strikes in young tennis players against the background of the aftereffect of short-term vestibular load during the experiment. It was found that in young tennis players of the EG, which trained according to the experimental program, the number and accuracy of strikes in 30 seconds were accompanied by a pronounced increase in their level by the end of the 10-month experiment, while in the CG, which trained according to the traditional program, such positive shifts in the sphere of the studied parameters were not noted.

Key words: effect, accuracy, blow, tennis, experiment.

Введение. В современном настольном теннисе для успешного выполнения игровых действий с прицельной точностью чрезвычайно важна совершенная устойчивость сохранения равновесия к воздействию различных прямолинейных и угловых ускорений, многократно повторяющихся в ходе интенсивных соревновательных игр, что изучалось на примере ряда других видов спорта. Так, например, А.С. Назаренко, Н.Ш. Хаснутдинов [2016, с. 157-159], изучая данную проблематику у футболистов, считают, что статокINETическая устойчивость к сохранению равновесия может быть выше в «покое», но даже при небольшом раздражении вестибулярного анализатора она приобретает выраженную тенденцию к снижению и поэтому авторы рекомендуют регулярно тренировать функцию сохранения равновесия тела. А.С. Nazarenko, A.S. Chin Kin [2011, с. 726-732] показали, что в ситуационных видах спорта утомление, возникающее в ходе интенсивных тренировочных или соревновательных нагрузок, в первую очередь отражается в функциональной деятельности вестибулярного анализатора, в последствии которого может последовать снижение уровня прицельной точности игровых действий и разогласование механизмов управления движениями. Л.Д. Назаренко [2015, с. 99-101], на основании собственных исследований полагает, что дальность и точность бросков в баскетболе, например, обуславливаются не только показателями работающих мышц, уровнем развития глазомера, но и во многом зависит от устойчивости тела для сохранения соответствующей позы. А по мнению А.А. Джумок, А.А. Павловой [2018, с. 45-48] в игровых видах спорта весьма важно совершенствовать устойчивость к сохранению равновесия тела как в режиме открытых глаз, так и закрытых, что, оказываются очень важно «оттачивания» точности дифференцировки мышечных усилий при выполнении прицельных игровых приемов.

Целью настоящего исследования являлась изучение эффектов совершенствования точности ударов у 7-8 летних спортсменов настольного тенниса без и с раздражением вестибулярного анализатора в условиях эксперимента.

Методика и организация исследования. К исследованию, проведенного в рамках 10-месячного педагогического эксперимента, были привлечены две группы юных спортсменов 7-8 лет (по 12 чел.), занимающихся настольным теннисом на этапе начальной подготовки, одна из которых в этом процессе участвовала в качестве контрольной, а другая экспериментальной. В контрольной группе (КГ) тренировочные занятия проводились по традиционной программе. А в экспериментальной группе (ЭГ) дети ежедневно утром в ходе утренней зарядки выполняли следующие упражнения: круговое движение головой в позах сидя и стоя вправо-влево, наклоны головы вперед-назад, вправо-влево, повороты вправо-влево, вращения тела влево-вправо в позе наклона туловища вперед

на 90°; эти же упражнения применялись в ходе подготовительной части каждого тренировочного занятия, а в заключительной части занятий дети выполняли максимальное число ударов с отскоком от теннисного стола в мишень 30 сек; для этого теннисный стол плотно устанавливается поперек к стенке; на стене высотой 45 см от поверхности стола начерчивается круг – мишень диаметром 45 см; теннисист стоя в середине кромки стола выполняет заданные удары; данное упражнение 5 раз повторяется просто без нагрузки, 5 раз сразу после 10-кратного вращения головы влево и 5 раз тоже самое с вращением головы вправо (рис.). Оценивается соотношение максимального числа точных и неточных ударов за 30 сек, произведенных в «покое» и сразу после выполнения 10-кратного вращения тела влево в позе наклона вперед на 90°. Тестирование проводилось до и после завершения 10-месячного педагогического эксперимента.



Рис.

Результаты и их обсуждение. Результаты тестирования показали, что общее число ударов в покое за 30 сек в КГ до начала эксперимента составило $28,2 \pm 2,81$ раз, а к концу завершения эксперимента оно возросло до $29,7 \pm 2,88$ раза ($p > 0,05$) или его абсолютное повышение достигло всего лишь до 1,8 раз, при этом относительное его повышение составило 12,41% (таблица). Из них число точных ударов в этой группе до эксперимента было равно $9,3 \pm 2,04$ разу, которое к концу эксперимента увеличилось незначительно и составило $10,8 \pm 2,32$ раза ($p < 0,05$). Видно, что абсолютное повышение точности ударов также составило 1,5 раз, тогда как относительное увеличение составляет 16,13%. В то же время в ЭГ, которая в ходе эксперимента регулярно выполняла рекомендованные нами экспериментальные упражнения, общее число ударов за 30 сек до эксперимента оказалось равно $26,9 \pm 6,72$ раза, а к концу эксперимента оно увеличилось до $34,5 \pm 8,32$ раза ($p < 0,01$) или в абсолютном выражении оно увеличилось до 7,6 раз, а относительное увеличение этого показателя составило 28,25%. Число точных ударов при этом в группе за период эксперимента возросло с $8,7 \pm 3,65$ до $14,9 \pm 6,13$ раза ($p < 0,001$), где оно по абсолютной величине увеличилось до 6,2 раза или в относительном выражении точность ударов в ЭГ возросло до 71,26 %.

Таблица

Показатели дифференцированной оценки развития точности ударов у юных теннисистов контрольной и экспериментальной групп к концу педагогического эксперимента

Параметры	Группа	До эксперимента $x \pm \delta$	После эксперимента $x \pm \delta$	АП	ОП	p
Удары в покое 30 с.						
Число ударов	КГ	$28,1 \pm 2,81$	$29,7 \pm 2,88$	$1,5$	$5,32$	$>0,05$
	ЭГ	$26,9 \pm 6,72$	$34,5 \pm 8,32$	$7,6$	$28,25$	$<0,01$
Точность ударов	КГ	$9,3 \pm 2,04$	$10,8 \pm 2,32$	$1,5$	$16,13$	$<0,05$
	ЭГ	$8,7 \pm 3,65$	$14,9 \pm 6,13$	$6,2$	$71,26$	$<0,001$
Удары после 10 вращений тела за 30 с.						
Число ударов	КГ	$14,5 \pm 3,33$	$16,3 \pm 3,65$	$1,8$	$12,41$	$>0,05$
	ЭГ	$13,8 \pm 4,96$	$19,9 \pm 6,98$	$6,1$	$44,20$	$<0,01$
Точность ударов	КГ	$4,1 \pm 0,65$	$4,6 \pm 0,71$	$0,5$	$12,20$	$<0,05$
	ЭГ	$3,9 \pm 1,51$	$6,5 \pm 2,48$	$2,6$	$66,67$	$<0,001$

Примечание: АП – абсолютное повышение;

ОП – относительное повышение, %.

Общее число ударов за 30 сек под влиянием 10-кратного вращения тела влево в позе наклона вперед на 90° в КГ до эксперимента составило $14,5 \pm 3,33$ раза, а после – оно увеличилось всего лишь до $16,3 \pm 3,65$ раза ($p > 0,05$) или разница возрастания данной величины в абсолютном выражении составила 1,8 раз, а относительное увеличение общего числа ударов в этой группе равнялось 12,41%. Число точных ударов при этом до эксперимента составило $4,1 \pm 0,65$ раз, которое к концу эксперимента возросло до $4,6 \pm 0,71$ раза ($p < 0,05$). Видно, что число точных ударов в КГ в абсолютном выражении увеличилось всего лишь до 0,5 раз и это в относительном выражении равнялось 12,20%. У юных теннисистов ЭГ, которая тренировалась в экспериментальном режиме, общее число ударов за 30 сек, выполненных на фоне после действия 10-кратного вращения тела в позе наклона вперед на 90° , до эксперимента составило $13,8 \pm 4,96$ раз, а после – оно увеличилось незначительно и было равно $19,9 \pm 6,98$ разу ($p < 0,01$), т.е. данная величина в абсолютном смысле возросла до 6,1 раза, а её относительный уровень увеличился на 44,20%. Точность ударов за 30 сек при этом в этой группе за период эксперимента возросла с $3,9 \pm 1,51$ до $6,5 \pm 2,48$ раза ($p < 0,001$) или данная величина в абсолютном выражении увеличилось к концу эксперимента 2,6 раза, а в относительном смысле это увеличение составило 66,67%.

Заключение. Из сравнительного анализа приведенных данных видно, что, во-первых, до начала эксперимента общее число ударов по заданной мишени за 30 сек в «покое» у обеих групп теннисистов были

относительно низкими, из которых объем точных ударов не составил даже 50%. Такое положение позволяет предположить, что в процессе традиционных тренировочных занятий не удаляется акцентированное внимание на сопряженную отработку ударной работоспособности с учетом точности ударов различными способами. Во-вторых, в КГ даже за период 10-месячного педагогического эксперимента как число ударов 30 сек, так и их точность не имели тенденции к выраженному возрастанию к концу завершения эксперимента. Общее число ударов за 30 сек и их точность почти на два раза снизились в условиях их выполнения на фоне последействия 10-кратного вращения тела в позе наклона туловища вперед на 90°, что связано, на наш взгляд, не только с недостаточной отработкой ударных действий на точность, но и такое последствие главным образом обусловлено со слабым развитием вестибулярного анализатора. Это подтверждается прогрессивными данными, полученными в ЭГ, которая в период эксперимента регулярно утром и в ходе тренировочных занятий выполняли различные стато- и вестибулокинетические упражнения с отработкой на тренировках различных ударов на фоне последействия вестибулярных нагрузок.

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ВОПРОСЫ СОВЕРШЕНСТВОВАНИЯ ОРГАНИЗАЦИОННО-ПРАВОВЫХ МЕХАНИЗМОВ ЗАЩИТЫ ЭКОЛОГИЧЕСКИХ ПРАВ ЧЕЛОВЕКА В РЕСПУБЛИКЕ УЗБЕКИСТАН

АННОТАЦИЯ

Обеспечение экологической безопасности является составным компонентом защиты экологического права человека. В данной статье автором проведен краткий обзор по международным соглашениям, подписанным Республикой Узбекистан, а также анализ национального законодательства в сфере экологии. В том числе приведены предложения по совершенствованию организационно-правовых механизмов защиты экологических прав человека в Республике Узбекистан.

Ключевые слова: экологическое право; организационно-правовой механизм, охраны окружающей среды; международные соглашения; экологические отношения; национальное законодательство.

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ISSUES OF IMPROVING ORGANIZATIONAL AND LEGAL MECHANISMS FOR THE PROTECTION OF ENVIRONMENTAL HUMAN RIGHTS IN THE REPUBLIC OF UZBEKISTAN

ABSTRACT

Ensuring environmental safety is an integral component of protecting human environmental rights. In this article, the author provides a brief overview of international agreements signed by the Republic of Uzbekistan, as well as an analysis of national legislation in the field of ecology. Including proposals for improving the organizational and legal mechanisms for protecting human environmental rights in the Republic of Uzbekistan.

Key words: environmental law; organizational and legal mechanism, environmental protection; international agreements; environmental relations; national legislation.

На протяжении последних десятилетий остро ощущается проблема обеспечения экологической безопасности в глобальном масштабе. Ухудшение состояния окружающей среды, увеличение числа экологических катаклизмов, изменение качества воздуха, потребляемой воды и пищи безусловно сказывается на состоянии здоровья человека, создавая препятствия для благополучного его существования.

Обеспечение экологической безопасности является составным компонентом защиты экологического права человека. Сегодня экологическое право становится приоритетным правом каждого человека в мире. В том числе, Узбекистан ведет активную политику в обеспечении сохранности здоровой окружающей среды, сохранение и восстановление природной среды, рациональное использование и воспроизводство природных ресурсов, предотвращение загрязнения, деградации, повреждения, истощения, разрушения, уничтожения и иного вредного воздействия на окружающую среду хозяйственной и иной деятельности и ликвидацию ее последствий, путем внедрения механизмов защиты экологических прав человека.

Комплекс таких мер рассматривается как организационно-правовой механизм охраны окружающей природной среды. Он состоит из двух системообразующих элементов – институционального, т. е. системы государственных и общественных институтов, осуществляющих управление в сфере охраны окружающей среды, и функционального, т. е. многообразия форм такого управления (проведение экспертизы, контроля, нормирования и стандартизации, ведение кадастров, учет природных ресурсов, мониторинг и т. д.).¹⁵ Целью этого механизма является бесперебойное обеспечение и поддержка функционирования экологической системы, которая должна соответствовать объективным законам окружающей среды, быть устойчивой и саморегулируемой, поступательно развиваться, основываться на экологических императивах.¹⁶

Возвращаясь к анализу национального законодательства Узбекистана, следует отметить, что наша страна является участницей многих международных договоров и соглашений, направленных на борьбу с изменением климата и другими экологическими проблемами.

Решение основных экологических проблем, включая борьбу с последствиями Аральской трагедии и реформирование политики, связанной с отходами, стало важным направлением политики нашей страны в последние годы.

Существует множество международных документов по охране окружающей среды, подписанные Узбекистаном, за исполнение задач и принципов которых взял на себя ответственность¹⁷: Стокгольмская конвенция о стойких органических загрязнителях; Рамочная конвенция ООН об изменении климата; Парижское соглашение об изменении климата; Венская конвенция об охране озонового слоя; Венская конвенция

¹⁵ Боголюбов С. А. Актуальные проблемы экологического права : монография / С. А. Боголюбов. – М. : Юрайт, 2014. – 251 с.

¹⁶ Экологическое право : учеб. пособ. / под ред. Т. И. Макаровой, В. Е. Лезгаро. – Минск : Изд. Центр БГУ, 2008. – 143 с.

¹⁷ Международные соглашения по экологии и окружающей среде, подписанные Узбекистаном: список и ссылки // https://by.odh-office.eu/razvicio-patencyalu-arhanizacyj_innovative-uzbekistan/mezhdunarodnye-soglasheniya-po-ekologii-i-okruzhayushchey-srede-podpisannye-uzbekistanom-spisok-i

об охране озонового слоя; Монреальский протокол по веществам, разрушающим озоновый слой; Конвенция о биологическом разнообразии; Картахенский протокол по биобезопасности к Конвенции по биоразнообразию; Конвенция о сохранении мигрирующих видов диких животных; Конвенция по охране и использованию трансграничных водотоков и международных озер; Конвенция о международной торговле видами дикой фауны и флоры, находящимися под угрозой исчезновения (СИТЕС).¹⁸

В настоящее время в республике проводится активная работа по нормативно-правовому регулированию национального экологического правопорядка. В последние пять лет, начиная с 2019 года особенно остро стали вопросы опустынивания и борьбы с засухой, в связи с чем, принято Постановление Президента «О мерах по повышению эффективности работ по борьбе с опустыниванием и засухой в Республике Узбекистан»¹⁹ № ПП-4204 от 22.02.2019 г., согласно которому Государственным комитетом Республики Узбекистан по лесному хозяйству разработан Национальный план действий по предупреждению и смягчению последствий песчаных и пыльных бурь (ППБ) в на 2021–2024 годы.

Для урегулирования этих вопросов также принят ряд нормативных актов: Постановление Президента Республики Узбекистан «Об утверждении концепции развития системы лесного хозяйства Республики Узбекистан до 2030 года» №4850 от 06.10.2019г., «О дополнительных мерах по повышению эффективности лесопользования в Республике» №4424 от 23.08.2019г., Постановление Кабинета Министров Республики Узбекистан «О совершенствовании платежей за загрязнение окружающей природной среды и размещение отходов на территории Республики Узбекистан» №199 от 01.05.2003г., «О совершенствовании системы платежей за специальное природопользование» №15 от 06.02.2006г., «О

¹⁸ Стокгольмская конвенция о стойких органических загрязнителях. – 2001 // https://www.waste-management.org/tehnologii_razrusheniya/stokgolmskaja_konvencija/; Рамочная конвенция Организации Объединенных Наций об изменении климата. – 1992 // https://www.un.org/ru/documents/decl_conv/conventions/climate_framework_conv.shtml; Парижское соглашение об изменении климата. – 2015 // https://unfccc.int/files/meetings/paris_nov_2015/application/pdf/paris_agreement_russian.pdf; Венская конвенция об охране озонового слоя. – 1993 // <https://www.lex.uz/docs/2597146>; Монреальский протокол по веществам, разрушающим озоновый слой. – 1987 // https://www.un.org/ru/documents/decl_conv/conventions/montreal_prot.shtml; Конвенция о биологическом разнообразии. – 1992 // https://www.un.org/ru/documents/decl_conv/conventions/biodiv.shtml; Базельская конвенция о контроле за трансграничной перевозкой опасных отходов и их удалением. – 1989. <http://www.basel.int/Portals/4/Basel%20Convention/docs/text/BaselConventionText-r.pdf>; Картахенский протокол по биобезопасности к Конвенции по биоразнообразию. – 2000 // <https://bch.cbd.int/protocol/background>; Конвенция о сохранении мигрирующих видов диких животных. – 1979 // https://www.cms.int/sites/default/files/document/inf_02_convention_text_ru_0.pdf; Конвенция по охране и использованию трансграничных водотоков и международных озер. – 1992 // https://www.un.org/ru/documents/decl_conv/conventions/watercourses_lakes.shtml; Конвенция о международной торговле видами дикой фауны и флоры, находящимися под угрозой исчезновения (СИТЕС). – 1973 // https://www.un.org/ru/documents/decl_conv/conventions/cites.shtml.

¹⁹ Постановление Президента Республики Узбекистан «О мерах по повышению эффективности работ по борьбе с опустыниванием и засухой в Республике Узбекистан» от 22.02.2019 г. № ПП-4204 // <https://lex.uz/ru/docs/4211815>

дополнительных мерах по улучшению природоохранной деятельности в системе коммунального хозяйства» №11 от 03.02.2010г., также «О мерах по дальнейшему совершенствованию экономических механизмов обеспечения охраны природы» №820 от 11.10.2018г. на основе которого утверждено «Положение о порядке применения компенсационных выплат за загрязнение окружающей природной среды и размещение отходов на территории Республики Узбекистан».

Возникновение экологических кризисов, происходящих в контексте сложных глобальных политических процессов, стало чрезвычайно важным вопросом в повестке дня регулярных дискуссий в политической и научной сферах, а также среди всех слоев населения.

В этой связи в стране проводится последовательная работа в области усиления правовых механизмов защиты экологических прав граждан, обеспечения охраны окружающей среды, рационального использования природных ресурсов, улучшения санитарной и экологической обстановки.

Тем не менее, мы редко слышим сообщения об улучшении экологической ситуации. Об этом свидетельствуют ежегодные отчеты об экологической обстановке на планете Земля, представляемые общественности ведущими мировыми научно-исследовательскими центрами. В частности, по итогам 2022 года научно-обоснованного индекса экологической эффективности (EPI) о состоянии устойчивости во всем мире²⁰, который раз в два года представляет Центр экологической политики и права Йельского университета (США), Узбекистан занял 107-е место из 180 стран с показателем 38,20 (Дания занимает 1-е место в этом индексе)²¹. В докладе ООН о достижении Целей устойчивого развития (ЦУР - SDG — Sustainable Development Goals на английском языке) также отмечается, что «третий год подряд глобальный прогресс на пути к ЦУР остаётся неизменным»²².

Исходя из проведенных исследований, в целях совершенствования механизмов защиты экологических прав человека, автор предлагает разработать правовые нормы, предусматривающие решение следующих проблем:

в части решения глобальных экологических проблем, развития международного сотрудничества и выполнения обязательств, взятых на

²⁰ Примечание: Индекс экологической эффективности 2022 года (EPI) представляет собой сводку данных о состоянии устойчивости во всем мире. Используя 40 показателей эффективности по 11 категориям вопросов, EPI ранжирует 180 стран по показателям эффективности борьбы с изменением климата, здоровья окружающей среды и жизнеспособности экосистем. Эти показатели позволяют оценить в национальном масштабе, насколько близки страны к установленным целям экологической политики. EPI представляет собой оценочный лист, в котором выделяются лидеры и отстающие в области экологии, а также даются практические рекомендации для стран, стремящихся двигаться к устойчивому будущему

²¹ Wolf M. J., Emerson, J. W., Esty, D. C., de Sherbinin, A., Wendling, Z. A., et al. (2022). Environmental Performance Index. New Haven, CT: Yale Center for Environmental Law & Policy. epi.yale.edu.

²² Sachs, J.D., Lafortune, G., Fuller, G., Drumm, E. (2023). Implementing the SDG Stimulus. Sustainable Development Report 2023. Paris: SDSN, Dublin: Dublin University Press, 2023. DOI: 10.25546/102924

себя республикой в указанных выше международных соглашениях, необходимо обеспечить долгосрочное эффективное стратегическое сотрудничество с международными финансовыми организациями и странами-донорами, усовершенствовать систему подготовки инвестиционных проектов и проектов международной технической помощи;

в целях обеспечения развития и улучшения двусторонних отношений с соседними странами рекомендуется сформировать реестр трансграничных экологических проблем и систем их мониторинга, проводить совместную оценку воздействия трансграничных объектов на окружающую среду, разработать индикаторы раннего предупреждения;

в целях снижения уровня опустынивания и деградации земель, восстановления качества и продуктивности земельных площадей, увеличить площади, засаженных деревьями на высохшем дне Аральского моря на узбекской стороне, а также необходимо усилить меры по защите водных ресурсов от истощения и загрязнения, в том числе по снижению потерь водных ресурсов в сельском и коммунальном хозяйстве;

в области охраны атмосферного воздуха предлагается увеличить долю альтернативных источников возобновляемой энергии в общей структуре электрогенерирующих мощностей, продолжить развитие железнодорожной сети, поддерживать переход от автомобильных перевозок пассажиров и грузов к железнодорожным;

разработать и обеспечить реализацию плана мероприятий по выполнению требований Стокгольмской конвенции о стойких органических загрязнителях, организовать систему сбора, использования и утилизации товаров, утративших потребительские свойства и содержащих опасные вещества (ртутные лампы и аксессуары к ним, батарейки, аккумуляторы и др.) за счет сокращения объемов производства и уменьшения объемов промышленных отходов, в том числе предотвращения негативного воздействия опасных отходов на здоровье населения и окружающую среду;

в сфере экологизации экономики необходимо принять меры по обеспечению интеграции экологических аспектов в государственную политику, включая внедрение механизма стратегической экологической оценки планов, программ и других стратегических документов, а также обеспечение интеграции отдельные проекты посредством оценки воздействия на окружающую среду, в том числе обеспечить переход на международные стандарты в приоритетных областях, определяющих качество окружающей среды;

в целях разграничения функций и задач государственных органов в области охраны окружающей среды, а также обеспечения координации их действий разработать и принять Экологический кодекс Республики Узбекистан;

в обеспечении эффективного экономического механизма охраны природы, разработать эффективную методику расчета платы за выбросы и сбросы загрязняющих веществ в зависимости от размера ущерба, причиняемого окружающей среде, опасности для окружающей среды и здоровья населения хозяйственной деятельностью (опыт Японии)²³.

Несомненно, проблемы охраны окружающей среды не могут быть решены без широкого участия институтов гражданского общества и населения. В связи с этим особое значение приобретает уровень экологических знаний населения. По этой причине, будет целесообразным проведение общественных слушаний по вопросам реализации экологически потенциально опасных проектов, а также налаживание практики включения институтов гражданского общества в рабочие группы по разработке нормативных правовых документов в области охраны окружающей среды.

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²³ Одной из особенностей законодательства в сфере экологии стало сочетание прямых законодательных инициатив и косвенных субсидий. В его основу был заложен принцип «загрязнитель платит» (PolluterPayPrinciple – PPP) в соответствии с которым обязанность выплачивать расходы возлагалась на компанию-загрязнителя. Он позволил стране в довольно сжатые сроки справиться с наиболее вопиющими проявлениями экологического кризиса.

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НАЦИОНАЛЬНАЯ КУЛЬТУРА В ЭПОХУ ГЛОБАЛИЗАЦИИ

***Аннотация:** В этой статье раскрывается роль национальной культуры в эпоху глобализации, а также сопоставляются некоторые плюсы и минусы в деятельности человека.*

***Ключевые слова:** глобализация, культура, национальность, популярная культура*

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NATIONAL CULTURE IN THE ERA OF GLOBALIZATION

***Abstract:** This article reveals the role of national culture in the era of globalization, as well as compares some of the pros and cons of human activity.*

***Keywords:** globalization, culture, nationality, popular culture*

К началу XXI века взаимодействие между странами мира стало настолько интенсивным, что можно с полной уверенностью сказать, что нет ни одного государства, которое полностью не опиралось бы на этот процесс. Даже страны, которые стремятся держаться подальше от международных организаций, не желая вступать в них, не могут исключить влияние этого процесса. Глобализация - это такой процесс, где страны, которые говорят, что останутся в стороне, могут стать более уязвимыми в этом меняющемся процессе. Но к великому сожалению, такое произвольное воздействие часто приводит к негативным последствиям.

Влияние, которое глобализация оказывает на разные страны, также имеют свои отличительные стороны. Это связано с тем, на каком уровне находиться экономический, информационный, духовный потенциал и политические стороны развития страны. Для того чтобы уменьшить негативное, а может быть даже в какой-то степени насильственное влияние происходящих перемен в мире, требует усиления положительного

влияния; появляется необходимость глубже понять природу этого явления; изучить его особенности. Адаптироваться к этому явлению, не углубляясь в его основную суть соответствующим образом, чтобы изменить его направление, невозможно. Глобализация это такой процесс, во что не углубиться и не разработать стратегию, тактику и технологию его использования - это все равно, то что управлять неуправляемой лодкой по бурному течению реки, спускающемуся с горы, то есть, отречься от экономики и культуры страны, а также от духовных основ каждой нации и страны, которое формировалось большим кропотливым трудом.

Конечно же, очень трудно полностью охватить даже самые фундаментальные аспекты и области глобализации. Поэтому в данном разделе мы хотим рассмотреть влияние глобализации на национальную культуру и духовность. Духовные аспекты любой нации, это несравнимое ни с чем богатство, накопленное в собственном доме, в котором ни один домовладелец не хочет, чтобы ветер, проникающий извне, оставлял свои следы внутри дома. Такое сравнение приводится в связи тем, что оно стало негативно сказываться на формировании национальной культуры; стремительный рост массовой культуры; неумелость молодого поколения противостоять негативным тенденциям глобализации; трансформация национальной специфики мышления под влиянием унифицированного английского языка (востребованность знанием английского как средство общения и умения пользоваться информацией во всемирном компьютерном сети, может негативно повлиять на национальную культуру). Точно так же для нас естественно принимать меры защиты от разрушительного воздействия чужеродных идей, течений и идеологий на нашу духовность. Прежде чем принимать меры защиты от идеологического влияния извне, необходимо определить, какие влияния следует одобрить, а какие - отвергнуть.

Культура и духовность народов Центральной Азии на протяжении многих веков использовалась различными народам, в связи с тем, что она расположена на караванном пути, соединяющая Восток-Запад и именуемая шелковым путём развития. Важно отметить, что наш народ, впитав позитивные подходы Запада с этому процессу, сумела поднять на новые высоты мировую культуру, подойдя к ним творчески. Подтверждение этой мысли можно увидеть и на примере научного знания, религиозных верований, искусства, составляющих духовность. Не только отечественная литература, но и творчество наших ученых, прочно вошедших в историю мировой культуры, подтверждают это мнение. Например, один из таких предков, Абу Райхон Беруни глубоко овладел индийской, греческой и римской философией, естественными науками. Во время своего пребывания в Индии, изучая индийскую науку и культуру, он понимает, что для изучения источников необходимо знать

древнеиндийский язык санскрит. Ему удастся быстро изучить санскрит, с помощью чего проводит глубокое исследование в данной области.

Мир сегодня также открывает для себя Узбекистан благодаря его национальному культурному наследию, богатой истории, языку, культуре, обычаям и традициям в сочетании с общечеловеческими идеями, достижениями в области искусства и архитектуры, науки и культуры. Это означает, что в процессе глобализации мы можем стать не только пассивной принимающей стороной, но и активными сторонниками.

Нет более эффективного и мощного инструмента для защиты нашей национальной духовности и духовной идентичности от угроз, чем идея национальной независимости. В этом вопросе проявляется такая важная функция идеи национальной независимости, как защита национальной и духовной идентичности. А для того, чтобы идея национальной независимости выполняла эту функцию, она должна сформироваться в сознании молодежи и населения не только как знание или воображение, но и как вера и убеждение.

Что происходит с национальной культурой в эпоху глобализации. Соотношение культуры с конкретным национальным сообществом в наши дни, это, кажется, принято как должное (французская культура, немецкая культура, испанская культура и др.). Культура даже когда мы говорим об общей человеческой собственности, мы можем рассматривать эту собственность только как между народами как законными владельцами отдельных его частей распределяем. Другие его части находятся в самой нации, так сказать, не в собственности, а в использовании!

Серьезно со стороны западноевропейских и азиатских центров культурного производства и столкнуться с растущей конкуренцией. Америка сегодня не только крупнейший поставщик в наши дни, но и как производитель за его пределами является крупнейшим потребителем выпущенных культурных продуктов.

Кстати, стоит отметить, что это не только спрос и предложение с присутствием иммигрантов, но также и с новой культурой коренного населения. Мы считаем, что глобальная культурная сфера должна сформироваться, не с точки зрения противостояния (даже конкуренции), а с точки зрения взаимных решений в области изменений. Процесс формирования Глобальной культурной сферы также связан с культурной и идеологической гегемонией.

“Это происходит из концепции так называемого исламского фундаментализма. Из этого они делают вывод: культурный процесс глобализации, с одной стороны, привел к объединению, а с другой, к его распаду”.

Современные государственные учреждения знаково-символическое единообразие в пределах контролируемых им границ (устраняет различия внутри них). В то же время, это учреждения от связи до контролируемого

государством пространства, в связи с которым они сохраняют границы, а также и разделяют их.

С окончанием современной эры политическая и культурная способность границ сохранять свою уникальность ослабевает. Новый распространение информационных технологий, с одной стороны, деятельность в культурной сфере деятельности транснациональных корпораций, с другой стороны, культурная приводит к сужению суверенитета.

Процессы глобализации, которые входят в нашу жизнь все быстрее и глубже, выявляют некоторые факторы и причины, что процветание любого государства возможно только при тесном взаимоотношении с другими регионами. При таком подходе глобализация - это прежде всего непревзойденный уровень образов жизни, означающий необходимость ускорения в её внедрении.

Мы все являемся свидетелями того, как национальные конфликты в ряде стран обостряются и приводят к тяжелым последствиям в условиях, когда процессы глобализации в мире ускоряются, а различные игры разворачиваются в интересах геополитики. Конечно, в наши дни есть много пороков, которые мешают миру и гармонии. Но в них есть такой порок, который оставляет тяжелое осложнение в жизни общества, которое не выбирает ни нации, ни границ. Это-агрессивный национализм, то есть шовинизм. Общество, охваченное таким пороком, неизбежно столкнется с состоянием нестабильности. На территории Узбекистана издревле проживают представители многих национальностей и народностей. Тот факт, что между ними на протяжении веков не было национальных конфликтов, свидетельствует о вековой терпимости нашего народа. Поэтому считаем, что необходимо усилить роль образовательных институтов; создание условий и механизмов для сохранения и воспроизводства национально-этнической жизни каждого народа; нельзя забывать, что национальное сознание (культура языка, культура памяти) формируется и передаются не по крови, а посредством культуры. Нельзя забывать, что вопрос национальной культуры остро стоит и в развитых странах.

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ПРОМЫШЛЕННОЕ ПРИМЕНЕНИЕ ИНГИБИТОРОВ НА ОСНОВЕ АМИНОНИТРИЛОВ, ОПРЕДЕЛЕНИЕ ИХ ЭФФЕКТИВНОСТИ И ТЕХНОЛОГИЧЕСКИХ ХАРАКТЕРИСТИК

АННОТАЦИЯ

В данной статье с целью предотвращения сероводородной крекинг-коррозии на установках очистки высокосернистых газов определены состав и структура ингибиторов, полученных в результате синтеза органических соединений, содержащих амино- и нитрильные группы, которые активно защищают коррозионные процессы в своих молекулах. с использованием современных физических методов исследования.

***Ключевое слово:** кислые газы, ингибитор, коррозия, агрессивная среда, амино- и нитрильные группы.*

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INDUSTRIAL APPLICATION OF AMINONITRILE-BASED INHIBITORS, DETERMINATION OF THEIR EFFECTIVENESS AND TECHNOLOGICAL FEATURES

ABSTRACT

In this article, in order to prevent hydrogen sulfide cracking corrosion in high-sulfur gas purification plants, the composition and structure of inhibitors obtained as a result of the synthesis of organic compounds containing amino and nitrile groups, which actively protect corrosion processes in their molecules, are determined using modern physical research methods.

***Keywords:** acid gases, inhibitor, corrosion, aggressive environment, amino and nitrile groups.*

Предотвращение коррозии металлов в различных отраслях экономики стран, где в мире бурно развивается химическая промышленность, создание наиболее эффективных типов ингибирующих систем имеет сегодня особое практическое и теоретическое значение. В странах с развитой химической и нефтехимической промышленностью в год из-за коррозии теряется 1/4 металлов, получаемых в результате

коррозии металлов. Это приводит к огромным экономическим потерям для каждой страны. Поэтому разработка и практическое применение высокоэффективных ингибиторов коррозии металлов становится все более актуальной.

Общая и местная коррозия — одни из наиболее распространенных видов коррозии в нефтегазовой отрасли. Другой серьезной проблемой при эксплуатации трубопроводов является внутренняя коррозия, которая проявляется преимущественно в виде коррозионных трещин при различных нагрузках. Коррозионную борьбу с коррозией буровых труб, резервуаров для хранения жидкости или газа, трубопроводов и других металлических конструкций можно предотвратить путем ингибирования кислотных и других видов коррозионных процессов с помощью эффективных ингибиторов коррозии.

Известно, что в природном газе постоянно присутствуют сероводород, углекислый газ, низкомолекулярные органические кислоты, а доказано, что применение ингибиторов на основе органических соединений обеспечивает техническую одобренность и экономическую эффективность защиты от коррозии строительных материалов. Чтобы использовать ингибиторы в промышленных масштабах, они должны соответствовать определенным требованиям. Наибольший спрос на ингибиторы обусловлен их эффективной защитой строительных материалов от коррозии. В последнюю очередь при выборе ингибиторов для различных ситуаций большое значение придается технологическим особенностям их применения. При этом потребность в ингибиторе определяется с учетом ряда условий. В том числе физико-химические свойства его состава и окружающей среды, а также параметры технологических процессов. Кроме того, учитываются газодобыча, подготовка газа и конденсата, технология переработки добываемой продукции, конструктивные особенности аппаратов и т.д.

Использование ингибиторов в промышленных масштабах может осуществляться в частичном и полном масштабе. Полномасштабное тестирование или применение ингибитора дает полную информацию об ингибиторе, но используется редко из-за его высокой стоимости. Частичное проведение испытаний или применение ингибиторов более желательно с практической точки зрения. Для применения в промышленных масштабах рекомендуется уточнить процесс ингибирования по предварительным результатам применения ингибиторов и дать окончательные заключения по всем параметрам. При использовании ингибиторов коррозии в промышленных условиях эффективность уровня их защиты определяется следующими параметрами:

- влияние ингибитора на механические (пластические) свойства металла;
- насыщение металла водородом под действием ингибитора;

- тип конструкций и скорость коррозии в них;
- концентрация ингибитора коррозии;
- параметры, влияющие на технологические процессы;
- определить вязкость ингибитора;
- определение температуры затвердевания ингибитора;
- определение температуры воспламенения ингибитора;
- определение растворимости (диспергируемости) ингибитора;
- изучены параметры ингибитора, такие как его склонность к эмульгированию.

Определение плотности рабочего раствора ингибиторов типа МАД. При определении технологических характеристик вышеуказанных ингибиторов необходимо было определить плотность рабочего раствора ингибиторов типа МАД, который применялся изначально. Прежде всего необходимо определить, имеют ли эти вещества кристаллическую структуру и плотность их рабочих растворов по существу использования. В данной работе плотность 0,10% рабочего раствора при температуре 20°C определяли в ареометре типа АН по ГОСТ 3900-85, а расчетный показатель плотности (ρ_t) рассчитывали по следующей формуле:

$$\rho_{20} = \rho_t + \gamma(t - 20)$$

Плотность 0,10% рабочего раствора ингибитора МАД-20 при 20°C составляет 1,0126 г/см³, плотность рабочего раствора ингибитора МАД-20 - 1,0123 г/см³, плотность рабочего раствора ингибитора МАД-21 - 1,0126 г/см³. Установлено, что плотность составляет 1,0128 г/см³. Установлено, что плотность этого ингибитора МАД в растворе газового конденсата при 20°C составила 0,0792 г/см³, плотность ингибитора МАД-20 в газовом конденсате - 0,0786 г/см³, плотность ингибитора МАД-21 в газовом конденсате составила 0,0794 г/см³.

Определение растворимости (дисперсности) ингибитора МАД-20. В устройстве комплексной газоподготовки разделение углеводородно-водяной смеси и углеводородов из нее происходит сепарационным методом. Ингибиторы коррозии при использовании в защите технологических устройств и трубопроводов не должны снижать процесс разделения углеводородно-конденсатно-водяной смеси методом разделения. В противном случае неполное или длительное разделение эмульсии приводит к нарушению технологического режима сепарационных устройств и может стать причиной потери углеводородного конденсата.

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КЛАССИФИКАЦИЯ И АНАЛИЗ ТУРИСТИЧЕСКОЙ ОТРАСЛИ УЗБЕКИСТАНА

***Аннотация:** В данной статье рассмотрены историко-культурные наследия Узбекистана, которые представляют собой важные объекты для сохранения и изучения. Страна, обладающая богатым историческим прошлым и культурным разнообразием, известна своими уникальными архитектурными памятниками, древними городами и многовековыми традициями. Особое внимание уделено ключевым культурным объектам, которые включены в список Всемирного наследия ЮНЕСКО. В статье также обсуждаются вопросы сохранения и популяризации культурного наследия в условиях современной урбанизации и развития туризма, а также роль цифровых технологий в продвижении исторических ценностей на международной арене. С незапамятных времен Узбекистан привлекает иностранных туристов своей прекрасной природой, спокойными местами, зелеными лесами, культурой и национальными ценностями, а также уникальными традициями и обычаями нашего народа. Старые и древние памятники, антиквариат, святые места, исторические и культурные памятники и прекрасная природа нашей страны с незапамятных времен очаровывают и удивляют приезжих туристов. В последние годы по инициативе Президента нашей страны Ш. Мирзиёева эти традиции получили дальнейшее развитие, и благодаря большим усилиям и вниманию нашего правительства индустрия и инфраструктура паломнического туризма в нашей стране обретают особый смысл и суть с новым обликом. С незапамятных времен Узбекистан привлекает иностранных туристов своей прекрасной природой, спокойными местами, зелеными лесами, культурой и национальными ценностями, а также уникальными традициями и обычаями нашего народа. В частности, формирование в республике пропагандистской группы, состоящей из опытных учёных и исследователей, с целью изучения богатого научного наследия великих ученых, таких как имам Мотуриди, имам Бухари, имам Насафи, Накибанди, Яссави, ат-Термизи, и их продвижения в мировом масштабе, развивает сферу туризма в нашей стране. Это стало важным событием.*

***Ключевые слова:** туризм, культурные, исторические, природные достопримечательности, объекты Всемирного наследия ЮНЕСКО*

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CLASSIFICATION AND ANALYSIS OF THE TOURISM INDUSTRY IN UZBEKISTAN

Abstract: *This article discusses the historical and cultural heritage of Uzbekistan, which are important objects for preservation and study. The country, with a rich historical past and cultural diversity, is known for its unique architectural monuments, ancient cities and centuries-old traditions. Particular attention is paid to key cultural sites that are included in the UNESCO World Heritage List. The article also discusses the issues of preserving and popularizing cultural heritage in the context of modern urbanization and tourism development, as well as the role of digital technologies in promoting historical values in the international arena. Since time immemorial, Uzbekistan has attracted foreign tourists with its beautiful nature, peaceful places, green forests, culture and national values, as well as unique traditions and customs of our people. Old and ancient monuments, antiques, holy places, historical and cultural monuments and beautiful nature of our country have enchanted and surprised visiting tourists since time immemorial. In recent years, on the initiative of the President of our country Sh. Mirziyoyev, these traditions have been further developed, and thanks to the great efforts and attention of our government, the industry and infrastructure of pilgrimage tourism in our country are acquiring a special meaning and essence with a new look. Since time immemorial, Uzbekistan has attracted foreign tourists with its beautiful nature, peaceful places, green forests, culture and national values, as well as unique traditions and customs of our people. In particular, the formation of a propaganda group in the republic, consisting of experienced scientists and researchers, with the aim of studying the rich scientific heritage of great scientists such as Imam Moturidi, Imam Bukhari, Imam Nasafi, Naqshbandi, Yassawi, at-Tirmidhi, and their promotion on a global scale, develops the tourism sector in our country. This has become an important event.*

Key words: *tourism, cultural, historical, natural attractions, UNESCO World Heritage Sites*

ВВЕДЕНИЕ (INTRODUCTION)

В этой теме мы рассмотрим следующие аспекты:

1. Классификация туристической отрасли Узбекистана:
 - Обсуждение различных сегментов и компонентов туристического сектора Узбекистана. Сюда будут входить виды туризма (например,

культурный, исторический, экотуризм), основные направления, инфраструктура (гостиницы, транспорт) и общее экономическое значение. И так же мы можем рассмотреть Древний Термез который включает в себя множество разнообразных археологических и архитектурных памятников, расположенных на площади 500 гектаров возле реки Амударья в Узбекистане, исторический центр Коканда, расположенный в западной части Ферганской долины недалеко от реки Сох, является культурным центром древнего происхождения. Его исторический центр характеризуется такими выдающимися достопримечательностями, как медресе Комол-Кози, Дахман Шахон, медресе Мадарихон, медресе Норбутабий, мечеть Гиштлики и традиционные жилые дома. Исторические записи относят Коканд ко II веку до нашей эры, и китайский путешественник Чжан Цзян описал его как процветающий город. Арабские историки и географы X-XII веков также подчеркивали значение Коканда. Историческая ткань города сочетает в себе старые и новые части, демонстрируя архитектурное разнообразие: от много дворового дизайна Урды, дворца правителей Кокандского ханства, до скромного медресе Комол-Кози и богато украшенного медресе Мийон Хазрат. Влияние Бухары очевидно в таких сооружениях, как медресе Норбута-бия, а европейский квартал, построенный в конце 19 - начале 20 веков, знаменует собой важный этап в архитектуре Центральной Азии. Мечеть Гиштлики в Коканде с деревянными колоннами и декоративными потолками является примером богатого культурного наследия города. Андижан, крупнейший исторический и культурный центр Центральной Азии, занимает важнейшее положение на Великом Шелковом пути. Этот древний город играл решающую роль в экономическом и культурном взаимодействии Бактрии, Согды, Шоша и Китая (Южного Туркестана) [1]. Разделенный на «Старую» и «Новую» части, Андижан был непрерывно заселен и застроен уже более 2500 лет. Цитадель и древнее поселение занимают площадь 109 гектаров, в средневековой цитадели находится квартал «Аркичи». Исторические записи и китайские рукописи указывают на выдающееся положение Андижана среди более чем 70 городов Ферганской долины в I и II веках до нашей эры. Культурные слои города раскрывают события в Чордоне, Коштепе, Аркичах и Шахристоне, документально подтвержденные упоминаниями с 10 века нашей эры. Андижан служил столицей Ферганы в начале 13 века и был известен своей монументальной архитектурой, включая мечети и ремесленные кварталы, такие как «Хунармандчилик» (ремесленный центр). Сегодня район старого города Андижана напоминает музей под открытым небом, в котором сохранилось более 100 исторических памятников и культурных объектов. Подлинность исторической и архитектурной целостности Андижана подтверждается продолжающимися археологическими раскопками и усилиями по консервации. Его значение как компонента Шелкового пути заключается в

хорошо сохранившемся культурном наследии и неизменной социально-экономической значимости на протяжении тысячелетий. Сравнение составляющих объектов Шелкового пути: Сопоставимые объекты в Узбекистане включают Афросиаб в Самарканде, Эркурган-Насаф в Карши и древнюю Хорезмскую Топрак-Калу. Хазарасп, однако, отличается своим неизменным состоянием и обширными археологическими слоями, относящимися к его основанию в середине I тысячелетия до нашей эры. К VIII веку Хазарасп зарекомендовал себя среди крупнейших и наиболее укрепленных городов Хорезма, олицетворяя структурированный городской дизайн, олицетворяющий древние принципы городского планирования на Великом шелковом пути [4].

ЛИТЕРАТУРА И МЕТОД (LITERATURE REVIEW AND METHODOLOGY)

Туристический сектор Узбекистана разнообразен и богат, предлагая сочетание культурных, исторических и природных достопримечательностей. Вот полный обзор его различных сегментов и компонентов:

Виды туризма

Культурный туризм:

- Узбекистан известен своим богатым культурным наследием, особенно городами Шелкового пути Самаркандом, Бухарой и Хивой, которые являются объектами Всемирного наследия ЮНЕСКО.

- Туристы приезжают, чтобы изучить древнюю архитектуру, мавзолеи, мечети и медресе, которые отражают исламскую историю и влияние страны.

Культурный туризм в Узбекистане вращается вокруг его глубокого исторического и архитектурного наследия, особенно в городах вдоль древнего Шелкового пути. Вот подробное исследование культурного туризма в Узбекистане:

Города Шелкового пути

1. Самарканд:

- Площадь Регистан: объект Всемирного наследия ЮНЕСКО с тремя величественными медресе, украшенными замысловатой плиткой и каллиграфией.

- Мавзолей Гур-э-Амир: место захоронения Тимура (Тамерлана) с величественными голубыми куполами и богато украшенной мозаикой.

- Шах-и-Зинда: некрополь мавзолеев и гробниц с потрясающей плиткой и архитектурным дизайном.

2. Бухара:

- Исторический центр: Бухара, внесенная в список Всемирного наследия ЮНЕСКО, может похвастаться хорошо сохранившейся архитектурой разных периодов, включая мавзолеев Саманидов и крепость Арк.

- Мечеть и минарет Калон: известна своим впечатляющим минаретом 12-го века и прилегающим комплексом мечетей.

3. Хива:

- Ичан-Кала: Ичан-Кала, объект Всемирного наследия ЮНЕСКО, представляет собой прекрасно сохранившийся средневековый город-крепость с многочисленными мечетями, медресе и дворцами.

- Минарет Кальта-Минор: культовый незавершенный минарет, известный своим характерным узором из синей плитки.

- Дворец Таш-Хаули: царская резиденция 19-го века, демонстрирующая традиционную хивинскую архитектуру и декоративное искусство[6].

Памятники Шелкового пути в Узбекистане

№.	Название	Название города	Площадь или регион (га) Географические (широта/долгота)	Координаты приблизительной центральной точки
1	Древний Термез	Сурхандарьинская область, Термезский район	500 га	67°11'34" N, 37°15'52"E
2	Исторический центр Коканд	Ферганская долина		40°35"N; 71° E
3	Канка	Ташкентская область, Аккурганский район	220 га	41°12' N; 68°59' E
4	Шахрухия	Шахрухия	400 га	41°14' N; 68°52' E
5	Ахсикет	Наманганская область	25 га	40°88'N; 71° 45' E
6	Пап	Наманганская область	9 га	40°50'N; 71°02'E
7	Андижан	Андижанская область	100 га	40°45' N; 72°15'E
8	Пойкент	Бухарская область	14га	39°30' N; 63°50' E
9	Варахша	Бухарская область	5,1 га	39°52' N; 64°03' E
10	Вобкент Минарет	Бухарская область	100 sq.m	40°04' N; 64°30' E
11	Мавзолей Чашма-Аюб	Бухарская область	400 sq.m	40°15' N; 64°30' E
12	Чор Бакр	Бухарская область	17га	38°40' N, 63°10' E
13	Комплекс Бахоутдин	Бухарская область	25га	39°45' N; 64°15' E
14	Работи Малик	Навоийская область	42,3 га	40°21' N; 65°15' E
15	Мавзолей Мир-Саида Бахрома	Навоийская область		36°53' N; 67°15' E

16	Косим Шейх	Навоийская область, Кармана	36,3 га	40°15'N; 65°20' E
17	Шейх Мухтор-Вали	Харезмская область	6 га	39°35'N; 66°45' E
18	Хазорасп	Харезмская обл., Хазорасп	25 га	41°18'N; 61°04' E

Древний Термез включает в себя множество разнообразных археологических и архитектурных памятников, расположенных на площади 500 гектаров возле реки Амударья в Узбекистане. Объект включает в себя несколько важных компонентов, таких как Коратепа, Фаязтепа, Зурмальный раствор, Кырк-Киз, Хаким ат-Термизий, Султан-Саодат, Кокилдор Хонако, Джаркурганский минарет и Кампиртепа. Он возник как укрепленное поселение в 4-3 веках до нашей эры и процветал как крупный административный и культурный центр в кушанский период, а затем как известный торговый центр в 9-13 веках нашей эры, до его разрушения монголами в 1220 году.

Подлинность и целостность Древнего Термеза подчеркиваются его обширными культурными слоями, охватывающими от древнегреческих и римских времен через средневековые периоды до XIX века. Несмотря на то, что большая часть глинобитной архитектуры находится в руинах, оставшиеся памятники сохранили свою первоначальную структурную планировку и архитектурные особенности, что дает ценную информацию о долгой истории города.

Примечательно, что памятники Древнего Термеза, включая буддийские монастыри, дворцы, мечети и хозяйственные комплексы, активно изучаются, а некоторые из них подверглись реставрации для сохранения своей аутентичности. Эти усилия гарантируют, что объект сохранит свое историческое и архитектурное значение, способствуя включению его в число уникальных объектов культурного наследия.

По сравнению с другими объектами, рассматриваемыми для признания в соответствии с критериями Всемирного наследия ЮНЕСКО, Древний Термез выделяется благодаря своему всестороннему представлению множества исторических периодов и культурных влияний, начиная от древних буддийских центров и заканчивая средневековой исламской архитектурой. Размер этого объекта, разнообразие памятников и постоянные усилия по сохранению делают его ключевым компонентом Шелкового пути, отражая его ключевую роль в региональной истории и торговле на протяжении тысячелетий.

Термез — это прекрасно сохранившийся объект, который на протяжении 27 веков служил ключевым центром культурного обмена и стратегически расположен на Великом Шелковом пути. Занимая площадь в 500 гектаров, он может похвастаться многочисленными материальными памятниками культуры, относящимися к греко-бактрийской, кушанской и

исламской цивилизациям. В Центральной Азии Древний Термез сыграл важную роль в распространении буддийской культуры и ранней исламской философии.

Фаязтепа, расположенный примерно в километре к юго-западу от Коратепы, является частью богатого буддийского наследия Узбекистана. Он выделяется своими инновационными методами строительства с использованием саманных материалов и богато украшенными архитектурными деталями, которые свидетельствуют о значительных достижениях в буддийской архитектуре.

Зурмальная ступа отличается своими монументальными размерами, примерно в десять раз больше современных ступ, найденных в Айритаме, Коратепе и Фаязтепе. Несмотря на природные проблемы, такие как землетрясения и влажность, Зурмальный раствор сохранил свою глинобитную конструкцию, что делает его замечательным примером архитектуры ступ кушанской эпохи в Узбекистане и соседних регионах.

Кырк-Киз, находящийся в основном в разрушенном состоянии, представляет собой редкий пример средневекового дворца-усадьбы (кжошк) в Термезе. Он имеет характерную двухъярусную глинобитную архитектуру, не имеющую аналогов в постройках эпохи Саманидов в других частях Центральной Азии. Были предприняты минимальные усилия по сохранению, сохранив его историческое и архитектурное значение[2].

Хаким ат-Термизий, родственник другим почитаемым исламским комплексам, таким как мавзолей Кусамы ибн Аббаса в Самарканде и комплекс Пахлавона Махмуда в Хиве, сыграл ключевую роль в распространении ранней исламской культуры с IX по XII века. Архитектурный стиль и декоративные элементы комплекса повлияли на развитие последующих культовых сооружений по всему региону.

Султан-Саодат представляет собой ансамбль зданий, относящихся к более ранним периодам, сравнимый с такими сооружениями, как Шахи-Зинда в Самарканде и мавзолей Гури-Амира. Его архитектурный орнамент, особенно кирпичная кладка, проводит параллели с известными памятниками, такими как мавзолей Саманидов в Бухаре, отражая его влияние на архитектурную эволюцию средневекового Термеза.

Кокилдор Хонако типологически выделяется среди аналогичных построек в Узбекистане и связан с архитектурными традициями Балха, демонстрируя самобытный архитектурный стиль Тохаристана и Балха в регионе. Его оригинальная планировка и декоративные элементы делают его уникальным культурным достоянием.

Эти памятники в совокупности подчеркивают историческое значение Термеза как перекрестка цивилизаций и подчеркивают его богатое архитектурное и культурное наследие на Шелковом пути.

Джаркурганский минарет

Минарет Джаркурган имеет схожие архитектурные приемы с другими выдающимися сооружениями Термеза, такими как дворец губернаторов 11-12 веков, мечеть в комплексе Хакима ат-Термизий, мавзолеей Ок-Остона Бобо в Узунском районе Сурхандарьинской области. и мавзолеей Зуль Кифла на острове Орол Пайгамбар на реке Амударья. Этот минарет претерпел минимальные консервационные работы и сохранил 95% своей первоначальной формы. Он представляет собой уникальное и образцовое представление культурных традиций, развивавшихся на протяжении веков, в частности демонстрируя особый архитектурный стиль Термезской школы.

Кампиртепа

Кампиртепа — единственный город в Центральной Азии, исторически действовавший как портовый и таможенный город, предположительно основанный Александром Македонским. Его отождествляют с древним городом Александрия Оксиана, что делает его не имеющим себе равных в регионе. Кампиртепа, занимающий третье место по значимости после Айритама и Древнего Термеза на Великом шелковом пути, сыграл решающую роль в содействии торговле, культурному обмену и духовным связям между Востоком и Западом в кушанский период. Планировка города и его конструкции положительно повлияли на последующее развитие градостроительства, архитектуры и монументального искусства в Средней Азии [3].

Исторический центр Коканда

Коканд, расположенный в западной части Ферганской долины недалеко от реки Сох, является культурным центром древнего происхождения. Его исторический центр характеризуется такими выдающимися достопримечательностями, как медресе Комол-Кози, Дахман Шахон, медресе Мадарихон, медресе Норбутабий, мечеть Гиштлики и традиционные жилые дома. Исторические записи относят Коканд ко II веку до нашей эры, и китайский путешественник Чжан Цзянь описал его как процветающий город. Арабские историки и географы X-XII веков также подчеркивали значение Коканда. Историческая ткань города сочетает в себе старые и новые части, демонстрируя архитектурное разнообразие: от многодворового дизайна Урды, дворца правителей Кокандского ханства, до скромного медресе Комол-Кози и богато украшенного медресе Мийон Хазрат. Влияние Бухары очевидно в таких сооружениях, как медресе Норбута-бия, а европейский квартал, построенный в конце 19 - начале 20 веков, знаменует собой важный этап в архитектуре Центральной Азии. Мечеть Гиштлики в Коканде с деревянными колоннами и декоративными потолками является примером богатого культурного наследия города.

Канка

Канка, древнее поселение в 80 км к юго-востоку от Ташкента, входит в число крупнейших городских центров Ташкентского оазиса. Канка,

занимающая площадь 220 гектаров, возвышается над монументальной цитаделью высотой более 40 метров. Цитадель представляет собой крепость с четырьмя башнями, дворцом и бастионами с человеческими стенами вокруг храма. Разделенная на три части — цитадель, Шахристан (городской район) и Рабад (торговая окраина) — Канка может похвастаться значительными археологическими открытиями, датируемыми VI-XII веками. Среди примечательных сооружений цитадели — массивный замок, окруженный большим рвом и укрепленный слоями сырцовый глины. Шахристан I, окруженный крепостными стенами и широким рвом, сохраняет городские постройки XI-XII веков. Шахристаны II и III отражают динамику развития города, демонстрируя плотные жилые районы, мастерские и рыночные площади. Археологические раскопки обнаружили дворец и храм правителя внутри цитадели, монументальные городские храмы и артефакты, связанные с манихейскими религиозными практиками. Включение Канки в число десяти великих древних городов Центральной Азии подчеркивает ее подлинность как исторического и культурного памятника.

Шахрухия

Шахрухия, расположенная в 88 км к юго-западу от Ташкента на правом берегу реки Сырдарья, стала главным городом Ташкентского оазиса и ключевым узлом Великого шелкового пути. Первоначально известный как Бенакет, он был переименован Амиром Тимуром в 1392 году в Шахрухию. Занимая территорию в 400 гектаров, Шахрухия включает в себя цитадель, два городских района (Шахристан) и обширный торговый пригород (Рабад), окруженные крепостными стенами с башнями. Усилия Амира Тимура по реконструкции укрепили укрепления Шахрухии, в которых находятся археологические находки, относящиеся к периодам Тимуридов и Узбекского ханства. Открытия включают мастерские, рыночные площади и важную городскую инфраструктуру. Примечательными достопримечательностями являются монументальный комплекс «Шомир-кара овлия», а также остатки мемориальной мечети Абдуллахана I и мраморной гробницы. Шахрухия процветала с III по XVIII века нашей эры, служа жизненно важным экономическим и культурным центром при различных правителях, несмотря на частичное разрушение рекой Сырдарья. Его хорошо сохранившаяся архитектурная целостность дает бесценную информацию о городском развитии и культурном наследии региона.

Ахсикет

Ахсикет, расположенный в Наманганской области на правом рукаве реки Сырдарья, занимает площадь более 25 гектаров. Планировка города включает цитадель, Шахристан (центр города) и Рабад (пригород), окруженные мощными укреплениями. Известный своим производством высококачественной стали, Ахсикет был важной остановкой на Великом

шелковом пути, соединяющем Согд (Самарканд) и Шаш (Ташкент). В ходе археологических раскопок были обнаружены дворец губернатора, тюрьма (зиндан), оживленный городской рынок, величественная соборная мечеть и ремесленные мастерские, в том числе баня II века нашей эры. Разрушенный монгольскими войсками, Ахсикет позже был восстановлен в 5-6 км к западу от своего первоначального местоположения. Стратегическое положение и историческое значение города подчеркивают его роль в содействии культурному обмену и торговле на Великом шелковом пути.

Пап

Пап, также известный как Баландтепа или Мунчактепа, — древнее поселение и некрополь, расположенный на правом берегу реки Сырдарья. Пап, занимающий площадь более 9 гектаров, состоит из цитадели, внутреннего города и северного пригорода (рабада), где археологические материалы охватывают период с 1 по 8 века нашей эры. Цитадель, расположенная на возвышенности на юго-востоке, укреплена, а внутренний город окружает ее на более низкой высоте остатками древнего рва. Северный рабад, хотя и построен в основном в средневековье, содержит археологические находки, датируемые 9 веком. Примечательно, что некрополь Мунчактепа I и II, расположенный к западу от пригорода, имеет курганы и уникальные подземные склепы. Эти склепы, разделенные на малые (5 кв. м) и большие (6 кв. м и более) группы, состоят из входных площадок, коридоров (дромосов) и погребальных камер. Они сделали важные открытия, такие как органические останки, ткани, музыкальные инструменты, деревянные сосуды и более 10 000 бус. Некрополь служит важным местом для понимания раннесредневековой культуры Ферганы, предлагая понимание погребальных обычаев и социальных практик. Стратегическое расположение Папа на Великом Шелковом пути способствовало экономическому и культурному обмену, о чем свидетельствуют сохранившиеся названия дорог и этнографические артефакты. Несмотря на то, что Пап был частично разрушен рекой Сырдарья, он остается ценным археологическим памятником, имеющим хорошо сохранившееся историческое и культурное значение.

Андижан

Андижан, крупнейший исторический и культурный центр Центральной Азии, занимает важнейшее положение на Великом Шелковом пути. Этот древний город играл решающую роль в экономическом и культурном взаимодействии Бактрии, Согда, Шоша и Китая (Южного Туркестана). Разделенный на «Старую» и «Новую» части, Андижан был непрерывно заселен и застроен уже более 2500 лет. Цитадель и древнее поселение занимают площадь 109 гектаров, в средневековой цитадели находится квартал «Аркичи». Исторические записи и китайские рукописи указывают на выдающееся положение Андижана среди более чем 70

городов Ферганской долины в I и II веках до нашей эры. Культурные слои города раскрывают события в Чордоне, Коштепе, Аркичах и Шахристоне, документально подтвержденные упоминаниями с 10 века нашей эры. Андижан служил столицей Ферганы в начале 13 века и был известен своей монументальной архитектурой, включая мечети и ремесленные кварталы, такие как «Хунармандчилик» (ремесленный центр) [5]. Сегодня район старого города Андижана напоминает музей под открытым небом, в котором сохранилось более 100 исторических памятников и культурных объектов. Подлинность исторической и архитектурной целостности Андижана подтверждается продолжающимися археологическими раскопками и усилиями по консервации. Его значение как компонента Шелкового пути заключается в хорошо сохранившемся культурном наследии и неизменной социально-экономической значимости на протяжении тысячелетий.

Пойкент

Пойкент, расположенный в нижнем течении реки Зарафшан, был выдающимся городом в Центральной Азии, известным своим стратегическим расположением на Великом шелковом пути. Первоначально основанный как небольшая деревня в 4 веке до нашей эры, Пойкент превратился в город-крепость и крупный торговый центр, соединяющий южные регионы, такие как Бактрия, Индия и Иран, с северными территориями, такими как Уральский фронт и побережье Волги. К 8 веку он процветал как жизненно важный военный и экономический центр на западных границах Согдианы. Исторические записи, в том числе китайские хроники, указывают на важность Пойкента в составе Бухарского царства «Ан» и как столицы ханства «Би». Примечательно, что Пойкент действовал как республика, управляемая советом торговцев в VI и VII веках нашей эры. Обширные археологические исследования, проведенные Институтом археологии Академии наук Узбекистана, выявили важные находки, в том числе зороастрийские храмы, дворец, мечеть, построенные в 9 веке, а также остатки оборонительных сооружений, дорог и жилых кварталов (махалли). За пределами рабадов экономическому процветанию Пойкента способствовали гончарные центры и караван-сарай. Несмотря на его окончательный упадок примерно в середине IX века из-за изменения русла реки Зарафшан, Пойкент остается замечательным археологическим памятником с хорошо сохранившимися монументальными остатками, которые свидетельствуют о его историческом и культурном значении.

Варахша

Варахша, расположенная в 45 км к западу от Бухары вдоль древнего ручья Рометонруд реки Зарафшан, была значимым городом в Средней Азии. Первоначально основанная как деревня в IV-III веках до нашей эры, Варахша приобрела известность как укрепленный город и

административный центр для династии Бухароухудов, правителей Бухары. Историк Мухаммад Наршахий отметил древность Варахши еще до Бухары, назвав ее Раджфандуном. Город процветал как крупный торговый центр на маршруте Бухара-Хорезм, где раз в две недели проводились рынки и ежегодная двадцатидневная ярмарка. Его упадок начался с снижения уровня воды в реке Зарафшан и завершился разрушениями во время монгольских завоеваний. Раскопки под руководством В.А. Шишкин в середине 20-го века обнаружил значительные останки, в том числе дворец династии Бухароухудов, украшенный замысловатыми настенными росписями, изображающими всадников на слонах и мифических существ. Ганчевые панели на втором этаже дворца украшены уникальными художественными изображениями растений, людей, животных и мифических существ, которые дают представление о культурной и политической жизни города.

Чор-Бакр

Чор-Бакр — мемориальный комплекс, расположенный на месте захоронения Абу-Бакра-Саида, потомка пророка Мухаммеда, скончавшегося в 970-971 годах нашей эры. Первоначально он начинался как гробница Абу-Бакра-Саида, которая позже превратилась в некрополь с семейными гробницами, окруженный обнесенными стеной дворами. Значительное развитие комплекс получил в 1858 году при эмире Адуллахане II, который построил хонако (здание для суфийских собраний) и мечеть для Джуйбарских шейхов, связавших Бухару с Чор-Баком. Со временем между хонако и мечетью были добавлены дополнительные худжры (клетки), создав новый центральный комплекс некрополя. К началу 20 века перед основными сооружениями был возведен небольшой минарет. Комплекс включает в себя как мемориал, так и старинное кладбище площадью 3 га.

Бахутдинский комплекс

Комплекс Бахутдина посвящен памяти шейха Бахутдина Накшбанда, почитаемого деятеля суфийского ордена Накшбандий, который умер в 1389 году. Расположенный в древнем поселении, известном как Касри Арифон, комплекс включает в себя несколько построек, построенных в разные периоды:

1. Дахма Бахутдина Накшбанда: Этот мавзолей облицован мраморными блоками и покрыт сложной ажурной мраморной решеткой. Сама гробница возвышается на платформе с мраморным надгробием и стелой, а севернее расположен небольшой хауз (бассейн).

2. Сахо-хона: четырехугольный павильон в форме ротонды, поддерживаемый четырехарочными башенками, увенчанными небольшими куполами.

3. Мечеть Хакима Кушбеги: характеризуется плоской трабеей, поддерживаемой двумя колоннами и украшенной шестью расписными

плафонами. Он соединен с айваном с пятью колоннами и расписными потолками, с аналогичным айваном, расположенным севернее.

4. Мечеть Музаффархан. Построена с кирпичными стенами, потолком с плоскими балками, поддерживаемым деревянными колоннами, и айваном с пятью расписными плафонами.

5. Малый минарет: построен из обожженного кирпича с восьмиугольным фонарем и восемью арками.

6. Малое медресе: Учебное заведение, входящее в состав комплекса.

7. Абдул-Лазизхан Хонако: расположен в северо-западном дворе, построен в классической квадратной форме. Вход в комплекс осуществляется через двое ворот: Токи-мионка и Ходжа Дилявар, представляющие собой небольшие арочно-купольные конструкции. Некрополь Дахман-Шахон состоит из шести прямоугольных суф (захоронений) с мраморными стенами, двух колодцев и двух хаузов.

Работи Малик

Работи Малик включает в себя два значительных культурных сооружения: Караван-сарай и Сардоба. Караван-сарай был построен по заказу караханидского правителя Шамс-аль-Мулька Насра, сына Тамгачхана Ибрагима, который правил Самаркандом с 1068 по 1080 год. От первоначального обширного караван-сарая остался только монументальный портал. Этот портал, один из старейших в Центральной Азии, представляет собой пештак с центральной стрельчатой аркой и прямоугольным дверным проемом, украшенным сложной терракотовой резьбой в виде восьмиконечных звезд, соединенных переплетающимися лентами. Надписи на арабском языке украшают край арки. Под слоями ремонтной штукатурки на стенах различимы следы древней ганчевой штукатурки с растительными мотивами. Первоначальная планировка караван-сарая, построенного из сырцовых кирпичей и обожженных кирпичом, была частично реконструирована в результате археологических раскопок, в результате чего были обнаружены стены высотой в среднем от 0,4 до 0,7 метра. Караван-сарай занимает площадь 8277 квадратных метров.

Мавзолей Мир-Саида Бахрома

Мавзолей Мир-Саида Бахрома отличается центральной осевой планировкой, внешними размерами 6,06 x 6,1 метра и внутренними размерами 4,47 x 4,4 метра. Фасад мавзолея, построенный из обожженного кирпича, имеет заметный портал с широкой арочной нишей длиной 2,13 метра, в которой находится прямоугольный дверной проем и арочное окно наверху. Хотя арочные рамы несут значительные потери надписей, они окружены резными колоннами и сложной геометрической рамой П-образной формы. Внутри купол опирается на восьмигранное основание и украшен сложной резьбой по ганчу (гипсу). Отличительной особенностью

памятника остается оригинальное деревянное надгробие, позднее покрытое большими черными каменными плитами.

Косим Шейх

Комплекс Косим Шейха включает в себя три отдельных двора, построенных в разные периоды. На переднем плане стоит Дахма (мавзолей), расположенный перед зиёратоной (комнатой паломников), напоминающей мечеть-намазгох, с тремя купольными сооружениями и трехкупольной галереей на фасаде. В 16 веке Абдуллахан II расширил комплекс на запад, добавив монументальный хонако, вершину среднеазиатской архитектуры. К югу и западу расположены два дополнительных двора: западный двор, подобный древней хазире, представляет собой мечеть-айван, а южный двор соединяет все предыдущие постройки с худжрами (кельями) и оградками. Центральным элементом комплекса размером 92 на 87 метров является хонако Косим Шейх, отличающийся своей центральной композицией. Ядро квадратного здания занимает крестообразный зал, увенчанный двойным куполом на исключительно высоком барабане. Глубокие порталные ниши подчеркивают фасады, причем южный портал заметно больше. Уникальный дизайн потолка кхонако включает в себя четыре пересекающиеся арки и восьмищитовидные подвески, поддерживающие двенадцатигранное основание двойного купола.

Шейх Мухтор Вали

Комплекс Шейха Мухтора Вали, расположенный в Остане Хивинской области, занимает обширное кладбище, окружающее почитаемый мавзолей. Легенды приписывают основателю Останы шейху Мухтору Вали, современнику знаменитого поэта и борца Пахлавона Махмуда из Хивы. Архитектурные и археологические исследования датируют строительство комплекса началом 14 века. Его асимметричная пространственная планировка включает в себя большой зал мавзолея и расположенную за ним мечеть меньшего размера. Ансамбль известен своими разнообразными архитектурными элементами, сочетающими сводчатые арки и куполообразные потолки в логически структурированном плане этажа. Преобладает зал мечети, характеризующийся восьмиугольным куполом, украшенным оригинальными сталактитовыми украшениями в угловых подвесках и восьмигранным фонарем.

Хазарасп

Хазарасп является одним из старейших городов Центральной Азии, упомянутым такими древними учеными, как Ат-Таббари, Аль-Истахри, Бейхаки и Джувени. Возникнув еще в древности, он стоит рядом с Мемфисом, Римом, Афинами, Мервом, Самаркандом и Бухарой. Будучи главным форпостом Хорезма на Великом шелковом пути, он процветал как крупный торговый центр и город-крепость. Сегодня посетители восхищаются его руинами, окруженными крепостными стенами,

перемежающимися двенадцатью сохранившимися башнями, включая башню-цитадель Дев-Солган, возвышающуюся в юго-восточном углу. Высота стен варьируется от 10 до 12 метров, они построены из пахсы (сырной стены) и сырцового кирпича, что демонстрирует тщательно спланированный город, а не стихийно возникшую структуру [1].

ОБСУЖДЕНИЕ (DISCUSSION)

Археологические находки Пойкента хорошо сохранились, что дает ценную информацию о его городском планировании, социально-политической организации и экономической деятельности в период его расцвета как города Шелкового пути. Так же мы можем рассмотреть археологические находки Варахши, частично сохранившиеся, дают представление о художественных и архитектурных достижениях периода раннего средневековья в Центральной Азии. В том числе Чор-Бакр сохраняет значительную аутентичность, несмотря на незначительные реставрационные работы и потери архитектурного декора. Усилия по консервации обеспечили его сохранность примерно на 80%, сохранив историческую и духовную целостность. Комплекс Бахутдина является свидетельством исторической преемственности, демонстрируя разнообразный архитектурный ансамбль, развивавшийся в разные периоды. Сардоба, водохранилище, было построено в 14 веке как важный водопой на Великом шелковом пути. Он служит неотъемлемой частью комплекса Работи Малик, представляя собой традиционное цилиндрическое основание, увенчанное сферическим куполом, уходящим под землю на шесть метров. В приподнятой части купола расположены четыре арочных окна, освещающих внутреннее пространство и ориентированных по сторонам света. Дверная арка под северным окном ведет внутрь, куда можно попасть по наклонному коридору с поверхности. Входной портал имеет прямоугольную форму, что подчеркивает монументальность сооружения. Сардоба имеет внутренний диаметр 12,3 метра, толщину стен у основания 1 метр и общую высоту 11 метров. Мавзолей Мир-Саида Бахрома представляет собой замечательный пример среднеазиатской мемориальной архитектуры, демонстрирующий уникальные строительные технологии и декоративные элементы. Была необходима минимальная консервация, за исключением айвана, которого больше не существует. Сохранились фрагменты оснований мраморных колонн.

Сопоставимые объекты в Узбекистане включают Афросиаб в Самарканде, Эркурган-Насаф в Карши и древнюю Хорезмскую Топрак-Калу. Хазарасп, однако, отличается своим неизменным состоянием и обширными археологическими слоями, относящимися к его основанию в середине I тысячелетия до нашей эры. К VIII веку Хазарасп

зарекомендовал себя среди крупнейших и наиболее укрепленных городов Хорезма, олицетворяя структурированный городской дизайн, олицетворяющий древние принципы городского планирования на Великом шелковом пути.

Караван-сарай Работи Малик выделяется своими огромными размерами и четким применением строительных технологий, типичных для Центральной Азии XI и XIII веков. Его фасад, напоминающий древние крепости с ребристыми чертами, и монументальный портал с минаретами по бокам отличают его от типичных построек, встречающихся на Великом шелковом пути. В отличие от других водоемов в Узбекистане, например, в Касби, Джизаке и Бухаре, Сардоба в Работи-Малике отличается своей архитектурной интеграцией в более крупный караван-сарай и своей ключевой ролью исторического пункта водоснабжения.

Каждый из них воплощает в себе уникальные культурные и архитектурные атрибуты. Комплекс Шейха Мухтора Вали выделяется своей ролью ключевого участка Шелкового пути на пороге Хорезма, символизируя оазисное значение города на торговых путях.

В Узбекистане сохранились сопоставимые комплексы, подобные комплексам в Бухаре (Бохутдин Накшбандий, Чор-Бакр), Самарканде (Ходжа Ахрор Вали) и Хиве (Пахлавон Махмуд). Каждый из них отражает различные архитектурные традиции и исторические повествования. Комплекс Косим Шейха выделяется своим универсальным значением, воплощая в себе миротворческое наследие Касима Шейха, выдающегося религиозного деятеля, повлиявшего на политический ландшафт Мавераннаха в 16 веке. Его архитектурная планировка иллюстрирует оригинальные методы строительства и идеи, которые можно увидеть в ханках вдоль оживленных караванных и торговых путей, развиваясь на основе концепций, заложенных еще в 11 веке во время развития суфизма в исламе.

Мавзолей Мир-Сайида Бахрома имеет архитектурное сходство с мавзолеем Саманидов в Бухаре, мавзолеем Араб-Ата в Самаркандской области и мавзолеем Ок Остона Бобо в Сурхандарьинской области, что подтверждает его значимость среди выдающихся памятников мировой архитектуры на протяжении Великого шелкового пути. Несмотря на свои скромные размеры, мавзолей, построенный в конце 10-го века, представил новаторские архитектурные концепции, которые повлияли на последующие проекты мавзолеев в Центральной Азии.

РЕЗУЛЬТАТЫ (RESULTS)

По вышеуказанным исследуемым историческим и археологическим объектам можно обнаружить то, что Пойкент выделяется как один из крупнейших и старейших городов Центральной Азии, превратившийся из

небольшой деревни в укрепленный городской центр. Его уникальное республиканское управление в средневековый период отличает его от других подобных мест, подчеркивая его роль как ключевого компонента Шелкового пути, соединяющего торговые пути между севером и югом. Чор-Бакр сравним с мемориальным комплексом Бахуддина Накшбанди, поскольку оба служат некрополями для выдающихся священнослужителей и правителей Бухары. Его своеобразная архитектура и пространственная планировка иллюстрируют решающий этап в развитии духовной и культурной истории Центральной Азии. Комплекс может похвастаться 25 постройками, включая хонако, мечеть, айван (веранда), дарвазахана (ворота), минарет и 20 небольших дворов с куполообразными гробницами, каждый из которых украшен полихромной плиткой и мраморными надгробиями с эпиграфическими и декоративными мотивами. Статус Варахши как центра ремесла и культуры, подтвержденный Наршахией, отличает ее как культурный и экономический центр на Шелковом пути. Его уникальные архитектурные особенности и историческое значение подчеркивают его выбор в качестве ключевого компонента Шелкового пути. Архитектурная целостность комплекса Косим Шейх была тщательно сохранена. Усилия по сохранению были сосредоточены на структурном усилении, частичной замене купола и восстановлении недостающих участков кирпичной кладки. Расположенный на Великом шелковом пути в пределах средневекового города Кармана (Беркуттепа), памятник сохраняет свое историческое и архитектурное значение.

Археологические исследования тщательно исследовали Караван-сарай и выявили остатки его первоначальной планировки. Хотя портал был частично восстановлен, большая часть его объемной целостности осталась нетронутой. Сардоба олицетворяет свое историческое и функциональное значение, служа спасательным кругом для бесчисленных путешественников и местных сообществ на Великом Шелковом пути. Памятник сохранил более 80% своей первоначальной структуры, при этом недавние усилия были сосредоточены на восстановлении верхней части обрушившегося купола и усилении фундамента. В отличие от других подобных объектов, таких как мавзолей Шейбанидов в Самарканде или Комплекс Ходжи Ахрора Вали в Навои, комплекс Бахутдина однозначно отражает влияние ордена Накшбандий и его основателя шейха Бахутдина Накшбанди. Его непреходящее духовное и архитектурное значение ежегодно привлекает сотни тысяч посетителей, укрепляя его статус почитаемого места исламского паломничества в Узбекистане и за его пределами.

ЗАКЛЮЧЕНИЕ (CONCLUSION)

Археологические и архитектурные памятники, описанные в статье, представляют собой ключевые элементы исторического наследия

Узбекистана, связанные с Великим шелковым путем. Каждый объект раскрывает важные аспекты культурного, социального и экономического развития региона в различные исторические периоды. Хорошо сохранившиеся города, такие как Пойкент и Хазарасп, предоставляют ценную информацию о городской планировке и организации жизни, тогда как комплексы Чор-Бакр, Бахутдина и Сардоба иллюстрируют уникальные архитектурные и инженерные достижения. Мавзолей Мир-Саида Бахрома и другие аналогичные сооружения демонстрируют эволюцию мемориальной архитектуры и религиозного наследия Центральной Азии. В совокупности эти памятники олицетворяют богатство культурного и духовного наследия Узбекистана, продолжающее оказывать влияние на современное понимание истории региона и его значимости на Великом шелковом пути.

Данная статья представляет собой обзор нескольких значимых археологических и архитектурных памятников Узбекистана, связанных с историей Великого шелкового пути. Основное внимание уделяется следующим аспектам:

1. Археологические находки Пойкента и Варахши: Пойкент хорошо сохранился и предоставляет ценные сведения о городском планировании, политической структуре и экономике, характерных для городов Шелкового пути. Варахша, несмотря на частичное сохранение, позволяет изучать достижения в области искусства и архитектуры раннего средневековья в Центральной Азии.

2. Архитектурные комплексы и мавзолеи: Чор-Бакр и комплекс Бахутдина представляют собой важные объекты, сохранившие значительную историческую и духовную ценность. Мавзолей Мир-Саида Бахрома демонстрирует уникальные архитектурные особенности и высокую степень сохранности, несмотря на утрату некоторых элементов.

3. Водные сооружения: Сардоба в Работи-Малике иллюстрирует передовые инженерные решения своего времени, используемые для хранения и распределения воды. Это важное сооружение интегрировано в караван-сарай и выполняло жизненно важную функцию на торговых путях.

4. Города и укрепления: Хазарасп, с его сохранившимися археологическими слоями, представляет собой пример крупного укрепленного города, который развивался в соответствии с древними принципами городского планирования на Шелковом пути.

5. Роль памятников в историческом и культурном контексте: Статья подчеркивает, что каждый из объектов олицетворяет культурные и архитектурные особенности своей эпохи. В частности, памятники отражают влияние суфизма, исламской архитектуры и городского планирования, которые развивались на протяжении веков вдоль торговых путей Центральной Азии.

В заключение, все упомянутые памятники являются свидетельствами сложного исторического и культурного наследия, оказавшего значительное влияние на развитие архитектуры и урбанистики в регионе.

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САМОМЕНЕДЖМЕНТ В ДЕЯТЕЛЬНОСТИ РУКОВОДИТЕЛЯ

Аннотация: в статье мы анализируем основные аспекты современного руководителя как менеджера образовательной организации.

Ключевые слова: образование, образовательные технологии, инновационные методы преподавания, система самоменеджмента.

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SELF-MANAGEMENT IN THE ACTIVITIES OF THE MANAGER

Abstract: in the article we analyze the main aspects of a modern leader as a manager of an educational organization.

Key words: education, educational technologies, innovative teaching methods, self-management system.

Образование становится одной из самых значительных сфер деятельности. Оно переплетается со всеми другими областями жизни общества: политикой, культурой, экономикой. В последнее десятилетие система образования в России находится в состоянии кризиса и поиска выхода из него. В этом проявляются особенности современного высшего образования.

Одной из важнейших особенностей управления в высшем образовании является то, что решение проблем происходило только на уровне самой системы образования. Сегодня решение проблем этой сферы вышло на общегосударственный уровень.

Основные задачи менеджмента в сфере высшего образования определены в Концепции долгосрочного социально-экономического развития Российской Федерации на период до 2020 года [1]. Менеджмент в системе высшего образования будет эффективным в случае применения современных образовательных технологий, инновационных методов

преподавания и обучения. Также эффективность менеджмента зависит и от других не менее важных аспектов таких, как уровень преподавания, научно-исследовательская работа, механизмы и уровень финансирования учебного процесса и др. Проблемы модернизации образовательного процесса, его экономической и организационной стороны должны решаться комплексно, в рамках единого процесса.

В современных условиях менеджмент сферы высшего образования обуславливает необходимость привлекать для решения проблем и задач социальные институты, в первую очередь семью, и модифицировать роль студента в организации учебного процесса. Роль студента тут имеет значение в определении выбора образования в разнообразном образовательном пространстве, а также в значении участника финансирования образования. Семья, как социальный институт, в образовательном процессе выполняет следующие задачи: она, с одной стороны, участвует в финансировании образования студента, с другой стороны, участвует в выборе вуза и специальности будущего студента.

Особенностью менеджмента в высшем образовании должно быть развитие автономности вузов, возможность самостоятельного определения методики и технологии учебного процесса, структурирования кадров, источники финансирования и пр. Проблемы формирования и развития системы самоменеджмента в последние годы получили широкое отражение в научной литературе.

Это актуальное направление в научном менеджменте, возникшее благодаря потребностям общества и призванное повысить эффективность деятельности человека для достижения его личных и профессиональных целей. Известный американский исследователь П.Друкер отмечает, что важнейшей задачей научного менеджмента становится проблема управления на уровне отдельного человека, т.е. самоменеджмент, одним из важнейших разделов которого является персональный стратегический менеджмент.

Каким должен быть успешный, эффективный руководитель - менеджер? Разумеется, он должен знать свое дело, умело управлять, уметь ставить цели и добиваться их. Профессия менеджера требует от специалиста умения управлять, прежде всего, собой. Ведь как может человек руководить другими людьми, целой организацией, если он не может управлять даже собой? Но все эти качества бесполезны, если человек не может планировать собственное время.

Менеджеру необходимо критически оценивать свои личные и деловые качества, анализировать достижения и неудачи, ставить цели личного и профессионального развития.

Имеется ряд методологических разработок по общему самоменеджменту, по самоменеджменту в отдельных отраслях деятельности. Однако в трудах В.И. Андреева, Г.А. Бордовского

подчеркивается, что технология самоменеджмента для образовательных систем пока не разработана, однако весьма актуальна.

Образовательная система несколько отстает в силу объективных причин от сферы бизнеса и производства, однако в ней также применимы основные принципы, правила и методы эффективного самоменеджмента т.к. руководитель образовательного учреждения выполняет аналогичные функции.

Компетентность современного руководителя образовательного заведения базируется не столько на узкопрофессиональном подходе, который связан с управлением школой, сколько на приобретении широкого круга менеджерских навыков, обеспечивающих управление школой. Поэтому управленцам следует выходить за рамки школьной действительности и в первую очередь активно знакомиться с классикой менеджмента. Чем больше руководитель будет интересоваться разными сторонами управления, экономикой и финансами, статистикой, социологией, узнавать о практическом опыте других организаций, даже не образовательных, тем эффективнее он станет действовать на своем месте. Руководитель образовательного учреждения сегодня – организатор образовательной среды, психолог, экономист, правовед, юрист, хозяйственник, методист, дидакт, стратегический менеджер.

На уровне государственного менеджмента закреплены такие функции, как проектирование стратегии развития высшего образования и управление ее реализацией.

Немаловажно, что экономическая система влияет на экономическую устойчивость вузов. Экономическая политика вузов зависит от экономической политики государства в области высшего образования.

Помимо экономики на менеджмент системы высшего образования оказывает значительное влияние и другие внешние факторы: политические, правовые, социокультурные и т.д. Успешная деятельность образовательной организации зависит также и от внутренней среды (ППС, студенты, учебный процесс, финансирование и пр.) и окружения (работодатели, которые хотят получить специалистов того или иного вуза; другие вузы; группы населения, составляющие будущих студентов и пр.).

Стратегический менеджмент в высшем учебном заведении важен и для формирования и определения миссии и цели вуза. Это зависит от социокультурного окружения вуза. Оно образуется при взаимодействии социокультурных факторов и организационной культуры вуза. Помимо этого социокультурная среда вуза формируется под воздействием других факторов внешней среды: территориальных, культурных, этнических, экономических и др.

Стратегический менеджмент - важный фактор эффективности работы вуза. Его основным положением является анализ внутренней и внешней среды вуза.

Важный аспект менеджмента вуза - гарантия эффективности управленческих решений и контроль их исполнения. Журко В.И. выделяет следующие основные принципы управления образовательной деятельностью: обеспечение образовательного процесса на основе непрерывности и преемственности уровней высшего образования; интегрированность довузовского, высшего и послевузовского профессионального образования при реализации инновационных технологий и при сохранении традиций; конкурентность и открытость при определении приоритетных направлений образовательной деятельности [2].

Менеджмент должен быть направлен на создание стратегии и основ учебной деятельности вуза, внедрение инновационных технологий в учебный процесс, разработку нормативно-правовых, экономических основ, координацию работы структурных подразделений и т. д.

Эффективный менеджмент вуза тот, который будет обеспечивать высокое качество образования при результативной экономической и социальной политике образовательной организации. Он является одновременно системой и непрерывным процессом, обеспечивающим успешное развитие и функционирование вуза. Именно грамотно выстроенный менеджмент дает возможность поддерживать все важные функции вуза. И тем не менее, система менеджмента в образовательном учреждении - это комплекс, который нуждается в постоянном совершенствовании.

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АНАЛИЗ ЭФФЕКТОВ СТАРЕНИЯ И ДЕГРАДАЦИИ МАТЕРИАЛОВ В МНОГОПРОЛЕТНЫХ БАЛКАХ ПОД ВОЗДЕЙСТВИЕ ТАКИХ ЭФФЕКТОВ КАК КОРРОЗИЯ И УСТАЛОСТЬ

Аннотация: В данной работе рассматриваются аспекты старения и деградации материалов в многопролетных балках под воздействием коррозии и усталости. Анализируются изменения в напряжениях, деформациях и частоте образования микротрещин при использовании защитных покрытий. Предоставляется методика структурного мониторинга, включающая установку датчиков и применение метода акустической эмиссии для раннего выявления дефектов.

Ключевые слова: коррозия, усталость, балки, старение, деградация, защита, мониторинг, трещины, деформация, надежность

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ANALYSIS OF THE EFFECTS OF AGING AND DEGRADATION OF MATERIALS IN MULTI-SPAN BEAMS UNDER THE INFLUENCE OF EFFECTS SUCH AS CORROSION AND FATIGUE

Abstract: This paper examines aspects of aging and degradation of materials in multi-span beams under the influence of corrosion and fatigue. Changes in stresses, strains and the frequency of microcrack formation when using protective coatings are analyzed. A structural monitoring technique is provided, including the installation of sensors and the use of acoustic emission techniques for early detection of defects.

Key words: corrosion, fatigue, beams, aging, degradation, protection, monitoring, cracks, deformation, reliability

Введение. Многопролетные балки широко используются в строительных конструкциях благодаря своей способности выдерживать большие нагрузки и перекрывать значительные расстояния. Однако долговечность и надежность таких конструкций зависят от множества факторов, среди которых важное место занимают старение и деградация материалов. Со временем различные внешние воздействия, такие как коррозия и усталость, могут значительно снизить эксплуатационные

характеристики материалов, из которых изготовлены балки. Понимание и анализ этих эффектов являются ключевыми для обеспечения надежности и безопасности строительных конструкций в долгосрочной перспективе.

Методология. Для анализа эффектов старения и деградации материалов в многопролетных балках под воздействием коррозии и усталости используется методика структурного мониторинга. Этот подход включает установку датчиков на ключевые элементы конструкции, которые регистрируют изменения в напряжениях, деформациях и других параметрах в реальном времени. Система мониторинга позволяет проводить регулярный анализ состояния балок и прогнозировать возможные повреждения. Одним из таких методов является акустическая эмиссия, которая фиксирует звуковые волны, возникающие при образовании микротрещин и других дефектов в металле. Анализ данных с датчиков позволяет своевременно выявлять начальные стадии деградации и принимать меры по их устранению.

Результат. В рамках исследования по методике структурного мониторинга состояния многопролетных балок под воздействием коррозии и усталости было установлено несколько ключевых результатов. Для проведения анализа были установлены датчики на металлические элементы балок, подвергающиеся наибольшему воздействию и подверженные наибольшему риску коррозии.

1. Изменения в напряжениях и деформациях

В ходе мониторинга было выявлено, что в среднем за год наблюдается увеличение деформаций на 2,5% в элементах балок, подвергнутых коррозии. В балках, не защищенных антикоррозийными покрытиями, этот показатель был выше и достигал 4,8%. Это указывает на значительное влияние коррозионных процессов на структурные изменения в материале.

2. Коррозионные повреждения

Анализ данных показал, что при регулярном техническом обслуживании и применении защитных покрытий удалось снизить скорость распространения коррозии на 35%. В частности, в зонах, где использовалось цинкование, глубина коррозионных повреждений за два года эксплуатации уменьшилась в среднем на 20% по сравнению с зонами без защитных покрытий.

3. Образование микротрещин

Метод акустической эмиссии позволил выявить ранние стадии образования микротрещин, что дало возможность своевременно принимать меры по их устранению. Было зафиксировано, что в местах, подверженных наибольшей усталости, частота возникновения микротрещин увеличивалась на 15% в течение первых трех лет эксплуатации. При этом, в элементах с применением антикоррозийных покрытий, частота микротрещин была ниже на 25%.

4. Продление срока службы балок

Благодаря внедрению системы структурного мониторинга и регулярного технического обслуживания, удалось продлить срок службы многопролетных балок в среднем на 10-15 лет. В балках с защитными покрытиями этот показатель был выше, что свидетельствует о высокой эффективности применяемых защитных технологий.

Таблица 1.

**Результаты и Анализ Эффектов Старения и Деградаци
Многопролетных Балок**

Параметр	Значение без защитных покрытий	Значение с защитными покрытиями	Проценты изменения	Польза
Увеличение деформаций за год	4,8%	2,5%	-47,92%	Снижение деформаций
Скорость распространения коррозии	100% (базовый)	65%	-35%	Замедление коррозионных процессов
Глубина коррозионных повреждений	100% (базовый)	80%	-20%	Уменьшение глубины повреждений
Частота микротрещин	15%	11,25%	-25%	Раннее выявление микротрещин
Продление срока службы балок	10-15 лет	15-20 лет	+33,33%	Увеличение срока службы конструкций

Заключение. Результаты исследования подтверждают важность применения методик структурного мониторинга и защитных технологий для продления срока службы многопролетных балок и обеспечения их надежности. Установленные датчики и анализ полученных данных позволили своевременно выявлять и устранять дефекты, что значительно снижает риски аварийных ситуаций и повышает общую безопасность строительных конструкций.

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БИОЭКОЛОГИЧЕСКИЕ ОСОБЕННОСТИ ГАЛОФИТОВ

Аннотация

В статье рассматриваются биоэкологические особенности галофитов. Галофиты – растения, относительно легко приспосабливающиеся в процессе своего онтогенеза к существованию на засоленных почвах, растения с высокой солестойкостью.

Ключевые слова: почва, галофит, процесс, онтогенез, вегетация.

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BIOECOLOGICAL FEATURES OF HALOPHYTES

Abstract

The article discusses the bioecological features of halophytes. Halophytes are plants that relatively easily adapt to existence on saline soils during their ontogenesis, plants with high salt tolerance.

Key words: soil, halophyte, process, ontogenesis, vegetation.

В последние годы внимание ученых мира привлекает проблема изучения и освоения в культуре галофитов – группы видов солеустойчивых растений, нормально функционирующих и продуцирующих в условиях засоленной среды, формируя при этом достаточно высокую растительную массу и семенную продукцию [5].

Галофиты – растения, относительно легко приспосабливающиеся в процессе своего онтогенеза к существованию на засоленных почвах, растения с высокой солестойкостью [2].

К галофильным типам растительности относятся фитоценозы, произрастающие в засоленных местах, где доминирующую роль играют галофиты. Галофиты, как обитатели засоленных почв, используют концентрированный почвенный раствор.

У галофитов весенне-летне-осенняя вегетация. У многих суккулентных галофитов вегетация происходит в течение 7-8 мес. Галофиты развиваются очень медленно, прорастают весной, цветение происходит летом, а плоды приносят осенью. Среди галофитных растений есть виды, для которых характерен укороченный период вегетации, заканчивающийся в начале или середине лета, например, *Tetradiclis tenella*, *Psylliostachys leptostachya* и др.

Из-за влияния своеобразных условий засоленных почв у галофитов выработаны особые свойства, которые вызвали ряд изменений в строении, форме и обмене веществ. В строении галофитов наблюдается сокращение листовой поверхности, как у *Haloxylon aphyllum*, *Halostachys belangeriana*, *Halocnemum strobilaceum*, большей части видов рода *Kalidium capsicum*, *Salicornia herbacea*, *Anabasis*, и др.

У других видов галофитов наблюдается приrostание нижней части листа к стеблю. Под влиянием солей у галофитов происходят структурные изменения, такие как мясистость и сочность побегов из-за образования в них водоносной паренхимы.

Суккулентные галофильные растения содержат большое количество воды – от 84 до 91 %, а у галоксерофитов количество воды в тканях не превышает 67-82 %. Концентрация солей в тканях снижается при таком количестве воды в протоплазме клеток.

Некоторые растения хотя не имеют суккулентной структуры, но отличаются высокой солеустойчивостью. К ним относится солеустойчивый злак – *Aeluropus litoralis*, лишенный признаков суккулентности.

Галофиты способны защищаться от высоких концентраций солей несколькими способами.

1. *Поглощение большого количества солей и концентрирование их в вакуолях.* Некоторые галофиты накапливают до 7 % солей от массы клеточного сока. Поэтому водный потенциал клеточного сока у них очень низкий (до -20 МПа), и это позволяет растениям поглощать воду из сильно засоленной почвы. К данной группе растений относятся солянки семейства маревых (растут на мокрых солончаках, по берегам морей и соленых озер), солерос, сведа, селитрянкa. Обитая на засоленных почвах, эти растения «всасывают» растворы солей, который накапливаются в надземных частях растений и способствующих развитию в них большого осмотического давления. Эта группа галофитов получила название соленакапливающих (или эвгалофиты) и отличаются своей солеустойчивостью. Способность соленакопления свойственна галофитам разных жизненных форм [4].

2. *Выведение поглощаемых солей из клеток с помощью специализированных солевых желез, волосков, которые затем*

обламываются. Часть солей может оседать белым налетом на листьях и затем удаляться с опадающими листьями или смываться дождем. К этой группе растений относятся кермек, тамарикс, степные и пустынные виды лебеды. Их называют солевыделяющими галофитами (или криптогалофитами).

3. *Ограничение поглощения солей клетками корней.* Этот механизм защиты действует на относительно менее засоленных почвах. Такие растения характеризуются высоким осмотическим давлением клеточного сока, их клетки мало проницаемы для солей (соленепроницаемые галофиты, или гликогалофиты). Представители этой группы — солончаковая полынь, некоторые виды кохии.

Галофиты устойчивы к высоким температурам. Для них характерна пониженная интенсивность дыхания, транспирация и ферментативная реакция.

Вышеуказанные свойства и приспособления галофитов к произрастанию на засоленных почвах выработались в процессе их исторического развития. Водно-солевой режим почв является основным фактором, определяющим распространение галофильной растительности.

Для многих галофитов характерна узкая экологическая амплитуда; благоприятные условия для развития они находят при определенной концентрации почвенного раствора.

Таким образом, галофиты довольно чутко реагируют на изменения степени засоленности почвы. Различны их требования и к условиям увлажнения. Быстрая реакция галофитов к названным факторам определяет их распределение в природе в определенной последовательности в зависимости от степени засоления и увлажнения субстрата.

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ПУТИ ПОВЫШЕНИЯ ЭФФЕКТИВНОСТИ ИСПОЛЬЗОВАНИЯ РЕСУРСНОГО ПОТЕНЦИАЛА ПРЕДПРИЯТИЯ

Аннотация: Современные условия развития российской экономики диктуют высокие требования к обеспечению должного уровня конкурентоспособности и устойчивости развития коммерческих предприятий. Применение на практике производственной деятельности таких компаний будет обеспечивать необходимую эффективность только в результате использования ресурсного потенциала организаций, который представляет основу их функционирования. С учетом данных аспектов и ограниченности имеющихся ресурсов, к основной задаче в настоящее время относится разработка рекомендаций для повышения степени эффективности использования всех внутренних ресурсов компаний. Многогранное изучение различных подходов к дальнейшему развитию тенденций использования ресурсного потенциала выступает благоприятным аспектом в деятельности хозяйствующих субъектов.

Ключевые слова: ресурсы, потенциал, ресурсный потенциал, конкурентоспособность, эффективность предприятия, устойчивость предприятия, ограниченность ресурсов

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WAYS TO IMPROVE THE EFFICIENCY OF USING THE RESOURCE POTENTIAL OF THE ENTERPRISE

Abstract: Modern conditions of development of the Russian economy dictate high requirements for ensuring the proper level of competitiveness and

sustainability of commercial enterprises. The practical application of the production activities of such companies will ensure the necessary efficiency only as a result of using the resource potential of organizations, which represents the basis of their functioning. Taking into account these aspects and the limited resources available, the main task at present is to develop recommendations to improve the efficiency of using all internal resources of companies. The multifaceted study of various approaches to the further development of trends in the use of resource potential is a favorable aspect in the activities of economic entities.

Keywords: resources, potential, resource potential, competitiveness, enterprise efficiency, enterprise sustainability, limited resources

Повышение потенциала предприятий в контексте наличия и использования ресурсов предопределяет их рационализацию и эффективность построения производственного процесса. Однако зачастую даже при высоком объеме ресурсов, которыми распоряжается компания, она не в состоянии выстраивает грамотную политику осуществления финансово-хозяйственной деятельности, что в свою очередь чревато сокращением ресурсного потенциала в организации в целом. Другими словами, под угрозой становится финансовое положение и активность предприятия. Для предотвращения негативных последствий, компании рассматривают в своих стратегических планах направления сохранения на существующем уровне и дальнейшего повышения ресурсного потенциала, под которыми следует понимать комплекс факторов и движущих сил, приводящих к росту уровня такого потенциала компаний.

Общеизвестным фактором является то, что на любом уровне развития компании ее потенциал, образующийся вследствие взаимодействия ресурсов и обуславливающих их компетенций, обусловлен наращиванием ресурсного потенциала и улучшением его использования.

Перечислим важнейшие направления повышения уровня эффективности ресурсного потенциала в компаниях:

- достижение увеличения производственных объемов через использование достижений научно-технического прогресса, механизации и автоматизации;
- рост трудовой производительности со стороны работающих, следствием которого будет материальная экономия, культурное качество и производственная безопасность;
- совершенствование средств труда с технической точки зрения, обуславливающее замену изношенной морально техники, модернизацию оборудования, а также механизацию производства вспомогательных и обслуживающих структур;
- совершенствование процесса управления производством на основе использования современной передовой компьютерной техники;

- использование ведущих методов и средств трудовой деятельности, организации рабочих мест и их обслуживания;

- повышение квалификации работников предприятия, отбор среди кандидатов, производимых на принципах адаптации кадров, их инновации, профессиональной мобильности, мотивации, а также дисциплинированности;

- рационализация процесса применения запасов на производство, снижение вероятности использования запасов сверх установленных нормативов, совершенствование нормирования и улучшение цепочки снабжения;

- использование безотходной, прогрессивной технологии производства;

- рационализация процесса сбыта готовой продукции, а также использование современных форм осуществления взаиморасчетов [1, с. 1066].

Итак, в условиях современности среда функционирования компаний характеризуется достаточно сложными трендами. К ключевым задачам, которые ставят перед компанией ее управленческие структуры, относятся такие значимые, как: оказание должного внимания эффективности использования ресурсов и средств производственной деятельности; рациональная реализация имеющего ресурсного потенциала. Рассмотренные в публикации направления более эффективного использования ресурсов в компаниях будут активизировать их деловую активность.

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МЕТОДИКА АНАЛИЗА РЕСУРСНОГО ПОТЕНЦИАЛА ПРЕДПРИЯТИЯ

Аннотация: Анализ ресурсного потенциала выступает необходимым компонентом в работе предприятия. Его проведение сопровождается исследованием текущего состояния ресурсов, оценкой эффективности их использования, а также определением резервов для максимально возможного использования имеющихся резервов в целях увеличения уровня результативности и получения прибыли. Вышесказанное обуславливает необходимость проведения своевременного анализа ресурсного потенциала компании. Его методика позволяет дать оценку применению ресурсов, выявить резервы повышения их эффективности использования, проанализировать имеющиеся возможности для последующего улучшения работы и раскрыть перспективы для дальнейшего развития.

Ключевые слова: ресурсы, потенциал, ресурсный потенциал, анализ ресурсов, методика анализа

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METHODOLOGY FOR ANALYZING THE RESOURCE POTENTIAL OF AN ENTERPRISE

Abstract: The analysis of the resource potential is a necessary component in the work of the enterprise. Its implementation is accompanied by a study of the current state of resources, an assessment of the effectiveness of their use, as well as the definition of reserves for the maximum possible use of existing reserves in order to increase the level of efficiency and profit. The above makes it necessary to conduct a timely analysis of the company's resource potential. His methodology makes it possible to assess the use of resources, identify reserves

for increasing their efficiency, analyze existing opportunities for further improvement of work and reveal prospects for further development.

Keywords: resource, potential, resource potential, resource analysis, analysis methodology

Оценка эффективности использования ресурсов предприятия позволяет понять, насколько рационально использовались имеющиеся ресурсы в процессе достижения запланированных целей.

Наиболее эффективной и объективной методикой оценки ресурсного потенциала предприятия являются комплексная оценка, которая включает в себя анализ соответствующих коэффициентов эффективности использования финансовых, трудовых, материальных ресурсов и основных средств, как ресурсов производства экономического субъекта. В общей совокупности данная методика включает расчет следующих показателей:

1) показатели эффективности использования производственных ресурсов: основных средств, материальных оборотных средств, средств в расчетах, трудовых ресурсов;

2) показатели эффективности использования ресурсов, отражаемых в балансе;

3) показатели эффективности финансовых вложений;

4) показатели рентабельности.

Показатели экономической эффективности основных средств проводится на основе анализа: фондоотдачи (отражает количество произведенной продукции в расчете на 1 руб. основных производственных фондов); фондоемкости (показатель обратный фондоотдаче и отражает стоимость основных производственных фондов в расчете на 1 руб. реализованной продукции); фондорентабельности (объем прибыли на рубль основных средств) [1, с. 190].

Оценка экономической эффективности через материальные оборотные активы определяется с помощью расчета показателей материалоотдачи (показывает, сколько продукции вырабатывается из единицы сырья), материалоемкости (выражает отношение величины материальных затрат к стоимости выпущенной продукции), прибыль на рубль материальных затрат (характеризует эффективность использования материальных ресурсов) и удельный вес материальных затрат в себестоимости (характеризует изменение материалоемкости продукции).

Для оценки средств в расчетах целесообразно провести сравнительную оценку объема дебиторской и кредиторской задолженности, коэффициента оборачиваемости дебиторской и кредиторской задолженности и время оборота в днях по этим видам расчетных обязательств.

Для оценки эффективности трудовых ресурсов в контексте ресурсного потенциала используется показатель производительности труда

(отражает эффективности вложенного в производимую продукцию труда рабочих), а также рентабельность расходов на оплату труда.

Следующим сегментом оценки экономической эффективности по выбранной методике является анализ эффективности ресурсов, используемых в балансе, при котором рассчитываются: коэффициент оборачиваемости (характеризует размер товарооборота в расчете на один рубль средней величины оборотных активов или кредиторской задолженности); длительность одного оборота в днях (отношение среднего остатка оборотных средств к однодневному товарообороту); рентабельность оборотных активов (соотношение чистой прибыли или иного финансового результата к средней величине оборотных активов).

И наконец, при использовании выбранной методики необходимо провести расчет показателей рентабельности: рентабельность продаж (отношение прибыли от продаж организации к выручке); рентабельность затрат (отношение налогооблагаемой прибыли к величине затрат на производство и продажу продукции); рентабельности активов (отражает величину прибыли на единицу стоимости капитала); рентабельность собственного капитала (показывает величину прибыли, которую получит организация на единицу стоимости собственного капитала) [2, с. 108].

Таким образом, анализ ресурсного потенциала предприятия оценивается на основе анализа результатов финансово-хозяйственной деятельности. Эта методика включает подробный расчет показателей эффективности использования производственных ресурсов (основных средств), показатели эффективности использования материальных ресурсов, трудовых ресурсов и финансовых ресурсов.

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РЕСУРСНЫЙ ПОТЕНЦИАЛ ПРЕДПРИЯТИЯ И ПУТИ ПОВЫШЕНИЯ ЭФФЕКТИВНОСТИ ЕГО ИСПОЛЬЗОВАНИЯ

Аннотация: В статье рассматриваются подходы к анализу и улучшению ресурсного потенциала предприятия. Цель исследования — разработка методов повышения эффективности использования ресурсов предприятия. Примененные методы включают сравнительный анализ и SWOT-анализ. Основной результат — предложения по оптимизации трудовых и материальных ресурсов, что ведет к росту производительности и снижению затрат.

Ключевые слова: ресурсный потенциал, эффективность, предприятие, производительность, оптимизация затрат.

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RESOURCE POTENTIAL OF THE ENTERPRISE AND WAYS TO INCREASE THE EFFICIENCY OF ITS USE

Abstract: The article discusses approaches to analyzing and improving the resource potential of the enterprise. The aim of the study is to develop methods for increasing the efficiency of resource use. The applied methods include comparative analysis and SWOT analysis. The main result is proposals for optimizing labor and material resources, which leads to increased productivity and cost reduction.

Key words: resource potential of the enterprise and ways to increase the efficiency of its use

В условиях усиленной конкуренции и ускоренного технологического прогресса перед современными предприятиями стоит задача повышения эффективности использования всех видов ресурсов. От этого напрямую зависит их способность адаптироваться к изменениям рынка, удерживать свои позиции и обеспечивать долгосрочный рост. Управление ресурсами,

такими как трудовые, финансовые, материальные и информационные, стало ключевым фактором успеха на большинстве рынков.

Ресурсный потенциал предприятия — это совокупность всех ресурсов, которыми оно обладает и которые могут быть направлены на достижение целей и задач. Важным аспектом управления этими ресурсами является их оптимизация, позволяющая достичь максимальных результатов при минимальных затратах. В этой связи эффективное управление ресурсами приобретает критическое значение для повышения конкурентоспособности предприятия, снижения издержек и повышения рентабельности.

Современные условия функционирования предприятий, особенно в промышленном секторе, предъявляют высокие требования к эффективности использования имеющихся ресурсов. Экономический кризис и растущие издержки на ресурсы вынуждают предприятия искать новые способы их оптимизации, чтобы повысить производительность и снизить себестоимость продукции. В этой связи разработка новых методов управления ресурсами является актуальной задачей.

Цель исследования — проанализировать ресурсный потенциал предприятия и разработать предложения по его оптимизации для повышения общей эффективности работы предприятия.

Задачи исследования:

1. Оценить текущее состояние использования ресурсов на предприятии.
2. Определить основные проблемы и «узкие места» в управлении ресурсами.
3. Разработать рекомендации по улучшению управления ресурсами для повышения их эффективности.

Для достижения целей исследования был использован комплексный подход, включающий методы сравнительного анализа и SWOT-анализа. Эти методы позволили выявить основные ресурсы предприятия, их текущее состояние и направления для повышения эффективности их использования.

Сравнительный анализ:

Данный метод использовался для сопоставления использования ресурсов предприятия с аналогичными показателями других компаний той же отрасли. Это позволило выявить отклонения от среднеотраслевых стандартов и определить ключевые проблемы, с которыми сталкивается предприятие. В результате проведенного анализа были выявлены основные узкие места в управлении ресурсами, которые снижают эффективность работы предприятия. Этот метод также позволяет оценить эффективность внедренных решений на примере других предприятий, которые уже реализовали подобные стратегии.

SWOT-анализ:

SWOT-анализ стал основным инструментом для оценки внутренних и внешних факторов, влияющих на ресурсный потенциал предприятия. Данный метод помогает выявить сильные и слабые стороны, а также возможности и угрозы, с которыми может столкнуться предприятие при управлении ресурсами. Этот подход дает более комплексную картину текущего состояния предприятия и позволяет лучше понять его конкурентные преимущества и риски. SWOT-анализ также позволяет более точно наметить стратегические направления для повышения эффективности использования ресурсов.

Основные этапы исследования включали:

1. **Сбор и анализ данных** о текущем состоянии использования ресурсов предприятия.
2. **Оценка эффективности** использования трудовых, материальных и финансовых ресурсов.
3. **Выявление узких мест** и факторов, ограничивающих эффективное использование ресурсов.
4. **Разработка предложений** по оптимизации использования ресурсов.

Проведенный сравнительный и SWOT-анализ позволил выявить несколько ключевых проблем, влияющих на эффективность использования ресурсов предприятия.

На основе собранных данных был сделан вывод, что предприятие неэффективно использует свои трудовые ресурсы. В частности, выявлена низкая производительность труда на ряде участков, что связано с недостаточной квалификацией персонала и отсутствием эффективной системы мотивации. Рекомендуется внедрение программ повышения квалификации, а также пересмотр системы оплаты труда в сторону увязки с производительностью. Для этого необходимо разработать систему мотивации, которая будет ориентирована на достижение конкретных показателей производительности, а также предоставить сотрудникам доступ к обучению и развитию.

Анализ показал, что значительная часть материальных ресурсов используется нерационально. Это связано с отсутствием современного оборудования и систем автоматизации, что приводит к повышенным затратам на производство. В результате предложено инвестировать в модернизацию производственных мощностей и внедрение технологий автоматизации процессов, что позволит снизить издержки и улучшить использование материалов. Модернизация производства также позволит сократить количество производственных потерь и повысить качество выпускаемой продукции, что дополнительно увеличит рентабельность предприятия.

Управление финансовыми ресурсами также требует оптимизации. Оказалось, что на предприятии не полностью используется потенциал

внутреннего финансирования, и имеются излишки оборотных средств. Было рекомендовано оптимизировать финансовые потоки и усилить контроль за бюджетированием, что позволит направить дополнительные средства на развитие ключевых направлений бизнеса. Внедрение системы эффективного бюджетирования поможет более точно распределять ресурсы, избегая перерасхода на незначительные статьи затрат, и сосредоточиться на приоритетных направлениях.

На основании проведенного исследования можно сделать вывод, что для повышения эффективности использования ресурсного потенциала предприятия требуется комплексный подход. Оптимизация трудовых, материальных и финансовых ресурсов играет ключевую роль в достижении конкурентных преимуществ предприятия на рынке.

Разработанные предложения по повышению квалификации персонала, внедрению современных технологий и оптимизации финансовых потоков создают возможности для устойчивого роста предприятия и увеличения его рентабельности. Важно отметить, что процесс улучшения использования ресурсов требует постоянного мониторинга и адаптации к изменениям внешней среды, что позволяет своевременно реагировать на вызовы рынка.

Таким образом, предлагаемые меры позволят не только улучшить производительность и снизить затраты, но и обеспечить долгосрочную устойчивость предприятия в условиях растущей конкуренции и экономических потрясений. Регулярная оценка ресурсного потенциала и внедрение стратегий по его улучшению являются основой успешного развития и процветания предприятия.

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УПРАВЛЕНИЕ ИННОВАЦИОННЫМИ ПРОЦЕССАМИ В СИСТЕМЕ МЕНЕДЖМЕНТА ОБЩЕОБРАЗОВАТЕЛЬНОЙ ШКОЛЫ НА ОСНОВЕ ИСПОЛЬЗОВАНИЯ СОВРЕМЕННЫХ ИКТ

Аннотация: Как внедрение современных ИКТ помогает оптимизировать управление школьными процессами и повышать их эффективность.

Ключевые слова: информационно - коммуникационные технологии, условия реформирования и модернизации системы отечественного образования, модернизация и инновационное развитие, инфосфера, инновационные процессы.

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MANAGEMENT OF INNOVATIVE PROCESSES IN THE MANAGEMENT SYSTEM OF A COMPREHENSIVE SCHOOL BASED ON THE USE OF MODERN ICT

Abstract: How the introduction of modern ICT helps to optimize the management of school processes and increase their efficiency.

Keywords: information and communication technologies, conditions for reforming and modernizing the domestic education system, modernization and innovative development, infosphere, innovative processes.

Модернизация и инновационное развитие - единственный путь, который позволит России стать конкурентным обществом в мире 21-го века. В условиях решения этих стратегических задач важнейшими качествами личности становятся инициативность, способность творчески мыслить и находить нестандартные решения, умение выбирать профессиональный путь, готовность обучаться в течение всей жизни.

В современном информационном обществе основой развития цивилизации выступают информационные процессы, в которых широкое применение находят информационно-коммуникационные технологии. Внедрение информационно-коммуникационных технологий во все сферы деятельности человека способствовало возникновению и развитию глобального процесса информатизации. В свою очередь, этот процесс дал толчок развитию информатизации образования, которая является одним из важнейших условий реформирования и модернизации системы отечественного образования, так как именно в сфере образования подготавливаются и воспитываются те люди, которые не только формируют новую информационную среду общества, но которым предстоит самим жить и работать в этой новой среде. В России, как и во многих других странах мирового сообщества, все большее внимание уделяется проблеме информатизации образования, которая рассматривается как одна из наиболее важных стратегических проблем развития цивилизации.

Национальный проект «Образование» в качестве одного из важнейших направлений выделил информатизацию образования. В рамках этого проекта большинство образовательных учреждений страны оснащены современной компьютерной техникой, мультимедийным и сетевым оборудованием, имеют доступ в Интернет.

Проект «Информатизация системы образования» тесно связан с одним из приоритетных направлений образовательной политики Российской Федерации. Проблемы информатизации образования является фундаментальной и важнейшей глобальной проблемой XXI века в силу следующих основных причин:

1. Стремительное развитие процесса информатизации общества, которое является проявлением общей закономерности развития цивилизации. Сегодня этот процесс приобрел поистине глобальный характер и уже охватывает практически все развитые страны мира, в том числе и Россию. При этом информатизация общества влечет за собой многие весьма радикальные социальные изменения. Она существенным образом изменяет практически все стороны жизни людей.

2. Функциональные возможности и технические характеристики средств информатики, информационно-телекоммуникационных технологий в последние годы исключительно быстро растут, а их стоимость неуклонно снижается, что делает эти средства все более доступными для массового пользователя. Необходимо отметить, что эти возможности уже сегодня значительно опережают тот уровень подготовленности общества, который требуется для их эффективного использования, и это порождает еще одну социальную проблему - проблему развития новой информационной культуры общества, тесно связанную с проблемой развития сферы образования.

Дальнейшее стремительное развитие информационно - коммуникационных технологий и широкое внедрение ее достижений в социальную практику привели к формированию совершенно новой информационной среды общества, которую современные философы называют инфосферой. Именно инфосфера будет определять основные черты информационного общества, той новой цивилизации, которая уже сегодня формируется в развитых странах, и с исторической неизбежностью будет распространяться от них по всему миру.

Инновационные процессы, происходящие сегодня в социально-экономической жизни общества, предъявляют новые требования к уровню не только подготовки выпускника образовательного учреждения, но и профессиональной квалификации и компетентности современного педагога. В настоящее время возникла необходимость в качественно иной подготовке педагога - компетентного педагога, позволяющего сочетать фундаментальность базовых знаний с инновационностью мышления и практико-ориентированным, исследовательским подходом к разрешению конкретных образовательных проблем.

Взросшие требования к профессиональной компетентности педагога в новых условиях обучения диктуют необходимость опытного использования информационно-коммуникационных технологий в профессиональной деятельности. Однако, современные исследования показывают, что даже регулярное прохождение курсовой подготовки через каждые 5 лет, не позволяет педагогу своевременно перестраивать свою профессиональную работу соответственно изменениям, происходящим в системе образования и, следовательно, снижает их готовность к инновационной деятельности. В связи с этим, видится проблема организации интегрированной системы повышения квалификации, позволяющая сделать процесс освоения педагогами новых информационно-коммуникационных технологий непрерывным.

Развитие современного мира диктует необходимость управления развитием и внедрением информационно-коммуникационных технологий в учебно-воспитательный процесс, что влечет за собой необходимость формирования информационно-коммуникационной компетентности педагога, являющейся его профессиональной характеристикой, составляющей педагогического мастерства. С внедрением новых информационно - коммуникационных технологий, современный педагог получает мощный стимул для собственного профессионального, творческого развития, тем самым способствует повышению качества образования.

Информационно-коммуникационные технологии (ИКТ) обладают сегодня гигантскими возможностями по использованию их в образовательном процессе. Со всеми своими ресурсами ИКТ являются одним из существенных средств реализации целей и задач процесса

обучения. Активно развивающиеся цифровые технологии предложили новый способ доступа и получения информации, новые виды коммуникации - электронную почту, чаты, конференции. Компьютерные технологии вошли во все сферы современной жизни, тем самым меняя процесс обучения в лучшую сторону.

На текущий момент у современного педагога имеется в распоряжении целая гамма возможностей для применения в процессе обучения разнообразных информационно-коммуникационных технологий - многочисленные электронные учебные пособия, Интернет, форумы для общения, банки данных, словари и справочники, дидактический материал, презентации, программы, автоматизированные системы, осуществляющие контроль, и многое другое. Благодаря этому актуализируется содержание образования, возможен интенсивный обмен информацией, прежде всего с коллегами, учениками и их родителями, партнерами извне, в силу этого процесс обучения принимает динамический характер.

При этом учитель не только образует, воспитывает и развивает ученика, но с внедрением новых информационно-коммуникационных технологий он получает мощный стимул для самообразования, профессионального роста и творческого развития. Владея информационно - коммуникационными технологиями, внедряя их в учебный процесс при подготовке будущих выпускников, которым предстоит реализоваться в новом, информационном обществе, педагог повышает качество образования, уровень подготовки будущих специалистов, умножая при этом и свое профессиональное мастерство.

Процесс управления всегда имеет место там, где осуществляется общая деятельность людей для достижения определенных результатов. Поскольку школа - социальная организация, она представляет собой систему совместной деятельности людей (педагогов, учащихся, родителей), то целесообразно говорить об управлении ею.

Возможность использовать ИКТ в процессе обучения помогает научить каждого ребенка, учитывая разный уровень обучаемости, свойства памяти, мышления и внимания. Использование ИКТ позволяет дифференцировать процесс обучения, например, учащиеся с более высоким уровнем развития могут при помощи компьютера углублять свои знания, выполняя упражнения повышенной трудности.

При творческом подходе к созданию мультимедийных презентаций в результате можно получить очень интересные обучающие ресурсы в виде справочников, тренажеров, тестов-лото, игровых дидактических материалов и т.п., что будет способствовать повышению мотивации и активизации познавательной деятельности учащихся, интереса к предмету, способствовать лучшему пониманию, запоминанию изучаемого материала, тем самым будет достигнута цель повышения эффективности урока.

Таким образом, применение ИКТ в образовательном процессе, позволяет решать одну из важных задач обучения – повышение уровня знаний. Учителя, которые в своей работе используют ИКТ, пришли к выводу: информационные технологии только для ищущих, любящих осваивать новое учителей. Они для тех, кому небезразличен уровень своей профессиональной компетентности, кого беспокоит, насколько он, педагог, соответствует требованиям века грядущего.

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ВОИНСКОЕ ОБУЧЕНИЕ, ВОСПИТАНИЕ И БОЕВАЯ ПОДГОТОВКА В ДЕЯТЕЛЬНОСТИ ОРГАНОВ ВНУТРЕННИХ ДЕЛ

***Аннотация.** В статье проведен научный анализ теоретических и практических аспектов воинского обучения, воспитания и боевой подготовки в деятельности органов внутренних дел, как одного из необходимых средств обеспечения общественной безопасности в стране. Основываясь на нормах законодательства регулирующие образовательный процесс, учитывая особенности процесса подготовки кадров органов внутренних дел в Академии и Института повышения квалификации МВД Республики Узбекистан рассматриваются направления развития патриотического воспитания в процессе воинского обучения и боевой подготовки у курсантов и слушателей как будущих высококвалифицированных сотрудников правоохранительных структур.*

***Ключевые слова:** воинское обучение, воспитание, боевая подготовка, патриотическое воспитание, курсант, слушатель, органы внутренних дел, академия, институт повышения квалификации.*

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MILITARY TRAINING, EDUCATION AND COMBAT TRAINING IN THE ACTIVITIES OF INTERNAL AFFAIRS BODIES

***Annotation.** The article provides a scientific analysis of the theoretical and practical aspects of military training, upbringing and combat training in the activities of internal affairs bodies as one of the necessary means of ensuring public safety in the country. Based on the norms of legislation regulating the educational process, taking into account the peculiarities of the process of training personnel of internal affairs bodies at the Academy and the Institute of Advanced Training of the Ministry of Internal Affairs of the Republic of Uzbekistan, the directions of development of patriotic education in the process of military training and combat training for cadets and trainees as future highly qualified law enforcement officers are considered.*

Keywords: *military training, education, combat training, patriotic education, cadet, listener, internal affairs bodies, academy, institute of advanced training.*

На всех этапах развития общества особое значение имеет умение найти общие точки соприкосновения всех сил, уверенно и решительно борющихся за обеспечение общественной безопасности государства и общества. Это одна из актуальных и важных задач современности. Органы внутренних дел как правоохранительный орган представляет собой государственную структуру, обеспечивающую безопасность личности, общества и государства. Только при наличии боеспособных, готовых к выполнению любых поставленных служебно-боевых задач правоохранительных органов и вооруженных сил страны можно рассчитывать на укрепление государственности, а также укрепление позиций нашего государства на международной арене[1]. Развитие органов внутренних дел (ОВД) как одной из правоохранительных структур Республики Узбекистан на современном этапе – это новая страница в их становления, развития и в настоящее время проводится полномасштабное реформирование всей системы ОВД.

Однако невозможно представить себе полноценную реформу ОВД без изменения системы воинского обучения, воспитания и боевая подготовка в деятельности сотрудников ОВД, формирования их морального, боевого духа, нравственных и военно-профессиональных качеств, которые позволят им выполнять поставленные служебно-боевые задачи в любое время и в любых условиях.

Воинское обучение, воспитание и боевая подготовка в деятельности сотрудников ОВД – это совокупность целенаправленной их деятельности как государственной структуры, органов управления и должностных лиц МВД Республики Узбекистан по формированию и развитию военнослужащих в соответствии с требованиями создания современной военной организации государства.

Воинское обучение, воспитание и боевая подготовка в деятельности ОВД является приоритетным направлением служебно-боевой деятельности сотрудников[2]. Основной целью воинского обучения, воспитания и боевой подготовки в деятельности ОВД является формирование и развитие у сотрудников качеств и отношений патриота, профессионала и высоконравственной личности.

В системе воинского обучения, воспитания и боевой подготовки в деятельности ОВД сотрудников включает в себя несколько направлений:

1) государственно-патриотическое воспитание – это оказание воздействия на сотрудников ОВД с целью формирования и развития личности, обладающей качествами патриота, способного активно участвовать в укреплении и совершенствовании основ общества,

подготовленного к успешному выполнению задач, связанных с обеспечением общественной безопасности личности, общества и государства.

2) воинское воспитание – процесс систематического и целеустремленного воздействия на духовное и физическое развитие сотрудников ОВД в целях подготовки его к охране общественной безопасности.

3) нравственное воспитание – оказание воздействия на сознание, чувства и волю сотрудников ОВД с целью формирования у них необходимых духовно-нравственных черт и качеств.

4) правовое воспитание – целеустремленное и систематическое влияние на сознание, чувства и психологию сотрудников ОВД с целью формирования у них устойчивых правовых представлений, убеждений и чувств, привития им высокой правовой культуры, навыков и привычек активного правомерного поведения.

Для успешного выполнения вышеуказанных направлений воинского обучения, воспитания и боевой подготовки в деятельности сотрудников ОВД[3, с. 147-148] долга служения народу и обретения народного доверия. В настоящее время создаются условия для обеспечения соблюдения прав и свобод человека, его полноценной жизни и благополучия. Должны сформироваться в сознании каждого сотрудника ОВД, впитаться в его плоть и кровь, стать основным девизом его служебной деятельности, посвященной обеспечению мира и спокойствия народа, безопасности граждан, их защите от любых посягательств.

Именно поэтому каждый обучающийся в Академии и Институте повышения квалификации МВД Республики Узбекистан курсант и слушатель в процессе обучения и воспитания должен оправдать оказанное ему доверие, т.е. честно и неустанно трудиться над собой, быть верным избранной профессии, народу, Президенту, Родине, добросовестно выполнять служебные обязанности. У курсантов и слушателей должны быть сформированы качества, обеспечивающие уважение прав и свобод граждан и формирование необходимых профессиональных навыков, а также практического опыта для использования их в повседневной служебной деятельности.

Эффективность мероприятий в сфере определенных задач по обеспечению защиты от различных посягательств, безопасности граждан мира и спокойствия Узбекистана изначально связана с уровнем квалификации подготавливаемых специалистов. Только высококвалифицированный сотрудник сможет найти возможность для эффективного достижения поставленной цели в любой ситуации.

Поэтому с первых дней независимости при осуществлении таких задач, как обеспечение мира и спокойствия, безопасности граждан, их

защита от различных посягательств, особое внимание уделяется подготовке высококвалифицированных специалистов для ОВД.

Служение народу, обретение народного доверия и подготовка высококвалифицированных кадров – это очень сложный, непрерывный и неделимый процесс. Его сложность связана, во-первых, с тем, что в этом процессе участвуют все слои общества, во-вторых, что ситуация во всех сферах общественной жизни общества оказывает непосредственное воздействие на него, в-третьих, на сегодняшний день усиливается влияние и увеличивается количество различного рода угроз, воздействующих на этот процесс. Поэтому подготовка высококвалифицированных специалистов для ОВД, способных обеспечить мир и спокойствие, безопасность граждан, их защиту от различного рода посягательств требует от профессорско-преподавательского состава и кураторов образовательных учреждений МВД самоотверженного и неустанного труда.

Исходя из этого простого требования, воинское обучение, воспитание и боевая подготовка в деятельности сотрудников ОВД осуществляется в отношении гармонично развитых, живущих полноценной сознательной жизнью, умеющих самостоятельно и широко мыслить должно, быть признано основной целью и задачей образовательно-воспитательной сферы. А это требует гармоничного ведения образования и воспитания. Ответственными за образование и воспитание полноценных специалистов ОВД являются, прежде всего, их руководители, особенно, службы по работе с личным составом, а также профессорско-преподавательский состав и наставники образовательных учреждений.

Для достижения положительных результатов при подготовке достойных кадров, обладающих необходимыми знаниями, навыками и опытом, способных с честью исполнять свой служебный долг и обрести народное доверие, необходимо обеспечить участие в образовательном процессе представителей комплекующих органы внутренних дел на местах. Это также относится и к отраслевым службам МВД, взаимодействующих с государственными и общественными организациями[4, с.8-9].

На сегодняшний день вопрос о том, какими качествами должен обладать сотрудник ОВД для успешного выполнения своего служебного долга и завоевания народного доверия, остаётся очень актуальным. Некоторые считают, что для специалиста достаточно владение в совершенстве своей узкопрофильной специальностью. Однако необходимо отметить, что на сегодняшний день недостаточно быть высококвалифицированным специалистом своего дела, для обретения народного доверия, кроме всего прочего, потребуется духовное, политическое, интеллектуальное совершенство.

Исходя из требований настоящего времени, необходимо отметить, что подготавливаемые сотрудники ОВД должны быть способны в любых ситуациях исполнять свой служебный долг, завоевывать народное доверие, не допускать злоупотреблений и стать не только высокопрофессиональными кадрами, но и быть духовно, интеллектуально, психологически, политически, идеологически, физически и профессионально зрелыми.

Процесс формирования, укрепления и развития необходимых качеств высококвалифицированного специалиста – это очень сложный и многогранный процесс, взаимосвязанный с множеством факторов и проблем[5, с.173-174].

В Академии и в Институте повышения квалификации отбор кандидатов на обучение, а также формирование, развитие, укрепление и становление в процессе обучения у курсантов и слушателей качеств, необходимых сотруднику ОВД для успешного выполнения своей профессиональной деятельности. Это необходимо для качественного служения народу и завоевания народного доверия, осуществляемого поэтапно, в неразрывной взаимосвязанности и логической последовательности.

Для формирования у курсантов и слушателей Академии и Института повышения квалификации в процессе изучения общественно-гуманитарных наук духовной, психологической, политической, идеологической зрелости. В процессе обучения они изучают юридические науки для приобретения правовой, профессиональной зрелости. При изучении специальных дисциплин – физической и боевой подготовки, необходимо достичь формирования и укрепления теоретических знаний, практических навыков и опыта у будущих стражей правопорядка.

Кроме того, воспитательные мероприятия, проводимые строевой частью Академии и Института повышения квалификации, службой по работе с личным составом и его структурными подразделениями оказывают непосредственное содействие в формировании, укреплении и становлении у слушателей и курсантов необходимых знаний, практических навыков и опыта, необходимых для последующего выполнения служебных обязанностей.

Проводимые этими подразделениями мероприятия воспитательного характера, с одной стороны, служат выявлению и развитию у курсантов и слушателей организаторских способностей. Также для приобретения таких качеств, как инициативность, преданность. С другой стороны это позволяет предоставлять возможность предупреждения и устранения причин и условий, создающие всяческие препятствия для полноценного исполнения своего профессионального долга сотрудниками ОВД.

Большую роль в формировании и укреплении у курсантов и слушателей таких качеств, как преданность народу, Родине, Президенту,

профессии, инициативность, самоотверженность, организаторские способности, а также практические навыки их применения, необходимых сотруднику ОВД для успешного выполнения своей профессиональной деятельности.

Основными факторами достижения положительных результатов в сфере формирования и развития у курсантов и слушателей Академии и Института повышения квалификации человеческих качеств, привития им профессиональных знаний и навыков, необходимых сотруднику ОВД для успешного выполнения своей профессиональной деятельности, является непрерывность, поэтапность, взаимосвязанность и логическая последовательность процесса обучения.

Кроме того, еще одним важным фактором достижения положительных результатов в этой сфере является сотрудничество между профессорско-преподавательским составом, наставниками, занимающимися с курсантами и слушателями в неурочное время, а также представителями общественных формирований.

Образование нельзя отделять от воспитания, также как воспитание нельзя отделять от образования – эта восточная мудрость, жизненная философия Востока. Нарушение этих требований, неиспользование вышеназванных факторов и возможностей в образовательно-воспитательном процессе, обязательно приведет к различным негативным последствиям.

В заключение, следует отметить, что воспитание кадров и подготовка зрелых высококвалифицированных специалистов для ОВД, способных с честью исполнять свой профессиональный долг служения народу и обрести народное доверие, во все времена было и остается очень сложным и ответственным делом. Поэтому сотрудники ОВД, неустанно работающих над расширением своего мировоззрения, открывающих новые горизонты, новые направления в охране общественной безопасности, взявших на себя бремя выполнения этих задач. Для достижения ими эффективных результатов необходимо всемерно поддерживать их стремления в практических действиях, требующих большого упорства, настойчивости, знаний и опыта

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ПРОБЛЕМЫ И РЕШЕНИЯ В СЕЛЬСКОМ ХОЗЯЙСТВЕ УЗБЕКИСТАНА: ЭКОЛОГИЧЕСКИЙ АСПЕКТ

Аннотация: Эта статья обсуждает важность взаимодействия сельского хозяйства и наук об окружающей среде, освещая актуальные проблемы, связанные с экологической устойчивостью сельского хозяйства в Узбекистане, а также предлагая решения для смягчения их воздействия на окружающую среду.

Ключевые слова: Сельское хозяйство, окружающая среда, экологическая устойчивость, Узбекистан, биоразнообразие, современные методы, инновации, проблемы, решения, управление ресурсами, экологическое образование

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CHALLENGES AND SOLUTIONS IN UZBEKISTAN'S AGRICULTURE: THE ENVIRONMENTAL ASPECT

Abstract: This article discusses the importance of the interaction between agriculture and environmental sciences, highlighting current issues related to the environmental sustainability of agriculture in Uzbekistan, and proposing solutions to mitigate their impact on the environment.

Keywords: Agriculture, environment, environmental sustainability, Uzbekistan, biodiversity, modern methods, innovations, problems, solutions, resource management, environmental education..

Введение: сельское хозяйство, которое долгое время было основой человеческого существования, привлекло повышенное внимание с точки зрения наук об окружающей среде. Со временем понимание взаимосвязи между сельским хозяйством и окружающей средой значительно возросло. Науки об окружающей среде играют важную роль в изучении, оценке и регулировании воздействия сельского хозяйства на окружающую среду, а

также в разработке устойчивых методов, которые помогают сохранить природные ресурсы и обеспечить безопасность пищевых продуктов.

Актуальность: современное сельское хозяйство сталкивается с насущной необходимостью внедрения экологически устойчивых методов для обеспечения его развития в долгосрочной перспективе. В этом контексте актуальность использования наук об экологии неоспорима, особенно в таких странах, как Узбекистан, которые сильно зависят от сельского хозяйства.

Узбекистан, обладающий богатыми природными ресурсами, сталкивается с трудностями, связанными с экологической устойчивостью своего сельского хозяйства. В условиях меняющегося климата, угрозы деградации почв и экосистем преподавание экологических наук становится необходимостью, направленной на сохранение биоразнообразия, оптимизацию использования ресурсов, обеспечение продовольственной безопасности.

Применение современных методов экологически устойчивого земледелия, таких как агроэкологические методы, устойчивое выращивание сельскохозяйственных культур, использование органических удобрений и биоразнообразных культурных систем, может помочь улучшить качество

почвы, сэкономить воду и уменьшить негативное воздействие на окружающую среду.

Экологически ориентированные исследования и инновации играют важную роль в развитии устойчивого сельского хозяйства в Узбекистане. Интеграция современных технологий, таких как дистанционное зондирование, геоинформационные системы и биотехнологии, позволяет эффективно управлять ресурсами, оптимизировать производственные процессы и минимизировать негативное воздействие на природную среду.

Проблемы: в сельском хозяйстве, как и во многих других отраслях, экологические проблемы становятся все более заметными. Сельское хозяйство играет важную роль в обеспечении продовольственной безопасности населения мира, но его воздействие на окружающую среду часто отрицательно.

Одной из основных проблем является интенсивное использование химических удобрений и пестицидов, приводящее к загрязнению почвы, водоемов и атмосферы. Эти вещества могут иметь долгосрочные негативные последствия для биоразнообразия и здоровья человека. Кроме того, массовая вырубка лесов для расширения сельскохозяйственных угодий приведет к потере жизненно важных экосистем и увеличению выбросов парниковых газов.

Управление водными ресурсами: проблемы загрязнения водоемов сельскохозяйственными стоками требуют комплексного подхода. Наука об окружающей среде может помочь в разработке и внедрении методов

очистки сточных вод, а также в создании систем управления водными ресурсами, которые могут помочь минимизировать негативное воздействие на экосистемы.

Использование пестицидов и гербицидов: использование химикатов в сельском хозяйстве может вызвать загрязнение почвы, воды и воздуха и привести к отравлению животных и людей. Наука об окружающей среде изучает альтернативные методы борьбы с вредителями и сорняками, такие как биологические пестициды и методы биологической борьбы, чтобы сократить использование химикатов.

Решения: устойчивое животноводство: проблемы, связанные с отходами животноводства, включая загрязнение воды и почвы азотом и фосфором, а также выбросы парниковых газов, могут быть смягчены за счет улучшения управления отходами, использования биогазовых установок для переработки отходов и внедрения экологически устойчивых методов содержания домашнего скота.

Продвижение экологически устойчивых методов: наука об окружающей среде может помочь в разработке и продвижении экологически устойчивых методов в сельском хозяйстве посредством образовательных программ, обучения фермеров и создания стимулов для внедрения таких методов, которые помогают им ответственно использовать природные ресурсы.

Резюме: сельское хозяйство оказывает значительное влияние на окружающую среду, но применение знаний в области экологии и наук об окружающей среде может помочь смягчить негативные последствия этого воздействия. Разработка и внедрение экологически устойчивых методов в сельском хозяйстве является ключевым этапом сохранения биоразнообразия, почвенных и водных ресурсов и обеспечения продовольственной безопасности без ущерба для окружающей среды.

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ИННОВАЦИИ В УПРАВЛЕНИИ КАДРАМИ: НОВЫЕ ПОДХОДЫ И РЕШЕНИЯ

Аннотация: В статье рассматривается процесс отбора кадров в контексте современных тенденций и инновационных подходов. Автор описывает основные этапы отбора, подчеркивая роль современных технологий и инструментов, а также анализирует влияние инновационных моделей управления персоналом на эффективность процесса.

Ключевые слова: Отбор персонала, кадровый менеджмент, HR-технологии, цифровизация, эффективность.

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INNOVATIONS IN HUMAN RESOURCES MANAGEMENT: NEW APPROACHES AND SOLUTIONS

Resume: The article examines the personnel selection process in the context of modern trends and innovative approaches. The author describes the main stages of selection, emphasizing the role of modern technologies and tools, as well as analyzes the impact of innovative HR management models on the effectiveness of the process.

Keywords: Personnel selection, HR management, HR technologies, digitalization, efficiency.

Кадровые нововведения представляют собой целенаправленную деятельность по внедрению новых подходов в управлении персоналом, направленную на повышение квалификации сотрудников и их способности эффективно решать задачи, связанные с функционированием и развитием социально-экономических структур (организаций и их подразделений) в условиях конкурентной среды на рынках товаров, рабочей силы и образовательных услуг. Эти нововведения являются одним из видов инноваций и активно применяются в кадровой практике предприятий, учреждений и организаций [1]. Они составляют важный элемент инновационного менеджмента в области управления персоналом и представляют собой комплексный процесс создания, распространения и применения новшеств, имеющих практическое значение для работы кадровых служб. Поиск высококвалифицированных специалистов остается актуальной задачей для большинства современных компаний в условиях российской экономики. Эффективный и качественный процесс найма персонала может значительно повысить производительность работы организаций. При этом система отбора должна основываться на постоянном совершенствовании методов работы с кадрами и использовании инновационных достижений как отечественной, так и зарубежной науки, а также на лучших практиках производства. Подробный подход к процессу подбора кадров обеспечивает высокое качество трудовых ресурсов, что в значительной степени определяет эффективность и возможность их дальнейшего использования. Ранее одним из основных показателей инновационного развития организаций считалось количество технических нововведений и степень их применения, в то время как управленческие инновации оставались вне поля зрения. Однако именно управленческие инновации способствуют внедрению и распространению достижений научно-технического прогресса [2]. Существует обоснованная связь между такими характеристиками человека, как разумность и инновационность, поскольку разум представляет собой творческий процесс создания нового знания, а разумность — это способность применять это знание на практике. Определенные характеристики инноваций и инновационной деятельности могут быть рассмотрены как ключевые элементы в концепции управления инновациями в контексте подбора и управления кадрами. Эффективность всей компании напрямую зависит от целенаправленности инновационной деятельности служб управления персоналом. Уровень восприимчивости кадровых служб к новшествам и достижениям научно-технического прогресса во многом определяется социально-психологическим климатом в организации, который должен способствовать инициативному поиску новаторских решений и самостоятельной подготовке работников к решению разнообразных производственных задач. Готовность руководства к изменениям определяет скорость перехода от традиционной к

инновационной стратегии менеджмента, что позволяет более точно соответствовать современным требованиям научно-технического прогресса. В этом контексте происходят значительные изменения в функциях руководителя кадровой службы, включая консультирование по вопросам внедрения новых подходов к кадровой политике, ориентированной на будущее [3]. Основные задачи руководителя кадровой службы включают планирование штатного расписания, обучение и профессиональное развитие сотрудников, отбор и адаптацию работников, организацию системы оплаты труда, а также консультирование руководителей подразделений по вопросам управления кадрами. Инновационная политика в области управления персоналом создает благоприятные условия труда, способствует карьерному росту и обеспечивает уверенность в будущем. Инновационное управление кадрами основывается на следующих принципах: необходимость интеграции стратегии развития компании с планированием персонала; оценка влияния затрат на работу с кадрами на экономические показатели; формирование необходимых компетенций и профессиональных навыков для успешной работы на рынке труда. В управлении особое значение имеет психологический аспект взаимодействия между людьми [4]. Инновационные исследования показывают, что результаты производственной деятельности во многом зависят от методов воздействия на личностные и психологические компетенции работников с целью формирования «нового» сотрудника и повышения результативности компании. Приоритетным направлением в этой области является способность руководителя создать условия для реализации потенциала каждого работника, проявления интереса к своей работе и стремления к оптимальному решению поставленных задач. Успех организации в значительной степени зависит от умения менеджера взаимодействовать с коллегами, его профессиональных и личных качеств, а также способности эффективно управлять сотрудниками.

Инновационный характер работы современных компаний изменяет требования к сотрудникам, повышая значимость творческого подхода и высоких профессиональных качеств. Эта тенденция уже привела к значительным изменениям в методах, принципах и социально-психологических аспектах управления кадрами [5].

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БИОЛОГИЧЕСКИЕ ОСОБЕННОСТИ СИНАНТРОПНЫХ ЖИВОТНЫХ ЮЖНОГО ПРИАРАЛЬЯ

В статье рассматриваются особенности биологии синантропных животных в Южном Приаралье. Синантропные животные – это те, которые обитают в непосредственной близости к человеческому жилью и адаптированы к жизни в антропогенных ландшафтах.

Ключевые слова: синантроп, ландшафт, антропоген, пустыня, регион, угодья.

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BIOLOGICAL FEATURES SYNANTHROPIC ANIMALS OF THE SOUTHERN ARAL SEA REGION

Abstract

The article discusses the features of the biology of synanthropic animals in the Southern Aral Sea region. Synanthropic animals are those that live in close proximity to human habitation and are adapted to life in anthropogenic landscapes.

Key words: *synanthrope, landscape, anthropogen, desert, region, lands*

Синантропные животные Южного Приаралья играют значительную роль в экосистеме этого региона, а также в жизни местного населения. Этот термин охватывает виды, которые приспособились и живут в средах, изменённых и населённых человеком. В Южном Приаралье, где пустынные и полупустынные ландшафты чередуются с оазисами и сельскохозяйственными угодьями, жизнь множества таких животных находится в тесной зависимости от человеческой деятельности.

Синантропные животные – это те, которые обитают в непосредственной близости к человеческому жилью и адаптированы к жизни в антропогенных ландшафтах. В Южном Приаралье, регионе, характеризующемся уникальными природно-климатическими особенностями и интенсивной хозяйственной деятельностью, разнообразие

синантропных видов представляет особый интерес для зоологов и экологов.

Одним из самых заметных синантропных животных Южного Приаралья является домовая мышь (*Mus musculus*). Этот вид широко распространен по всему региону и часто селится вблизи человеческого жилья, находя там пищу и укрытие. Домовая мышь нередко становится соседом сельских жителей, распространяясь на сельскохозяйственных угодьях и складских помещениях, где она может наносить значительный вред запасам зерна и другого продовольствия.

Эта маленькая, но чрезвычайно приспособляемая грызуна сумела занять важное место в экосистеме регионов, населенных человеком. Распространение домовой мыши тесно связано с человеческой деятельностью: селится она преимущественно в жилищах людей, на складах и в амбарах, где обилие пищи и укрытий способствует её процветанию. Подобное соседство вполне выгодно для мыши, но требует от людей постоянных мер по контролю за численностью этого синантропного вида, так как домовые мыши могут быть носителями различных заболеваний и наносить ущерб имуществу.

Южное Приаралье, с его жарким климатом и аридным ландшафтом, предоставляет домовой мыши разнообразные возможности для выживания. Мыши активно мигрируют в поисках новых источников пищи и укрытий, демонстрируя феноменальную способность адаптироваться к изменяющимся условиям. Грызуны быстро размножаются, и при отсутствии контроля их популяция может достигать угрожающих размеров. Тем не менее, их роль в экосистемах невозможно недооценивать. Это и контроль за численностью насекомых, и участие в процессах разложения органических материалов.

Исследования поведения и экологии домовой мыши могут тоже принести пользу в изучении общих принципов биологии и адаптации. Ученые внимательно следят за изменениями в популяциях этих животных, особенно в условиях современной урбанизации, когда природная среда всё больше вытесняется человеческой деятельностью.

Такое соседство с дикой природой напоминает нам о том, что даже в самых урбанизированных местах сохраняются нити связи с природным миром, чреватые как возможностями, так и угрозами. Домовая мышь остаётся постоянным напоминанием о необходимых границах и мерах в вопросах сосуществования с дикими видами в условиях современного мира.

Еще одним ярким представителем синантропной фауны является воробей (*Passer domesticus*). Этот маленький птица обычно живет в городских и сельских поселениях, находя здесь как пищу, так и подходящие места для гнездования. Воробьи питаются семенами, зерном и насекомыми, а их активная адаптация к жизни рядом с людьми делает их

неотъемлемой частью ландшафта Южного Приаралья. Особую важность имеет их роль в экосистеме, так как они способствуют контролю над численностью вредителей сельскохозяйственных культур.

Млекопитающие, такие как кошки и собаки, которые часто являются домашними животными, также играют свою роль в экосистеме Южного Приаралья. Они могут охотиться на мелких грызунов и птиц, участвуя таким образом в регулировании их численности. При этом не стоит забывать о возможных негативных последствиях, таких как распространение болезней и конкуренция с местными видами.

В заключение, синантропные животные Южного Приаралья представляют собой уникальную и значимую часть региональной фауны. Их существование и адаптация к жизни в изменённых человеком условиях не только демонстрируют удивительную пластичность природы, но и подчеркивают важность гармонизации взаимодействия между человеком и окружающей средой. Поддержание баланса между хозяйственной деятельностью и защитой природных ресурсов остаётся ключевой задачей для обеспечения устойчивого развития региона и благополучия его обитателей.

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СЕЛЕВЫЕ ЯВЛЕНИЯ ЮГО-ЗАПАДНОГО УЗБЕКИСТАНА (НА ПРИМЕРЕ СУРХАНДАРЬИНСКОЙ ОБЛАСТИ)

Аннотация. В данной статье рассматривается образование селевых явлений Юго-Западного Узбекистана, на примере Сурхандарьинской области. А также, даётся характеристика процессам селепроявлений в бассейнах рек Сурхандарьи, Шерабаддарьи, Туполангдарьи.

Ключевые слова: селевые водосборы, селевой поток, рельеф, водная эрозия, склон, селевой очаг, бассейн, ассиметричный склон.

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MURDERSLOADS OF SOUTHWESTERN UZBEKISTAN (ON THE EXAMPLE OF THE SURKHANDARYA REGION)

Abstract. This article examines the formation of mudflows in Southwestern Uzbekistan, using the example of the Surkhandarya region. It also provides a description of the mudflow processes in the Surkhandarya, Sherabaddarya, and Tupolangdarya river basins.

Key words: mudflow catchments, mudflow, relief, water erosion, slope, mudflow source, basin, asymmetric slope.

Введение. В последние годы проблеме селей в нашей стране уделяется очень большое внимание. Республикой Узбекистан приняты ряд специальных постановлений, направленных на усиление защиты от селей, улучшение научно-исследовательских работ по изучению селей, а также расширение наблюдений за условиями образования и прохождения селевых потоков.

Основная часть, Территория Юго-Западного Узбекистана представлена горной областью, являющейся западным окончанием Зеравшанского хребта, и юго-западными отрогами Гиссарского хребта,

занимающими северо-восточную часть Кашкадарьинской и Сурхандарьинской областей [1].

Рельеф района сложный и разнообразный. В северной части Зеравшанский хребет вытянут в широтном направлении с асимметричными склонами (южные крутые, северные более пологие), средние отметки осевой части колеблются от 1500 до 2500 м с отдельными высотами до 2803 м.

Восточная территория района представлена западной частью Гиссарского хребта широтного направления со средними отметками 2500 – 3500 м, отдельные высоты достигают 4424 (Ходжа-Пирьях) 4688 м (Ахбаходжа-Гаспи). Юго-западная часть представлена отрогами Гиссарского хребта с уменьшением абсолютных высот с северо-востока (от осевой части) на юго-запад (4400-800 м).

Для территории характерны скалистость и глубокая вертикальная расчлененность, развитие долин и плосковершинных гребней, повсеместная асимметричность склонов, мощное проявление водной эрозии. Предгорные и плоские равнины сопрягаются с горной зоной, в пределах которой ежегодно формируются разгружающиеся и затухающие селевые потоки.

Систематическое изучение селевых потоков в юго-западных отрогах Гиссарского хребта начато в 1928 г. Селевой режим водотоков района исследовали сотрудники гидрометеорологических станций. В 1966-1968 гг. В.А.Кудышкин и В.А.Бондарь проводили региональное изучение селей. Селевые потоки в основном формируются в бассейнах р. Сурхандарьи в марте – июне с максимумом в апреле – мае (>70%), за счет выпадающих дождей, интенсивного снеготаяния и ливневых дождей. По составу селевой массы отмечаются грязекаменные (40%), водокаменные (40%) и грязевые (20%) сели, что обусловлено составом развития четвертичных отложений. Водокаменные сели образуются в верхней части бассейнов высокогорной зоны с развитием домезозойских горных пород, грязекаменные – в среднегорной и низкогорной с развитием мезокайнозойских отложений в сочетании полускальных и пластичных, грязевые – в низкогорной с развитием комплексов связных и полускальных с пластичными.

В бассейне реки Сурхандарьи селепроявление происходит в притоках первого порядка, которые по размерам водосборных площадей объединены в четыре группы; I – более 2000 км², II -1000 -2000 км², III – 500 -1000 км² и IV – менее 500 км². I группа состоит из селевых бассейнов рек Шерабаддарьи и Туполангдарьи, являющихся правобережными протоками Сурхандарьи, с общей площадью селеформирования 4840 км² (19%). Бассейны веерообразной формы расположены на юго-восточных склонах Гиссарской мегаантиклинали, абсолютные отметки уменьшаются с севера на юг, верхняя часть их находится в высокогорной зоне нижней –

в средне и низкогорной с выходом в современную долину Сурхандарьи. [2].

В среднем и нижнем течении рек в долинной части и на вершинных участках с развитием эллювиально-деллювиальных и деллювиально-аллювиальных отложений появляются террасы, образующие в долинной части Сурхандарьи значительные конусы выноса, где происходит основная аккумуляция обломочного материала селей.

Бассейн реки Шерабаддарьи (2640 км²) – правобережный приток нижнего течения Сурхандарьи, начинается в юго-западных отрогах Гиссарского хребта (хр. Байсунтау, Чакчар), с относительным перепадом высот до 2900 м, общим уклоном 0,0156. Шерабаддарья по сравнению с другими притоками Сурхандарьи имеет наименьший показатель средневзвешенной высоты, равный 1495 м. Почти половина территории бассейна находится ниже 1500 м. Площадь бассейна в высокогорной зоне составляет 8%, в среднегорной-42, в низкогорной-50. В Шерабаддарье половодье начинается в конце февраля, наибольший среднемесячный расход воды отмечается в мае (18,3 м³/сек) – июне (20,6 м³/сек). Сели в этом районе регистрируются с 1928 г. В целом бассейн реки Шерабаддарьи является ежегодно действующим со среднемноголетним периодом повторяемости 1 селя через 1-3 года. Всего зарегистрировано 58 крупных селевых потоков. Расходы селей колеблются от 36,6 (13/III-1931 г.) до 360 м³/сек (28/III-1951 г.), продолжительность прохождения их 5 часов.[1] Основные причины формирования селей – атмосферные осадки. Годичный период селепроявлений отмечается в марте – июне с максимумом в апреле – мае. Преобладающий тип селей – грязекаменный, реже грязевой.

Бассейн реки Туполанга (2200 км²) - правобережный водоток Сурхандарьи, веерообразной формы, меридиональной ориентировки, с общим уменьшением абсолютных отметок с севера на юг и общим перепадом относительных высот до 3200 м, с продольным уклоном 0,03, начинается в высокогорной зоне южных склонов Гиссарского хребта. Площадь бассейна в высокогорной зоне составляет 30%, в среднегорной – 50%, в низкогорной – 20%. Средневзвешенная высота равна 2546 м. Потоки, образовавшиеся в боковых саях, почти одновременно доходят до главного русла и дают возможность быстрому подъему общего уровня воды в нем. В верховьях ледники и снежники благоприятно действуют на стокообразующий период реки. Основная масса стока формируется за счет таяния снегов, роль ледников же небольшая. Река Туполанг относится к рекам снежно-ледникового питания. Расходы реки увеличиваются в феврале – марте (начало половодья), достигая максимума (14,2 м³/сек) в июне [1]. С начала июля до января начинается спад расхода. Средний модуль стока – 23,6 л/сек/км, среднегодовые расходы составляли 33,4 (1957 г.), 71,1 м³/сек). Река зарегулирована плохо. Сток за октябрь – февраль равен 10,6%, а коэффициент внутригодовой неравномерности

стока – 0,40%. В верховьях развиты обвалы, перегораживающие русло и образующие временные озера; прорыв этих заторных участков приводит к селеобразованию. Оползни развиты в среднегорной и низкогорной части бассейна. Селевые явления в бассейне регистрируются с 1927 г. Река Туполанг отличается мощными селевыми потоками. Расходы зафиксированных селей колеблются от 22 до 300 м³/сек. [1].

Ежегодные сели отмечались в течение 9 (1926 – 1934 гг), 7 (1948 и 1955 г.) и 6 (1963 и 1969 гг) лет [1]. Причины возникновения селей – интенсивное снеготаяние, ливневые дожди.

Заключение. Таким образом, в пределах селевого бассейна выделяются следующие элементы:

- 1) селевые очаги;
- 2) водосборы селевых очагов, которые могут содержать локальные регулирующие элементы с импульсным режимом обводнения (ледники и водоемы, формирующие прорывные паводки);
- 3) селевые водосборы;
- 4) нейтральная водосборная площадь.

Описание процессов селеформирования на территории Юго-западного Узбекистана, в данном случае Сурхандарьинской области, следует отметить, что могут иметь место селевые бассейны, характеризуемые одним типом селевого потока. Однако гораздо чаще наблюдается совместное или поочередное прохождение селевых потоков всех типов по одному и тому же руслу. Появление же водных потоков в хвосте грунтовых является скорее правилом, чем исключением. Именно водные потоки, легко размывая только что остановившиеся тела грязевых и грязекаменных потоков, создают послеселевые русловые врезы.

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КЛИНИЧЕСКИЕ И ЛАБОРАТОРНЫЕ АСПЕКТЫ И ТАКТИКА ВЕДЕНИЯ ДЕТЕЙ С ВНЕБОЛЬНИЧНОЙ ПНЕВМОНИЕЙ ЗАТЯЖНОГО ТЕЧЕНИЯ ПОСЛЕ COVID-19

Аннотация: Внебольничная пневмония затяжного течения у детей после COVID-19 является серьезным осложнением, требующим тщательной диагностики и комплексного лечения. В данной обзорной статье рассматриваются клинические и лабораторные аспекты заболевания, а также предложены подходы к его ведению. Особое внимание уделено мульти дисциплинарному подходу, включающему использование антибиотиков, противовирусных и противовоспалительных препаратов, а также методов физиотерапии для реабилитации легочной функции. Описаны основные клинические признаки, диагностические методы и терапевтические стратегии, направленные на снижение риска осложнений и улучшение прогноза у детей.

Ключевые слова: COVID-19, дети, пневмония, затяжное течение, диагностика, лечение, воспаления, реабилитация.

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CLINICAL AND LABORATORY ASPECTS AND MANAGEMENT STRATEGIES FOR CHILDREN WITH PROLONGED COMMUNITY- ACQUIRED PNEUMONIA FOLLOWING COVID-19

Abstract: Prolonged community-acquired pneumonia in children following COVID-19 is a serious complication that requires thorough diagnosis and comprehensive treatment. This review article examines the clinical and laboratory aspects of the disease and suggests approaches to its management. Special attention is given to a multidisciplinary approach, including the use of antibiotics, antiviral and anti-inflammatory drugs, as well as physiotherapy methods for pulmonary function rehabilitation. The article describes the main clinical signs, diagnostic methods, and therapeutic strategies aimed at reducing the risk of complications and improving prognosis in children.

Key words: COVID-19, children, pneumonia, prolonged course, diagnosis, treatment, inflammation, rehabilitation.

ВВЕДЕНИЕ

Внебольничная пневмония затяжного течения у детей после COVID-19 представляет собой серьезное осложнение, требующее особого внимания со стороны врачей. Эта проблема становится все более актуальной в условиях пандемии, так как многие дети, перенесшие COVID-19, сталкиваются с длительным течением пневмонии, что существенно ухудшает их общее состояние и требует специального подхода к лечению и реабилитации [1, 2]. Целью данной статьи является рассмотрение клинических и лабораторных аспектов диагностики и лечения детей с внебольничной пневмонией затяжного течения после перенесенного COVID-19. Основные задачи включают описание симптомов заболевания, обзор методов диагностики, а также представление современных терапевтических подходов к лечению и реабилитации таких пациентов. Особое внимание уделено разработке тактики ведения с учетом возможных осложнений и особенностей детского организма [3, 4]. Для написания статьи был проведен анализ научной литературы по теме COVID-19 и пневмонии у детей, включая исследования в базах данных PubMed, Scopus, Web of Science и Google Scholar. Использованы современные данные о диагностике, лечении и прогнозах детей с затяжной пневмонией после перенесенной коронавирусной инфекции [5]. Предпочтение было отдано обзорным статьям, клиническим рекомендациям и метаанализам, актуальным на 2023 год [6].

МЕТОДЫ И МАТЕРИАЛЫ

Для написания данной обзорной статьи был проведен поиск и анализ научных публикаций в базах данных PubMed, Scopus, Web of Science и Google Scholar по ключевым словам: COVID-19, дети, внебольничная пневмония, затяжное течение, диагностика, лечение, осложнения, реабилитация. Были отобраны статьи, опубликованные в период с 2020 по 2023 год, с приоритетом для клинических исследований, метаанализов и рекомендаций по ведению детей с пневмонией после перенесенного COVID-19. Включенные материалы анализировались с целью выявления современных подходов к диагностике, лабораторным методам исследования, а также тактике лечения и профилактике осложнений. Рассмотрены как российские, так и международные клинические рекомендации, что позволило обобщить имеющийся опыт и предложить оптимальные стратегии ведения пациентов.

РЕЗУЛЬТАТЫ

Анализ современных научных данных показал, что внебольничная пневмония затяжного течения у детей после COVID-19 характеризуется длительными воспалительными изменениями в легких, которые требуют комплексного подхода к диагностике и лечению. Клинические проявления включают затяжную лихорадку, устойчивый кашель, одышку и слабость.

У детей также отмечается повышенная склонность к развитию вторичных бактериальных инфекций, что требует применения антибиотиков наряду с противовирусными и противовоспалительными препаратами [11, 12]. Лабораторные исследования выявляют повышенные уровни маркеров воспаления, таких как С-реактивный белок и прокальцитонин, что указывает на активные воспалительные процессы в организме. Инструментальные методы, включая рентгенографию и компьютерную томографию легких, демонстрируют стойкие изменения в легочной ткани, которые могут сохраняться на протяжении нескольких месяцев после основного заболевания [5]. Лечение требует мульти дисциплинарного подхода с участием педиатров, пульмонологов и инфекционистов. Использование физиотерапевтических методов и дыхательных упражнений показало эффективность в реабилитации легочной функции и снижении риска развития хронических осложнений, таких как фиброз легких [9, 10].

АНАЛИЗ И ОБСУЖДЕНИЕ

Результаты исследования указывают на то, что внебольничная пневмония затяжного течения у детей после COVID-19 представляет собой сложное и многогранное заболевание, требующее особого внимания. Основные клинические проявления, такие как лихорадка, кашель и одышка, могут сохраняться на протяжении длительного времени, что свидетельствует о стойких воспалительных изменениях в легочной ткани. Это осложняет процесс восстановления и требует не только симптоматического лечения, но и тщательной реабилитации [1, 2]. Лабораторные исследования показывают, что воспаление, вызванное COVID-19, может продолжаться даже после острого периода заболевания, что подтверждается повышенными уровнями маркеров воспаления. Это подчеркивает необходимость постоянного мониторинга состояния пациента, особенно в ранние периоды после выздоровления, для своевременного выявления осложнений [3, 5]. Применение антибактериальной терапии в сочетании с противовирусными и противовоспалительными препаратами демонстрирует положительные результаты. Однако важно учитывать, что длительное использование антибиотиков может привести к развитию резистентных форм инфекции, поэтому выбор препаратов должен быть основан на данных о чувствительности возбудителей [6, 7]. Физиотерапевтические методы, включающие дыхательные упражнения и специальные реабилитационные программы, играют ключевую роль в восстановлении легочной функции. Это особенно важно для предотвращения таких долгосрочных осложнений, как легочный фиброз, который может существенно ухудшить качество жизни пациентов [8, 9]. Таким образом, мульти дисциплинарный подход, основанный на сочетании медикаментозной терапии и физиотерапевтических методов, является наиболее эффективной тактикой

ведения детей с внебольничной пневмонией затяжного течения после COVID-19. Необходимы дальнейшие исследования для уточнения оптимальных схем лечения и разработки индивидуализированных программ реабилитации [10, 12].

ВЫВОДЫ

Внебольничная пневмония затяжного течения у детей после COVID-19 является серьезным осложнением, требующим комплексного и мультидисциплинарного подхода к диагностике и лечению. Основные клинические проявления, такие как длительная лихорадка, кашель и одышка, могут сохраняться в течение нескольких недель или месяцев, что указывает на необходимость продолжительного наблюдения за пациентами. Лабораторные исследования и инструментальные методы диагностики, такие как рентгенография и компьютерная томография, играют важную роль в выявлении стойких воспалительных изменений и помогают определить правильную тактику лечения. Применение антибактериальной терапии, противовоспалительных препаратов и методов реабилитации легочной функции показало свою эффективность в снижении риска осложнений. Наиболее эффективным является индивидуализированный подход к лечению, учитывающий особенности течения заболевания у каждого пациента. Важное значение имеет своевременное назначение физиотерапии и дыхательных упражнений для улучшения вентиляционной функции легких и предотвращения развития фиброза. Ведущее значение также отводится профилактическим мероприятиям, направленным на предупреждение рецидивов и укрепление иммунной системы детей. Необходимы дальнейшие исследования для разработки стандартов ведения пациентов с пневмонией затяжного течения после COVID-19, что позволит повысить эффективность лечения и улучшить прогноз у детей.

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РАЗВИТИЕ ЛИДЕРСКИХ КАЧЕСТВ РУКОВОДИТЕЛЯ ОБРАЗОВАТЕЛЬНОГО УЧРЕЖДЕНИЯ КАК ФАКТОР ПОВЫШЕНИЯ ЭФФЕКТИВНОСТИ УПРАВЛЕНИЯ ПЕРСОНАЛОМ

Аннотация: как лидерство влияет на эффективность управления операционными задачами в учебных заведениях.

Ключевые слова: трансформационный лидер, лидер, структурный подход, организационное лидерство

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DEVELOPMENT OF LEADERSHIP QUALITIES OF THE HEAD OF AN EDUCATIONAL INSTITUTION AS A FACTOR IN INCREASING THE EFFICIENCY OF PERSONNEL MANAGEMENT

Abstract: how leadership affects the efficiency of managing operational tasks in educational institutions.

Keywords: transformational leader, leader, structural approach, organizational leadership.

Современная жизнь выдвигает новые требования к профессиональной деятельности руководителя образовательного учреждения. Современная школа претерпевает сейчас изменения, поэтому руководитель должен обладать такими знаниями и качествами, которые бы позволяли эффективно управлять персоналом, что позволяло бы обеспечивать условия для максимального развития внутреннего потенциала личности и эффективной социализации школьников. Совершенствование лидерских навыков важно, поскольку руководитель с ярко выраженными лидерскими качествами, способен обеспечить быструю адаптацию организации к быстрым изменениям среды для эффективного управления персоналом.

Организационное лидерство – важнейший компонент эффективного руководства. Оно встречается везде, где есть устойчивое объединение людей. Само слово «лидер» означает «вождь», «ведущий». Несмотря на кажущуюся простоту этого понятия, в современной науке, при наличии общности исходных позиций различных авторов, лидерство характеризуется неоднозначно.

Лидерство и организационная культура тесно взаимосвязаны. Лидеры создают, внедряют, развивают и иногда умышленно пытаются изменить культурные представления.

Лидерство — это установки и мотивация, побуждающие человека изучать культуру и управлять ею.

Лидерство, как и управление, является до некоторой степени искусством. До сегодняшнего дня вопросы о лидерстве остаются актуальными, поскольку ещё не дано каких-либо чётких и определённых ответов. Но различные модели и теории, которые рассматривает данная работа, помогают осознать необходимость гибкого подхода к руководству.

Руководитель, который хочет работать как можно более эффективно, получить всё, что можно от подчинённых, не может позволить себе применять какой-то один стиль руководства на протяжении всей своей карьеры. Скорее руководитель должен научиться пользоваться всеми стилями, методами и типами влияния, наиболее подходящими для конкретной ситуации.

Актуальность работы объясняется новыми тенденциями в области управления организацией и важностью лидерства для эффективного развития организации. Команда эффективна тогда, когда у неё есть руководитель, который обладает лидерскими качествами.

В результате теоретического анализа литературы, социологического исследования лидерских качеств руководителя и их влияние на эффективность управления персоналом пришли к выводу, что:

Лидер - творческий человек, находящийся в поиске инноваций, но его значение максимально возрастает, как только лидер обретает свою команду.

Для того чтобы руководитель мог эффективно управлять персоналом он должен обладать лидерскими качествами: находится в постоянном поиске новых идей; быть коммуникабельным; уметь убеждать и вселять веру в своих подчинённых; обладать сформированным целеполаганием; быть разносторонним; быть трудолюбивым и настойчивым; находится в постоянном поиске новых решений, быть сосредоточенным на идеях; быть любознательным.

Кроме того у лидера должны быть: интеллектуальная развитость, некоторая жесткость в отношении дела, большая степень дипломатичности, расчетливости, открытости, эмоциональной

устойчивости. Лидерам свойственно доминирование, самоконтроль, независимость, склонность к новому.

3. Для того чтобы руководитель школы мог легко ориентироваться в современных условиях и мог эффективно руководить персоналом, он в первую очередь должен быть менеджером. Для этого необходимо пройти соответствующее обучение и получить соответствующие знания в этой области.

В современных условиях выпускник вуза должен обладать не только профессиональными знаниями, умениями и навыками, но и определенным набором лидерских качеств, которые позволят ему, молодому специалисту, успешно реализовать свои лидерские задатки в практической деятельности. В связи с этим необходима такая подготовка в высшей школе, где бы в полной мере использовались социальные и образовательные условия образовательного процесса, способствующие формированию лидерских качеств в профессиональной деятельности студентов. В данной статье освещается понятие «лидерство», приводятся мнения авторов, дающих определение данному явлению, описываются подходы к толкованию термина, отмечается национальный аспект, социально-демографические характеристики, этические вопросы деятельности лидера. Рассматривая проблему лидерства, необходимо акцентировать внимание на мотивации, типологии, способах выявления лидеров и их основных характеристиках. Важно прояснить способы раскрытия лидерского потенциала, как его можно использовать в организационных целях. Лидерство является важнейшей составляющей эффективного управления. Лидеры встречаются везде, где есть власть или устойчивое объединение людей. Лидерство не имеет конкретного определения, оно многогранно, кроме того, существуют различные подходы к анализу этого явления, а также ряд проблем, которые находятся в области изучения существующего явления. Основная часть. Исходным условием при рассмотрении лидерства является утверждение, что человек не может ни управлять, ни общаться, ни обмениваться информацией с другими людьми. Подобно строению человеческого мозга, имеющего два полушария — левое (сознание-мышление) и правое (чувства-интуиция), природа лидерства также двойственна: в ней выделяют сферу бизнеса (формальное лидерство) и сферу отношений (неформальное лидерство). Иными словами, в первом случае речь идет о разработке и достижении целей, а во втором — о согласии между людьми, их взаимоотношениях [1]. С другой стороны, лидерство основывается на определенных потребностях сложно организованных систем. К ним относятся, прежде всего, потребности в самоорганизации, упорядочении поведения отдельных элементов системы с целью обеспечения ее жизнеспособности и функциональной дееспособности. Такая упорядоченность достигается за счет вертикального (управление-подчинение) и горизонтального

(соотносительные одноуровневые связи, например, разделение труда и кооперация) распределения функций и ролей [2]. Несмотря на то, что само понятие «лидерство» может показаться достаточно простым и в современной науке существуют общие исходные позиции у различных авторов, это явление характеризуется неоднозначно. Важным аспектом изучения лидерства является определение, описание и характеристика самого понятия «лидер».

Каждый человек может определить свою и чужую пригодность для лидерства, используя следующие восемь критериев: 1) самокритика и, что самое главное, постоянное самосовершенствование; 2) нацеленность на служение другим; 3) излучение позитивной энергии, доброжелательность и избегание восприятия негативной энергии и конфликтов; 4) вера в других и внушение этого им; 5) рациональное распределение времени и усилий; 6) внутренняя уверенность, оптимизм, свежий взгляд на события, восприятие жизни как приключения; 7) толерантность, поощрение и использование многообразия мнений и подходов, признание заслуг других и их равного права на самовыражение; 8) забота о физическом здоровье, интеллектуальном и духовном развитии.

В целом лидерство можно определить как тип управленческого взаимодействия, основанный на наиболее эффективном для данной ситуации сочетании различных источников власти и направленный на мотивацию людей к достижению общих целей. В целом полноценное лидерство позволяет управлять людьми без их сопротивления и недовольства, формального контроля, страха и наказания. По мнению многих ученых, лидерами «рождаются», но в еще большей степени они становятся ими в результате обучения, упорной индивидуальной работы, просвещенного знаниями практического опыта и приобретенных в ней навыков. Исходя из вышесказанного, практически каждый грамотный руководитель может стать деловым, а во многом и эмоциональным лидером.

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КОММУНИКАТИВНОЕ ОБУЧЕНИЕ ИНОСТРАННЫМ ЯЗЫКАМ

Аннотация: В данной статье рассматривается вопрос о лингвистической и коммуникативной компетенции учебника русского языка.

Ключевые слова: элемент, типология, реализация, функциональность.

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COMMUNICATIVE TEACHING OF FOREIGN LANGUAGES

Abstract: This article examines the issue of linguistic and communicative competence of the textbook of the Russian language.

Keywords: element, typology, implementation, functionality.

Одним из необходимых условий успешного обучения нерусских русскому языку является широкое внедрение в практику преподавания функционального подхода к отбору и подаче языкового материала. Обращение к функциональному подходу – закономерный этап в развитии языкознания и лингводидактики. Из общеполитического определения функции вытекают следующие ее особенности: функциональный подход нацеливает на изучение фактов в движении, - в применении к языку это значит - в коммуникации; функциональный подход предусматривает отношение объекта к среде, типология их устанавливается в зависимости от характера элемента и объема среды. Существуют разные подходы к реализации условий функциональности, опирающихся на разный объем значения слова «функциональность».

Взаимная заинтересованность лингвистической теории и практики преподавания языка стимулирует отбор тех понятий, которые наиболее последовательно и содержательно выражают сущность и связи языковых

явлений. Неизменным стержнем грамматики, позволяющим выстроить последовательную систему единиц от лексики до текста, служит понятие функции. Функция определяется как способ участия любого элемента, предопределенного его категориально - семантическим значением и формой, в построении коммуникации. Ориентированность на коммуникативное действие, на текст обогащает грамматический аппарат такими категориями, как позиция говорящего и наблюдателя, субъективная перспектива, речевые интенции, функциональная парадигма слова, коммуникативные регистры речи. Выделяются общие для всех текстов регулярные ступени от языкового материала через речевую систему к структуре конкретного речевого произведения. При презентации, организации и отработке грамматического материала учитывается роль разрешающего и запрещающего контекста для отдельных грамматических явлений, помимо этого, в процесс обучения вводится и набор правил на основе различных видов контекста.

В учебный материал входят и элементы объективного измерения уровня лингвистической компетенции. «Коммуникативное обучение иностранным языкам представляет собой преподавание, организованное на основе заданий коммуникативного характера. Коммуникативно-ориентируемое обучение имеет целью научить иноязычной коммуникации, используя все необходимые для этого (не обязательно только коммуникативные) задания и приемы». Отсюда целью обучения русскому языку является овладение не его системой, а речью, речевыми действиями на данном языке. Значимость же речевого общения выходит далеко за рамки собственно актов говорения и обмена информацией, ибо «речь, формировавшаяся одновременно с сознанием человека, материализует сознание, делая его достижением не только одного человека, но и других членов коллектива, превращает индивидуальное сознание в часть социального и вместе с тем раскрывает информацию всего общества для его отдельных членов».

«Если же учесть, что изучение русского языка необходимо обучающемуся для выражения собственных мыслей, определенного воздействия на партнеров по коммуникации, то в качестве основной единицы обучения следует рассматривать речевые действия. При этом русский язык выступает в качестве строительного материала (кода), без которого невозможно участвовать в процессе коммуникации. Но одно только знание системы языка, его правил, даже при условии сформированности определенных языковых навыков и умений, не приводит к владению языком как средством общения. Опыт лингвистически ориентированной методики повсеместно это подтвердил. Вместе с тем правомерна мысль и о том, что, с одной стороны, овладение речью возможно без знания системы языка, а с другой, – знание системы языка еще не обеспечивает владения речью. Именно этот факт и заставляет

говорить о различии лингвистической и коммуникативной компетенции». Под коммуникативной компетенцией принято понимать не только способность правильно строить предложение, что обеспечивается лингвистической компетенцией, но и знание того, при каких условиях общения его можно употребить, а также правильно интерпретировать устные и письменные тексты с учетом условий общения. Об этом Ф. Деннингхауз говорит так: «... Речевая компетенция не равна коммуникативной компетенции. Понятие «владеть языком» обозначает чисто речевое умение строить и понимать бесконечное (или практически бесконечное) число грамматических и осмысленных предложений». Определение уровня коммуникативной компетенции, которого должны достигнуть учащиеся в процессе обучения, является принципиально важным

для конкретизации целей обучения, определения его содержания и средств. Иными словами, определение коммуникативной компетенции дает ясное представление о конечной цели обучения.

От степени четкости и конкретности формулировки уровня коммуникативной компетенции в значительной степени зависят результаты обучения. Формирование коммуникативной компетенции возможно только в процессе речевой практики, которая может и должна быть организована на каждом занятии. По мнению С.Г.Тер-Минасовой (мы присоединяемся к этому мнению), «одной из основных причин недостаточной эффективности преподавания иностранных языков (и русского тоже), по-видимому, является оскверненная многолетней практикой попытка обучения «языку вообще». Отсюда, очевидно, необходима минимизация содержания обучения русскому языку. Важным в этом плане представляется выделение сфер общения, а также видов речевой деятельности, наиболее необходимых для конкретной группы студентов.

Таким образом, если «цель обучения определяется как овладение студентами речевой деятельностью на русском языке, т.е. решение определенных коммуникативных задач средствами русского языка, то обучение должно строиться не как процесс овладения абстрактной системой «языка вообще», овладения лингвистическими единицами (словами, предложениями, сложным синтаксическим целым), а как обучение студентов выполнению определенных речевых действий в конкретных видах речевой деятельности».

Теоретически круг коммуникативных потребностей, т.е. нужды в общении как внутреннего побудителя речевой активности студентов весьма широк. На наш взгляд, наиболее значимые в учебно-научной и общественно-политической сферах деятельности следующие виды компетенций. Компетенции на основе чтения как вида речевой деятельности.

Студенты должны уметь читать тексты разных типов общенаучного, узкоспециального и общественно-политического содержания (со словарем и без словаря); находить и вычленять в текстах все содержательные (информативные, коммуникативные) блоки; самостоятельно ориентироваться в семантической, структурной устроенности и коммуникативной направленности всего текста (и частей текста); выделять в содержательных блоках главную, дополнительную информацию для иллюстрации своего высказывания, приведения аргументов, контраргументов и пр.; уметь ориентироваться в композиционной структуре текста; уметь сопоставлять информацию двух или более текстов; уметь прогнозировать содержание текста или газетной информации и т.д.

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СОСТОЯНИЕ РАЗВИТИЯ ИНДИВИДУАЛЬНОГО ЖИЛИЩНОГО СТРОИТЕЛЬСТВА В РЕСПУБЛИКЕ БАШКОРТОСТАН

Аннотация: Строительство жилья является одним из важнейших составляющих социально-экономического развития региона. В данной научной статье рассматривается состояние развития индивидуального жилищного строительства в Республике Башкортостан. Освещены основные показатели, достигнутые в данном направлении по итогам 2022 года, а также пути развития данной сферы в республике.

Ключевые слова: рынок индивидуального жилищного строительства; динамика и развитие республики; регионы; районы; индивидуальное строительство; инвестиции; коммерческие отношения.

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STATE OF DEVELOPMENT OF INDIVIDUAL HOUSING CONSTRUCTION IN THE REPUBLIC OF BASHKORTOSTAN

Abstract: Housing construction is one of the most important components of the socio-economic development of the region. This scientific article examines the state of development of individual housing construction in the Republic of Bashkortostan. The main indicators achieved in this direction based on the results of 2022 are highlighted, as well as the ways of development of the republic in this direction.

Keywords: market of individual housing construction; dynamics; development of the republic; regions; districts; individual construction; investments; commercial relations.

В текущий период времени улучшение качества жизни населения, проживающего во всех субъектах Российской Федерации, является

приоритетной задачей федеральных целевых программ, касающихся решения основных проблем в социальной сфере. Проблема развития жилищного фонда является значимой и по настоящий момент, поскольку жилищное строительство играет немаловажную роль при формировании комфортной среды для проживания населения.

Статья посвящена вопросу развития индивидуального жилищного строительства в регионах Российской Федерации с учетом современных строительных реалий. Рассмотрены специфика рынка индивидуального жилищного строительства и основные его проблемы. Подчеркнуто, что индивидуальное жилищное строительство является одним из набирающих популярность видов разрешенного использования земли. Особое внимание уделено отсутствию единой региональной стратегии развития, подчеркнута неподготовленность инфраструктуры. Все это влияет на равновесное развитие этой отрасли строительства в нашей стране.

Региональное развитие рынка индивидуального жилищного строительства - это один из важнейших процессов, который может существенно повлиять на комфорт жизни населения и экономический рост региона страны в целом. В статье выделены перспективы и возможные пути решения проблем для развития рынка индивидуального жилищного строительства в отдаленных регионах. В заключении сформулирован вывод о необходимых мерах для создания комфортных условий для развития индивидуального жилищного строительства во всех регионах страны.

Рынок индивидуального жилищного строительства в Республике Башкортостан (далее - ИЖС) - это частный сегмент рынка недвижимости, который имеет свои особенности и специфику.

Основным фактором, влияющим на спрос на республиканском рынке ИЖС, является наличие рабочих мест в республике. Как известно, расселение на территории Республики Башкортостан крайне неравномерно: мегаполисы (такие города, как Уфа, Стерлитамак, Октябрьский), где спрос на жилье превышает предложение, а также страдающие от высокой безработицы и оттока населения малые города и сельские районы (например, Ишимбай, Мелеуз, Кумертау, а также районы республики), где имеется свободный земельный фонд и привлекательные для строительства условия.

Федеральной службой государственной статистики в 2023 г. была опубликована статистика индивидуального жилищного строительства за 2022 г. [6]. Данные свидетельствуют о том, что в 2022 г. В Башкирии в 2022 году ввели рекордные 3,06 млн кв. м жилья, согласно отчета Росстата. Рост по сравнению с позапрошлым годом составил 5,4%. Отметку в 3 млн «квадратов» в регионе преодолели впервые, предыдущий максимум был достигнут в 2021 году — 2,9 млн кв. м.

Где, 1,9 млн кв. м из общего объема введенного в регионе жилья возведено индивидуальными застройщиками, показатель на 7,9% выше, чем годом ранее.

По вводу жилья республика занимает второе место в Приволжском федеральном округе. Отставание от лидера в округе — Татарстана — составило всего 31 тыс. кв. м. На третьем месте среди регионов ПФО — Пермский край, где в прошлом году ввели 1,98 млн кв. м жилья. Наименьшие показатели зафиксировали в Мордовии (342 тыс.), Марий Эл (435,8 тыс.) и Ульяновской области (828,5 тыс. кв. м).

За 2022 г. в республике построено 33 тысячи квартир. В расчете на одну тысячу жителей введено 669 квадратных метров жилья. Что говорит о том, что республика продолжает занимать лидирующие позиции в стране по вводу жилья.

Среди городов республики лидером по вводу жилья является Уфа. В столице Башкортостана по итогам 2022 г. введено более 930 тыс. кв. метров жилых помещений. Это 88,2% по отношению к прошлогоднему уровню. Индивидуальная застройка в Уфе составила 273 тысячи кв. м. На втором месте среди городских округов — Стерлитамак, где за 2022 г. возведено 84,2 тысячи кв. метров жилья, из которых 30,5 тыс. кв. метров приходится на индивидуальное строительство. Тройку лидеров замыкает город Октябрьский, где сдано 76,5 тыс. кв. метров жилой недвижимости, в том числе 49,8 тыс. кв. метров — частными застройщиками.

Среди муниципальных округов самое большое количество жилья введено в Уфимском районе — за 2022 год здесь построено и сдано 278,7 тыс. кв. метров жилья. В тройке лидеров по объемам жилищного строительства также Иглинский и Абзелиловский районы, где введено 125,5 тыс. кв. м и 85,9 тыс. кв. м жилья соответственно.

Согласно данным Минстроя Башкирии, к 2030 году в регионе планируется уровень ввода жилья в 4 млн кв. м в год. Для реализации этой задачи стройкомплекс уже готовит инфраструктуру для будущих застройщиков, в частности, в уфимском Забелье, где в ближайшие 5–10 лет «вырастут» новые микрорайоны. Считается, что в ИЖС темпы роста также сохранятся.

В масштабах Российской Федерации, в рейтинге регионов по объемам ИЖС в 2022 году, Республика Башкортостан занимает четвертую позицию, уступив Московской области, Ленинградской области и Республики Татарстан.

В 2022 году Правительство Республики Башкортостан концентрировалось на создании условий и необходимой инфраструктуры для строительства нового жилья и стимулирования его ввода, решении проблемы «обманутых дольщиков». Для этого наращивалось взаимодействие с федеральными институтами развития. В 2022 году

введены рекордные 3 млн. кв. м жилья. Это существенно больше, чем строилось даже в самые продуктивные «советские» годы.

Развитие регионального рынка ИЖС как процесс имеет свою специфику, которую коротко можно выразить в следующих требованиях [2]:

1. Демографические и экономические тренды. Уровень рождаемости, миграция населения, экономический рост, инфляция, рост цен на жилье и другие сопутствующие факторы.

2. Городское планирование и зонирование. Различные ограничения и требования городских властей (например, в отношении размера участков и типов домов) могут также существенно повлиять на спрос и цены на ИЖС.

3. Инфраструктура и транспортная доступность. Наличие школ, больниц, магазинов, детских садов и другой инфраструктуры, а также качество дорог и общественного транспорта оказывают влияние на выбор места жительства.

Соответственно, без практически полного соответствия этим требованиям ни один отдаленный российский регион не сможет поддерживать развитие ИЖС в долгосрочной перспективе.

Таким образом, если поставлена цель развития ИЖС в отдаленных районах Республики Башкортостан, следует придерживаться следующих принципов [3]:

1) интеграция программ и проектов региона с учетом различных форм участия государственных органов в их реализации;

2) объединение различных источников финансирования, имеющихся в республике, в рамках единого регионального бюджета развития отдаленных районов;

3) формирование единых требований к программам и проектам развития отдаленных районов и процедурам их отбора;

4) формирование системы очередности программ и проектов развития отдаленных районов (разделение их на этапы);

5) анализ действующих программ и проектов с последующей их корректировкой для повышения эффективности;

6) включение в методику отбора и продвижения программ развития отдаленных районов принципа территориального и пространственного подхода к реализации с целью развития территорий и объектов инфраструктуры.

Также отметим, что при развитии ИЖС в регионах Республики Башкортостан необходимо внедрять новые и прогрессивные технологии для строительства индивидуальных домов и хозяйственных построек наравне с инновациями, применяемыми в мегаполисах и крупных городах России. Это поможет установить баланс по уровню развития ИЖС.

Развитие ИЖС в отдаленных районах Республики может дать на наш взгляд следующие положительные эффекты:

1) Рост численности населения в районах.

Развитие ИЖС привлечет людей к жизни в тех районах, где очевидно не хватает рабочей силы, которые считаются «вымирающими», а это может привести к развитию инфраструктуры и внутренней экономики республики.

2) Развитие республиканской экономики.

Создание новых рабочих мест при строительстве и организации обслуживающих предприятий благоприятно скажется на развитии местной экономики, поможет сократить уровень бедности и безработицы среди населения в районе;

Кроме того, важно учитывать, что развитие экономики внутри региона значительно влияет не только на республику, но и на состоянии экономики всей страны в целом, поэтому это весомый стимул для повышения внутренних экономических показателей России.

3) Снижение миграции населения в города республики.

Развитие ИЖС в отдаленных регионах может стать альтернативой проживания в больших городах, что снизит активную миграцию населения в крупные города и, как следствие, перегрузку городских инфраструктур [5].

Тем не менее, успешное развитие и решение препятствующих тому проблем в сфере ИЖС во всех регионах Российской Федерации будет возможным только при поддержке государства в виде финансирования, увеличения количества предоставляемых земельных участков и контроля качества производимых работ.

Следует заметить, что в основе всего должен лежать растущий спрос населения на индивидуальное жилье. На это может повлиять интерес людей к качественному жилищному строительству и его экологической безопасности, а также влияние следующих факторов:

1. Пандемия и самоизоляция повысили спрос на индивидуальное жилищное строительство (ИЖС) из-за роста потребности в комфортных домах для удалённой работы и учебы, стремления к безопасности и уединению, а также привлекательных финансовых условий для ипотеки. Люди стали искать просторные и удалённые от городской суеты жилья.

2. Санкции также способствуют открытию новых производств за счёт необходимости заместить импорт и развивать локальную экономику. Это создание новых рабочих мест и рост доходов населения, что повышает спрос на индивидуальное жилищное строительство (ИЖС). Люди, получая стабильные заработки, начинают инвестировать в жильё, что увеличивает интерес к построенным домам за пределами городов.

3. Дороговизна и недоступность квартир в многоквартирных домах (МКД), а также высокие расходы на услуги ЖКХ, побуждают людей искать альтернативы. Индивидуальное жилищное строительство (ИЖС) становится более привлекательным за счёт большей свободы выбора,

возможности создания собственного пространства и потенциально меньших эксплуатационных затрат. Это приводит к росту интереса к ИЖС как к более экономичному и доступному варианту жилья.

Таким образом, приходим к выводу, что многие районы республики возможно развить до конкурентного уровня для проживания, однако, для этого потребуются значительные усилия, немало времени и материальных ресурсов.

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МЕТОДИКА ТАКТИЧЕСКОЙ ПОДГОТОВКИ ПАРА-ДЗЮДОИСТОВ

Аннотация

В этой статье представлены результаты исследования о ведении тактической борьбы слабовидящими и незрячими спортсменами, с применением методических основ тактической подготовки парадзюдоиста.

Ключевые слова: пара-дзюдо, тактика, силовой приём, борьба, выбор положения, контратакующее действие, контроль дистанции.

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METHODS OF TACTICAL TRAINING OF PARA-JUDOISTS

Annotation

This article presents the results of a study on the conduct of tactical wrestling by visually impaired and blind athletes, using the methodological foundations of tactical training of a para-judoka.

Key words: para-judo, tactics, power technique, wrestling, choice of position, counterattacking action, distance control.

Введение. Современное направление пара-дзюдо характеризуется техническими действиями, требующими от спортсмена максимальных мышечных усилий в условиях чувствительности рук, слуха и самозащиты. Анализ тенденций развития пара-дзюдо в мире свидетельствует о повышении тактических действий, высоком уровне технической подготовленности. Усиление конкуренции на международной арене требует повышения эффективности тренировочного процесса в подготовке парадзюдоистов Узбекистана за счёт оптимального использования научно-обоснованных средств и методов спортивной тренировки в целях дальнейшего достижения успехов.

Достижения в 2020 году на Олимпийских Играх в Японии, конечно, радует узбекских болельщиков параолимпийцев. Но требования к современной борьбе пара-дзюдо предусматривают значительное увеличение количества тактических действий, которые возможны лишь на основе повышения функциональных возможностей и технико-тактической

подготовленности пара-дзюдоистов. Успешное выступление пара-дзюдоистов в соревнованиях зависит от уровня тактической подготовленности пара-дзюдоистов. Отличительной особенностью современного пара-дзюдо являются тактические действия при выполнении технических приёмов. Повышение уровня развития современного пара-дзюдо тесно связано с совершенствованием методически правильных подходов к повышению способов тактической подготовки. Способы тактической подготовки – разведка, сковывание, угроза, маневрирование, обман и двойной обман, введение схватки при имеющихся преимуществах играют большую роль перед выполнением технического приёма.

Теоретическая часть. Тактика ведения схватки главным образом зависит от степени подготовки противника. Для правильного построения тактики схватки в первую очередь надо знать, какие атакующие действия применяет противник, как защищается, какова его физическая подготовленность.

Следует тактику планировать с учётом использования своих сильных сторон подготовленности и слабых сторон конкретного противника в схватке. Например: если пара-дзюдоист обладает большой силой, то решающую атаку он должен строить на силовом приёме. Если противник быстро выполняет движения, его действия надо сковывать захватами и подавлять силой. Если он физически сильный, надо опережать его действия и обыгрывать сложными атаками и т. д. Зная излюбленные атаки противника, надо применять контратакующие действия. С противником, который выше ростом, будет стараться брать захваты сверху как решающий приём сложного атакующего действия, важно чувствовать движения тела, предугадывать действия. Противника, который ниже ростом, будет стараться бороться нижними захватами, поэтому атаку строить за счёт выведения из равновесия рывками за плечевой пояс и бросками через спину, прогибом и переводом в партер рывком с действием ног т. д.

Для проведения схватки с конкретным противником пара-дзюдоисту следует предварительно наметить план определённой тактики. При этом, если она ведёт к преимуществу, её надо сохранить до конца схватки. На случай, если она окажется неудачной, использовать запасные варианты.

Тактический план строится из следующих составных частей:

цель схватки и методы её достижения. Цель намечается в зависимости от возможностей пара-дзюдоиста и противника. Так, цель пара-дзюдоиста в поединке с относительно слабым противником – чистая победа; с сильным – победа по очкам;

выбор технических действий. Учитывая свою подготовленность, пара-дзюдоист избирает такие технические действия и способы их подготовки (сложного атакующего действия), которые наиболее полно соответствуют намеченной цели и эффективны в борьбе с конкретным противником.

Приёмы и сложные атакующие действия подбирают с учётом слабых сторон противника.

Выбор различных положений и контроль дистанции в пара-дзюдо играет большую роль. При выборе стойки и дистанции надо исходить из того, насколько они будут способствовать выполнению намеченных атакующих действий, контролировать движения и затруднять «любимые» атаки противника, не давая ему выполнить броски. В перерывах между минутами пара-дзюдо надо критически оценить ход схватки и внести коррективы, то есть оценить ее ход, выявить слабые места противника и чего следует опасаться, наметить поведение в оставшееся время в пара-дзюдо. Например, нельзя считать исход поединка решённым после достижения выигрышного положения. До финальной оценки надо оставаться собранным, внимательным и готовым к атакующим действиям противника, который, проигрывая, мобилизуется и атакует не всегда расчётливо. В это время надо маневрировать, применять ложные атаки и сковывающие захваты. Проигрывая схватку, пара-дзюдоист должен до последней секунды готовить решающую атаку. Показывая своими действиями, что смирился с поражением, пара-дзюдоист должен неожиданно для противника «взорваться» и провести сложную атаку, которая решит исход поединка в его пользу.

В борьбе пара-дзюдо рассматриваются следующие технико-тактические движения: совершенствование техники страховок (Ukemi), совершенствование выведений из равновесия (Kuzushi), демонстрационный комплекс техники пара-дзюдо третьей ступени.

Боковая подсечка в темп шагов (Okuri-ashi-barai), Бросок через плечо (Seoi-nage), Подсечка под пятку изнутри (Ko-uchi-gari), Передняя подножка (Tai-o-toshi), Бросок упором стопы в живот (Tomoe-nage), Болевой прием рычагом локтя захватом руки между ног (Ude-hisigi), Обратное удержание сбоку (Ushiro-kesa-gatame), Болевой прием рычагом локтя через бедро от удержания сбоку (Kesa-garami), Узел локтя ногой от удержания сбоку (Ashi-ude-garami), Узел локтя руками (Ude-garami).

Защита от удержаний - от удержания сбоку (Kata-gatame); от удержания со стороны головы с захватом пояса (Kami-siho-gatame); от удержания верхом захватом головы одной рукой (Tate-siho-gatame); от удержания со стороны головы с захватом пояса (Mane-gatame); переворот от удержания верхом захватом головы одной рукой (Tate-siho-gatame). Из них можно использовать разные варианты: 1) переворот от удержания поперек с захватом дальней руки (Mane-gatame); 2) переворот от удержания поперек с захватом дальней руки (Mane-gatame).

Защита от бросков - зацеп изнутри (O-uchi-gari); передняя подсечка (Sasae-tsuri-komi-ashi); бросок через бедро (O-goshi). Например: защита от зацепа изнутри (O-uchi-gari) способом «освобождение захваченной ноги»; защита от броска через бедро (O-goshi) способом «обшагивание по ходу».

Контратаки: изучение способов контратаки на примерах – опережением: бросок через бедро (O-goshi) влево от броска через бедро (O-goshi) вправо; блокированием: подъемом противника вверх от броска через бедро; использованием движения: передняя подсечка (Sasae-tsurikomi-ashi) от броска через бедро (O-goshi). Например: способом «опережение» бросок через бедро (O-goshi) влево от броска через бедро (O-goshi) вправо; способом «блокирование» блокирование с подъёмом вверх от броска через бедро (O-goshi); способом «использование» передняя подсечка (Sasae-tsurikomi-ashi) от броска через бедро.

Перевороты с выходом на удержание или на болевой прием: переворот с выходом на болевой приём рычаг локтя или удержание (Mune-gatame); переворот способом «лампочка» с выходом на удержание поперек (Yoko-shiho-gatame); переворот из положения «тори» на спине, «уке» между его ног с выходом на рычаг локтя (Juji-gatame).

Дополнительный материал для стойки (Nage-waza): бросок через бедро с захватом за рукав и отворот (Koshi-guruma); бросок через плечо с захватом руки на плечо (Ippon-seoi-nage); передняя подсечка с падением (Sutemi-Sasae-tsurikomi-ashi); подсечка изнутри, выполняемая на стоящем на одном колене «уке» (Ko-uchi-gari).

Полученные результаты. Цель схватки намечается в зависимости от возможностей пара дзюдоиста и противника. Так, цель пара-дзюдоиста в поединке с относительно слабым противником - чистая победа; с сильным - победа по очкам.

Выбор технических действий. Учитывая свою подготовленность, пара-дзюдоист избирает такие технические действия и способы их подготовки (сложного атакующего действия), которые наиболее полно соответствуют намеченной цели и эффективны в борьбе с конкретным противником. Приемы и атаки подбирают с учётом слабых сторон противника.

Общая тенденция построения схватки сводится к тому, чтобы уже в первый период схватки добиться победы ли получить преимущество в баллах.

Темп схватки. Ведение схватки в высоком темпе целесообразно планировать хорошо подготовленному пара-дзюдоисту при встрече с противником, не имеющим достаточной выносливости, но превосходящим его в силе и технике. В схватке с выносливым противником следует свою энергию экономно расходовать. Надо сковывать движения противника и маневрировать, чтобы не позволить ему выиграть схватку в высоком темпе, и самому быть готовым использовать малейшую возможность для контратаки. Для выявления индивидуальных особенностей пара-дзюдоистов следует также выявлять их интеллектуальные качества. Необходимость осмысленного манёвра прогнозирования возможных действий соперника маскировки предстоящих действий требует в бою находчивости.

Находчивость зависит:

- от скорости мышления;
- от чувствительности и осязаемости;
- от прочности памяти;
- от логичности мышления;
- от способностей предвидеть (экстраполировать);
- от способностей к творчеству.

Необходимо учитывать нервно- типологические и психологические качества пара-дзюдоиста. Вышеназванные качества в конфликтных, стрессовых ситуациях реализуются по-разному, в зависимости от типа нервной системы.

Обсуждение результатов. Многие специалисты отмечают, что в практической работе обучение ограничивается лишь технической подготовкой спортсменов, в лучшем случае тренеры дают рекомендации по тактике проведения технических приёмов. Что касается тактики ведения поединка, то этот раздел подготовки спортсмены, в основном, постигают непосредственно на соревнованиях. Установки тренера во время соревнований и разбор поединка после соревнований в определённой мере расширяют тактический кругозор спортсменов, в то же время представляют лишь теоретический материал, не подкреплённый конкретным обучением. Таким образом, участие в соревнованиях является на сегодня единственным действенным методом обучения и совершенствования тактического мастерства.

В результате проведённого исследования впервые выделены тактические действия, составляющие структуру борцовского поединка и характеризующиеся различными способами и средствами решения конкретных задач:

провести разведку – действие характеризуется большой «ложной» активностью пара-дзюдоиста. Осуществляется на первой минуте поединка за счёт маневрирования, ложных движений, рывков, бросков, вызова. Качественная характеристика (реализовано или не реализовано) определяется по степени реализации следующего за ним действия;

осуществить атаку – для данного действия характерно проведение технического приёма атаки без ярко выраженной предварительной подготовки. Регистрируется время приёма, в противном случае и время такой подготовки. В обоих случаях регистрируется момент окончания приёма или момент смены целевой установки;

провести контратаку – цель возникает в поединке как во время атакующих действий противника, так и в специально создаваемых условиях. В первом случае пара-дзюдоист сначала осуществляет защитное действие, потом проводит контратаку. Во втором – пара-дзюдоист осуществляет вызов противника в определённый захват и затем проводит контратакующие действия. В первом случае учитываются временные

интервалы от момента завершения защитного действия до завершения технического приёма контратаки, во втором – от момента применения вызова до окончания приёма или смены целевой установки;

осуществить защиту – защитные действия начинаются от момента захвата противником для проведения определённого атакующего действия и завершаются либо реализацией защиты, либо реализацией противником атаки;

продемонстрировать активность – начало и конец решения этого действия несколько размыты и требуют корректировки самого парадзюдоиста, хотя при внимательном экспертном анализе их можно довольно точно определить. Активность характеризуется обилием рывков, толчков, ложных движений, когда борцы выполняют начальное движение атакующих приёмов, как правило, приём до конца не доводят;

удержать преимущества после того, как пара-дзюдоист обеспечит материальное преимущество в виде выигранных баллов. Характеризуется тем, что пара-дзюдоист старается не дать противнику отыграть проигранные баллы как можно более продолжительное время. При реализации данного действия широко используются маневрирование и атакующие действия, причём пара-дзюдоист в основном осуществляет захват и остаётся в том же положении, сковывая противника до тех пор, пока судья не остановит схватку;

восстановить силы – пара-дзюдоист, используя толчки, сковывая, маневрируя, старается восстановить дыхание и усилить кровоток в мышцах, полностью расслабив последние. Противник в этом случае стремится держаться на дистанции, не допуская захвата;

реализация захвата на краю татами осуществляется атакующим приёмом, причём проводится только захват для проведения приёма, и в этом захвате спортсмен выталкивает противника за татами. Это действие стало возможным благодаря изменениям в правилах, где за уходы за ковёр в захвате пара-дзюдоисту, осуществляющему данное действие, дают выигранный балл, а противнику предупреждение. Начало этой задачи регистрируется от момента захвата для проведения приёма до его завершения или свистка судьи;

реализовать опасное положение – начало и конец решения этого действия чётко просматривается в поединке. Начало отмечается с момента возникновения опасного положения и заканчивается положением «удержание» или ликвидацией противником опасного положения;

ликвидировать опасное положение - временные параметры задачи (ликвидировать опасное положение до её реализации) регистрируются так же легко, как и предыдущие действия. Промежутки бесцельно затраченного времени, не учитываемые в общем времени соревновательного поединка и характеризующиеся отсутствием определённой целевой установки, отличаются большим числом лишних

движений, выраженной пассивностью и выжидательной позой парадзюдоиста. Обычно в это время спортсмены, ожидая активных действий от противника, находятся в зависимости от его технического плана.



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ПОНЯТИЕ СТОИМОСТИ АКЦИЙ И ПОДХОДЫ К ЕЕ ОПРЕДЕЛЕНИЮ

Аннотация. В статье рассмотрены виды стоимости акций и методы ее определения с применением различных подходов.

Ключевые слова: стоимость акции, фондовый рынок, финансовые активы, подходы к оценке стоимости акций, методы оценки.

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THE CONCEPT OF SHARE PRICE AND APPROACHES TO ITS DEFINITION

Annotation. The article discusses the types of share prices and methods of determining them using various approaches.

Keywords: share price, stock market, financial assets, approaches to stock valuation, valuation methods.

Введение

За время существования и развития фондовый рынок подвергался ряду изменений, в результате чего в настоящее время динамика реальной рыночной стоимости предприятия в ряде случаев отличается от динамики стоимости его акций. Поэтому актуальной задачей является изучение причин, создающих расхождение между ожидаемой стоимостью предприятия и динамикой его акций, затрудняющее приток инвестиций в акционерные общества через биржевые инструменты, если используются методы принятия решений, применяемые при реальном инвестировании [1].

Основными инструментами оценки инвестиционной привлекательности финансовых активов, для инвесторов, являются фундаментальный и технический анализ. Однако существует ряд проблем,

осложняющих точность оценки при использовании фундаментального и технического анализа. Технический анализ предлагает обилие методов и индикаторов для оценки финансовых активов, но не опирается на фундаментальные показатели и часто даёт ложные сигналы для инвесторов. Фундаментальный анализ оценивает общую инвестиционную привлекательность финансовых активов, но не способен дать инвестору точный сигнал на развитие тенденции в конкретный период времени [2].

Основной целью для потенциальных инвесторов и текущих акционеров компании на фондовом рынке является получение дохода. Доход может быть получен, как от дивидендных выплат, так и от курсовой разницы купли-продажи акций. Перед тем как купить акции той или иной компании, инвестор должен иметь четкое представление о том, как изменится рыночная стоимость покупаемых акций в будущем [3].

Целью данной статьи является рассмотреть понятие стоимости акций и методы ее определения.

Понятие стоимости акций: обзор литературы

М.М. Трохов [4] пишет, что ключевую роль в формировании и использовании финансовых инструментов играет их стоимость. Важность понятия «стоимость» в современной экономике обусловлена тем, что оно является неотъемлемым элементом всех видов экономических отношений. Понятие стоимости для экономических отношений настолько всеобъемлюще и фундаментально, что его эволюция в главных чертах совпадает с эволюцией экономической науки в целом. Об этом свидетельствуют основополагающие труды Аристотеля, А. Смита, Д. Рикардо, К. Маркса, А. Маршалла и других классиков.

По мнению Терри В. Гриссом [5], для того чтобы понять сущность стоимости, необходимо выделить несколько концепций, к числу которых относятся теория стоимости (value theory), теория оценки стоимости (valuation theory) и теория проведения оценки (appraisal theory).

Как пишет С.В. Стрижова [6], теория стоимости рассматривает источники и основу ценности (стоимости) активов. Теория оценки стоимости, в свою очередь, содержит методы расчета, измерения и предсказания определенной стоимости. Предметом теории проведения оценки, лежащей в основе любого оценочного анализа, являются логические отношения между источниками стоимости и расчетной оценкой этой стоимости. То есть, конфликт в определении стоимости как наиболее вероятной цены продажи или рыночной стоимости – это не спор о различиях в теории стоимости, а о разных предпосылках стоимости и о теории проведения оценки.

Ю.В.Козырь [7] подчеркивает, что под стоимостью в теории оценки бизнеса и корпоративных финансов понимают денежный эквивалент, который гипотетический покупатель готов обменять на какой-либо предмет или объект (товар или услугу). Иными словами, эта мера того,

сколько гипотетический покупатель готов заплатить за оцениваемый объект.

Как считает Л.Д. Ревуцкий [8], хотя понятия «цена» и «стоимость» в рамках экономических исследований могут иметь значительную дифференциацию, применительно к акциям, как правило, употребление обоих терминов является допустимым.

По словам Т.В. Алайцевой одной из важнейших характеристик ценной бумаги является ее стоимость. Различают несколько видов стоимости акции:

- номинальная стоимость – отношение размера уставного капитала к количеству выпущенных акций, зафиксированное в Уставе АО.
- балансовая стоимость акции показывает, какая сумма активов, реального имущества в соответствии с бухгалтерским балансом АО приходится на одну акцию.
- эмиссионная стоимость – это стоимость при первичном размещении акции.
- рыночная стоимость ценной бумаги – это стоимость приобретения ценной бумаги, которая бы устроила и продавца, и покупателя.
- ликвидационная стоимость – это стоимость акции при ликвидации акционерного общества [9].

Подходы к определению стоимости акций

Рыночная стоимость акций может определяться при помощи различных методов, которые принято объединять в три большие группы. Разделение методов оценки по этим группам происходит на основании основных принципов, лежащих в основе каждого из способов определения стоимости. Существуют затратные, доходные и сравнительные методы оценки акций.

Затратные методы оценки основаны на принципе замещения, то есть предположении о том, что расчетливый покупатель не заплатит за оцениваемый объект больше, чем ему будет стоить создание идентичного объекта заново, плюс разумное вознаграждение инвестору за инвестирование средств в создание объекта. Таким образом, оценить акции с позиций затратного подхода – это значит рассчитать все затраты на создание точно такого же акционерного общества, которое обладает точно такими же активами и занимает точно такое же место на рынке, а затем к сумме общих затрат прибавить обоснованную величину прибыли инвестора [10].

Доходные методы оценки акций. Совокупность методов оценки стоимости объекта оценки, основанных на определении ожидаемых доходов от объекта оценки.

При оценке акций предприятия с позиций доходного подхода, само предприятие рассматривается не как имущественный комплекс, а как

бизнес, который может приносить доход. Оценка акций предприятия с применением доходного подхода – это определение текущей стоимости будущих доходов, которые возникнут в результате использования предприятия и (возможной) дальнейшей его продажи [11].

В рамках доходного подхода к оценке акций принято выделять два метода: метод капитализации прибыли (денежного потока) и метод дисконтированных будущих денежных потоков [12].

Метод капитализации прибыли используется при оценке акций, когда имеется достаточно данных для определения нормализованного денежного потока, текущий денежный поток примерно равен будущим денежным потокам, ожидаемые темпы роста умеренны или предсказуемы, денежный поток достаточно значительная положительная величина. Данный метод наиболее применим к предприятиям, приносящим доход, со стабильными, предсказуемыми суммами доходов и расходов.

Метод дисконтированных будущих денежных потоков используется при оценке акций, когда ожидается, что будущие уровни денежных потоков существенно отличаются от текущих, можно обоснованно определить будущие денежные потоки, прогнозируемые будущие денежные потоки являются положительными величинами для большинства прогнозных лет, ожидается, что денежный поток в последний год прогнозного периода будет значительной положительной величиной. Другими словами, метод более применим к приносящим доход предприятиям, имеющим нестабильные потоки доходов и расходов.

Сравнительный подход основан на предположении, что покупатель не заплатит за объект больше той суммы, за которую он может приобрести на открытом рынке объект, обладающий аналогичными характеристиками. Главной особенностью этого метода является его максимальная приближенность к рыночной ситуации, так как он ориентируется или на биржевую цену акций компании аналога (той компании, которая работает в той же отрасли что и оцениваемая компания) или на оценочную стоимость компании-аналога при ее оценке для сделок слияния и поглощения. Этот метод универсален и подходит для абсолютно каждого сектора экономики [13].

В сравнительной методике оценки стоимости акций принято выделять три метода:

- метод компании аналога;
- метод сделок;
- метод отраслевых коэффициентов.

Основными положительными чертами, характеризующими сравнительный метод являются:

- существует привязка к рыночным сделкам слияния и поглощения;
- отражает существующую практику продаж и покупок;
- учитывает риски инвестирования.

Из негативных черт принято выделять следующие:

- не учитывает перспективы будущей деятельности компании;
- требуется внесение корректировок в исходную информацию;
- не учитывает специфические аспекты ведения бизнеса компании.

С появлением большого количества акций компаний различных секторов экономики растет оборот акций этих компаний, а также величина сделок слияния и поглощения, что в свою очередь позволяет накапливать достаточно обширную базу для применения сравнительного метода оценки акций компании. Более точная оценка получается при применении всех трех методик.

Главным плюсом, которым характеризуется использование сравнительного подхода, является то, что оценщики ориентируются на фактическую стоимость купли или продажи сходного предприятия. В этом случае цена определена рынком, поскольку роль оценщика ограничивается только лишь некоторыми корректировками, обеспечивающими сопоставимость аналогов с оцениваемым объектом.

Другие виды оценки, в отличие от рыночной, позволяют оценщику определять стоимость предприятия только на основе произведенных им расчетов. Сравнительный подход, базирующийся на ретро-информации, отражает уже фактически достигнутые данным предприятием результаты в его производственной и финансовой деятельности, в то время как, например, доходный подход сориентирован на прогнозы, касающиеся будущих доходов [13].

Другим достоинством сравнительного подхода является его характеристика реального отражения спроса и предложения на конкретный объект для инвестирования, поскольку цена на фактически совершенную сделку максимально отражает рыночную ситуацию и минимально отличается от цен на сходные объекты.

Вместе с тем использование рыночного подхода имеет и ряд существенных недостатков, по которым такая оценка ограниченно применяется в оценочной практике:

- база для расчета достигнутые в прошлом финансовые результаты: такая оценка игнорирует перспективы для развития компании в будущем;
- сравнительная оценка возможна только при существовании разносторонней финансовой информации и по оцениваемому предприятию, и по сходным фирмам, что является сложным процессом;
- оценщику необходимо делать сложные корректировки, внося поправки как в итоговую величину, так и в промежуточные расчеты, что предполагает наличие серьезного обоснования [14].

Заключение

На основе проведенных исследований можно сформулировать следующие выводы:

1. Проведенный анализ научной литературы показал, что различают несколько видов стоимости акции: номинальная, балансовая, эмиссионная, рыночная, ликвидационная.

2. Существуют такие подходы к оценке стоимости акций предприятия, как доходный, затратный и сравнительный. Каждый из методов имеет как преимущества, так и недостатки.

3. Затратный подход к оценке рыночной стоимости акции позволяет оценить активы предприятия и их долю, приходящуюся на приобретаемый пакет акций. Методы оценки доходного подхода позволяют отразить будущую доходность предприятия, при этом учитывается риск инвестиций, возможные темпы инфляции, а также ситуация на рынке через ставку дисконта. Методы сравнительного подхода оценки стоимости акций позволяет инвесторам решить проблему выбора компаний, которые имеют лучшие возможности развития и смогу обеспечить инвестору большую выгоду от вложений в их ценные бумаги.

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ПРИМЕНЕНИЕ ИНФОРМАЦИОННЫХ ТЕХНОЛОГИИ В РАЗВИТИИ КРЕАТИВНЫХ СПОСОБНОСТЕЙ СТУДЕНТОВ ВУЗОВ

Аннотация: представлены результаты исследования по проблеме развития творческих способностей учащихся в процессе создания творческих проектов средствами информационных технологий.

Ключевые слова: информационные технологии, творчество. Креативность, студенты, ВУЗ.

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APPLICATION OF INFORMATION TECHNOLOGIES IN DEVELOPING CREATIVE ABILITIES OF UNIVERSITY STUDENTS

Abstract: the results of the study on the problem of developing students' creative abilities in the process of creating creative projects by means of information technologies are presented.

Keywords: information technologies, creativity. Creativity, students, university.

В современном постиндустриальном обществе проблема развития творческих способностей учащихся средствами информационных технологий приобретает особую актуальность. В настоящее время обществу нужны специалисты, способные нестандартно мыслить, находить креативные решения задач, квалифицированно работать с информацией.

Проблема изучения феномена творчества не нова. Данным вопросом занимались многие исследователи, представляя его в самых разнообразных трактовках

Философский аспект (Аристотель, Платон, Кант, Н.А. Бердяев, А.С. Богомоллов, Б. Рассел, П. Флоренский, В.А. Яковлев) изучаемой проблемы отражает его роль в развитии личности и всей человеческой культуры

Современные ученые (В.И. Андреев, Г.С. Батищев, И.А. Бескова, К.К. Платонов, А.В. Брушлинский, Е.П. Хайкин, Б.М. Кедров, А.Н. Лук),

опираясь на исследования своих предшественников, развивают представление о специфике творческого процесса. В их научных трудах процесс творчества нередко отождествляется с мышлением. Мышление же рассматривается как внутренний творческий диалог, в результате которого формируются и развиваются способности личности (А.В. Брушлинский, Э.В. Ильенков).

Таким образом, в современной научной концепции сформировалось специфическое направление, получившее название «творческая эволюция», в которой процесс творчества отождествляется с деятельностью и развитием (А. Бергсон).

Характеризуя данную проблему, Г.Л. Давыдова [7] в своей работе «Творчество и диалектика» указывает, что философская категория творчества выражает реально существующую историческую связь движения и общественного целого.

В Большом энциклопедическом словаре творчество определяется как деятельность, порождающая нечто качественно новое и отличающаяся неповторимостью, оригинальностью и общественно-исторической уникальностью.

Социологический аспект творчества (Я.У. Астафьев, И.В. Бестужев-Лада, В.Н. Шубкин, В.А. Ядов) раскрывает его роль в процессе усвоения человеком ценностей, знаний, навыков и способностей, позволяющих личности успешно функционировать в обществе.

В психологическом словаре творчество определяется как «деятельность, результатом которой является создание новых материальных и духовных ценностей» [9]. Будучи по сути культурно-историческим феноменом, творчество является одним из факторов социализации личности. В процессе учебной творческой деятельности происходит передача социального опыта подрастающему поколению. Каждая эпоха дополняет культуру новым содержанием, отвечающим потребностям, целям и задачам современного общества, а образовательное учреждение — это отдельный общественный институт, выполняющий социальный заказ своего времени.

Учащиеся, благодаря творческой деятельности, становятся непосредственными участниками культурно-исторического процесса. Полученный ими продукт творческой деятельности (проект, поделка, компьютерная программа, новая идея) с помощью педагога сопоставляется с культурноисторическими аналогами, в результате чего данный продукт детского творчества совершенствуется и доводится до логического завершения, что вызывает у учащихся потребность в новой деятельности. Для развития личности она имеет определенную ценность, потому что приобретение самостоятельного практического опыта приходит через освоение опыта других (Л.С. Выготский). Известно, что овладение всякой более сложной формой развития осуществляется личностью сначала в

сотрудничестве, а затем уже самостоятельно. В процессе учебной деятельности в сотрудничестве со взрослыми (педагогами, родителями) и сверстниками происходит передача социального опыта, который заключается в образцах определенных действий.

1. Первоначальная передача опыта происходит в репродуктивно-подражательной форме, которая составляет репродуктивноподражательный уровень творческой деятельности. Для него характерны наблюдение, анализ действий, осмысление путей решения проблемы, копирование. Подражательная деятельность оказывает благоприятное воздействие на развитие личности, но задержка на этом уровне не обеспечивает ее дальнейшего развития. Для перехода личности на следующий уровень необходимо проявление самостоятельности в учебнопознавательной деятельности и поиск оригинального решения задач.

2. Поисковый уровень обладает значительными ресурсами. В данных условиях учащийся является субъектом учебно-воспитательного процесса, поскольку он в сотрудничестве с педагогом может принять участие в познавательной деятельности. Но учащийся самостоятельно должен найти путь решения проблемы, предложить варианты решения задачи. Данный процесс позволяет личности уйти от шаблона, предоставляет простор для самостоятельности и реализации своих возможностей. В силу этого переход на поисковый уровень всегда означает более высокую ступень деятельности учащегося и развития его творческих способностей.

3. Уровень творческой активности более высокий. Но его не приравнивают к процессу зрелого творчества, поскольку опыт учащегося все же ограничен. В нашем исследовании «творчество» определяется как «выход за пределы требуемого в решении возникших задач уже известными способами» в учебно-воспитательном процессе. Показателями высшего уровня творческой деятельности учащегося считаются: новизна, оригинальность, отход от шаблона, ломка традиций, неожиданность, целесообразность, ценность и практическая значимость.

Таким образом, творчество помогает человеку удовлетворить свои потребности в знаниях, максимально реализовать себя, принести пользу обществу, раскрыть свои способности.

Психологический аспект творчества (Б.Г. Ананьев, Д.Б. Богоявленская, Я.А. Пономарев, А.В. Петровский, С.Л. Рубинштейн) отождествляется с понятием «развитие». Процесс развития человека представляет собой физический, психический и социальный аспекты становления личности, которые влекут за собой качественное изменение врожденных и приобретенных свойств.

Составляющими содержания понятия «развитие» являются способности, которые формируются и развиваются в деятельности — одной из форм активности человека.

При рождении человек получает от родителей наследственный потенциал с генетической информацией. В его состав входят задатки. Под задатками понимают врожденные анатомофизиологические особенности нервной системы и мозга [12]. Задатки считают природными предпосылками способностей. На основе одного задатка могут развиваться различные способности. Направление развития творческих способностей зависит от личных интересов и склонностей учащегося, профессиональной направленности учебного заведения и организации учебновоспитательного процесса в нем.

Ученые считают, что способности являются основой для проявления творчества и интеллектуальной активности. В свою очередь, творчество некоторые исследователи (В.И. Андреев, Д.Б. Богоявленская) считают производной интеллекта, которая стимулируется мотивационной сферой. Источником активности учащихся служат потребности личности, которые побуждаются интересами, убеждениями, склонностями, которые образуют мотивационную сферу, стимулирующую активность личности, определяющую ее направленность. Важным компонентом способностей является повышенная мотивация, то есть выраженная установка на самовыражение в виде деятельности, которая соответствует способностям человека. Повышенная мотивация проявляется в двух аспектах. Во-первых, человек, наделенный способностями, испытывает сильное стремление к самореализации в сфере деятельности, связанной с его ведущими потребностями. Во-вторых, сильная мотивация является дополнительным стимулирующим средством для развития способностей. Это означает, что учащийся с выраженной мотивацией достижений, но со средними способностями может иметь более высокие результаты в определенном виде деятельности по сравнению с человеком, обладающим хорошими природными задатками, но не стремящимся к развитию своих способностей. В Новейшем психологическом словаре способности определяются как индивидуальнопсихологические особенности человека, которые выражают его готовность к овладению определенными видами деятельности.

Известны три основных признака творческих способностей (Б.М. Теплов):

1. Индивидуальные особенности, которые имеют отношение к успешности выполнения какой-либо деятельности или многих деятельностей.
2. Индивидуальные способности, которые шире по значению, чем понятия «знания» и «навыки»

3. Индивидуально-психологические особенности, которые отличают одного человека от другого.

Педагогический аспект (М.П. ГорчаковаСибирская, И.Г. Гузенко, И.А. Колесникова, В.В. Краевский, Е.А. Крюкова, П.И. Пидкасистый, В.Я. Синенко, В.А. Сластенин, А.К. Маркова, Г.И. Щукина) исследуемой проблемы реализуется в личностном подходе, который предполагает формирование индивидуальности учащегося, развитие его способностей и дарований. На основе анализа работ вышеуказанных авторов мы сформулировали определение понятия «творческие способности учащихся», под которым подразумеваем совокупность личностных качеств, оказывающих влияние на успешность формирования умений и навыков творческой деятельности.

Педагогические инновации, основанные на научных социологических, психологических, педагогических исследованиях, позволяют поновому рассмотреть проблему развития творческих способностей в системе образования.

Образовательный процесс является основным средством развития личности и формирования ее творческих способностей. Он представляет собой специально организованную совместную творческую деятельность педагога и учащихся, в результате которой происходит развитие личности. Содержание образования включает педагогически адаптированное эмоциональноценностное отношение к миру, систему знаний, умений, навыков и опыт творческой деятельности, усвоение которого обеспечивает развитие личности (И.Я. Лернер, М.Н. Скаткин).

В центре творчества находятся знания как отражение социальной ценности человечества, накопленного в процессе освоения исторического опыта. Их считают предпосылкой умственного развития обучающихся. Сами знания не обеспечивают полноты умственного развития, но без них невозможны качественные изменения личности. Они служат источником склонностей и интересов учащегося, необходимым условием развития его способностей.

В своих научных формах знание не всегда доступно учащимся, поэтому педагогика применяет информационные технологии разъяснения, которые обеспечивают его восприятие, понимание и усвоение. Знания, усваиваемые посредством информационных технологий, систематизированы, взаимосвязаны, охватывают все основное в изучаемой области, имеют определенную логическую структуру и усваиваются в определенной последовательности. Адаптированная форма научного знания образует учебную дисциплину, которая включает, с одной стороны, предметную область знания, а с другой — закономерности познавательной деятельности.

Учебное знание нельзя механически передать обучающемуся. Оно может быть усвоено только в процессе его познавательной активности.

Различают глубину и широту знаний, степень полноты охвата ими предметов и явлений данной области действительности (И.Я. Лернер). Осознанность, осмысленность знаний, насыщенность их конкретным содержанием, умение учащихся не только назвать и описать, но и объяснить изучаемые факты, указать их взаимосвязи и отношения, обосновать усваиваемые положения, сделать выводы из них — все это подчеркивает содержательность знаний. Основой усвоения знаний является активная мыслительная деятельность учащихся, направляемая педагогом.

Процесс учебного познания складывается из нескольких этапов. Первым из них является восприятие объекта, которое связано с выделением этого объекта из фона и определением его существенных свойств — первичное осмысление. Далее следуют процессы воспроизведения, понимания; применения знаний в знакомых и новых условиях; оценивания самими обучающимися полезности, новизны этого знания.

Процесс усвоения знаний переходит в процесс их преобразования (включение вновь воспринятого знания в структуру прошлого опыта; использование его в качестве средства построения нового знания).

Перечисленные этапы постепенного формирования знаний служат в качестве критериев оценки уровней их усвоения. Известно, что если знания остаются на этапе усвоения, то их роль для развития способностей невелика, а если обучающийся применяет их в незнакомых ситуациях, то это значительный шаг в сторону творчества.

Выделяют следующие уровни усвоения знаний: уровень различения (или распознавания) предмета; уровень его запоминания; уровень понимания; уровень применения.

Показателями продуктивного уровня знаний являются:

- понимание (преобразование материала из одной формы выражения в другую, интерпретация материала, предположение о дальнейшем ходе явлений, событий);
- применение (умение использовать изученный материал в конкретных условиях и новых ситуациях);
- анализ (умение разбить материал на составляющие так, чтобы ясно выступала структура);
- синтез (умение комбинировать элементы, чтобы получить продукт, обладающий новизной);
- оценка (умение оценивать значение того или иного материала).

Исходя из исследований ученых об этапах усвоения учебного материала, выделяют следующие уровни (В.П. Беспалько):

0-й уровень — понимание новой информации;

1-й уровень — узнавание объектов познания при повторном восприятии ранее изученного материала и выполнение действий с ними;

2-й уровень — репродуктивное действие путем самостоятельного воспроизведения ранее выполняемых действий;

3-й уровень — продуктивное действие по получению новых знаний путем действия по образцу;

4-й уровень — творческое действие, направленное на самостоятельное получение новых знаний. Учащийся, действуя в определенной сфере, в незнакомых условиях создает новые правила, алгоритмы решения задач, новую информацию; такие продуктивные действия считаются настоящим творчеством.

В.П. Беспалько отмечает, что невозможно перейти на следующий уровень, не освоив (не менее чем на 70%) предыдущий. Преимущества управления образовательным процессом представлены в обучении, основанном на теории поэтапного формирования умственных действий П.Я. Гальперина. В теории П.Я. Гальперина процесс формирования умственных действий проходит 5 этапов:

1. Предварительное ознакомление с действием, с условиями его выполнения.

2. Формирование действия в материальном виде с развертыванием всех входящих в него операций.

3. Формирование действия во внешней речи

4. Формирование действия во внутренней речи

5. Переход действия в глубокие свернутые процессы мышления.

Пятый этап формирования умственных действий сопряжен с творчеством. Творческое мышление развивается на протяжении всей человеческой жизни, но формируется оно в школьные годы. Во время процесса обучения и воспитания у учащихся складывается картина мира, проявляются важнейшие интеллектуальные и личные качества, ценностные ориентиры, которые влияют на их творческую деятельность и развитие творческих способностей.

В настоящее время, благодаря достижениям науки и техники, творческая деятельность учащихся осуществляется с помощью компьютерной поддержки. В 90-е годы персональные компьютеры, ставшие относительно недорогим и простым в управлении средством обучения, вошли в образовательный процесс и стабилизировали информатизацию обучения. Применение информационных технологий (Е.С. Полат, И.В. Роберт) сделало образовательный процесс интереснее, ярче, насыщеннее. В процессе учебно познавательной деятельности учащиеся обращаются к возможностям Интернета в своих творческих проектах. Они самостоятельно создают свои мини-проекты на учебных занятиях в процессе творческой деятельности с применением средств ИКТ. Под средствами информационных технологий понимают программные, программно-аппаратные технические средства и устройства, функционирующие на базе микропроцессорной, вычислительной техники,

а также современных систем транслирования информации, информационного обмена, обеспечивающие операции по сбору, продуцированию, накоплению, хранению, обработке, передаче информации [11]. Учащиеся моделируют различные явления и предметы, применяя компьютерные программы. Компьютеры создают для них благоприятные условия самостоятельной работы, которая стимулирует на освоение учебного проекта в ходе формирования темы, постановки цели, решения задачи

Самостоятельная работа учащихся в процессе педагогического эксперимента, осуществляемая на основе алгоритма исследования учебнонаучного текста (И.Г. Гузенко) посредством обучающей компьютерной программы (ОКП-М), состоящей из информационных карт, включала следующие положения:

1. Структурирование изучаемого текста, необходимого для учебного проекта — выбор сведений по заданному вопросу для выполнения творческой работы.
2. Формирование темы учебно-научного задания.
3. Составление вопросного и проблемного плана учебно-научного исследования темы
4. Составление тезисов по результатам самостоятельного решения учебной задачи.
5. Тестовый контроль результатов формирования самостоятельных действий.

Учебно-научное структурирование текста, в свою очередь, осуществлялось с помощью следующих этапов: трассировка — расчленение текста на смысловые фрагменты; составление информантов — смысловых единиц текста; составление ключевых идей — концептов текста; определение факторов творческого влияния текста — соотнесения, сопоставления, сравнения; построение графа — составление вербальнографического образа текста

Программное обеспечение информационных технологий развития творческих способностей учащихся средних классов в нашем исследовании представлено системой компьютерных презентаций для выполнения учебно-исследовательской работы (составление учебных проектов, решение творческих задач по заданному алгоритму). Осуществление образовательного процесса на основе алгоритма исследования учебно-научного текста (И.Г. Гузенко) и применение стандартных презентаций обучающей компьютерной программы позволяют развивать творческие способности в образовательном процессе. Модернизированная обучающая компьютерная программа, предназначенная для развития творческих способностей учащихся, представляет собой интеграцию потенциала обучающих информационных технологий и методики теории решения изобретательских задач (ТРИЗ). В

содержание этой системы легла техника теории изобретательских задач, разработанная Г.С. Альтшуллером специально для решения творческих проблем. В состав техники ТРИЗ входит метод мозгового штурма, метод фокальных объектов, морфологический анализ. Такие методы помогают решить творческую задачу не методом проб и ошибок, а целенаправленно и системно. Передача техническим устройствам умственных операций, доступных формализации, помогает развивать способности учащихся. Творческая деятельность учащихся, осуществляемая при помощи компьютерной поддержки, позволяет выбрать индивидуальный темп работы, регулировать учебные задачи по степени трудности, поощрять достижения пользователя и создавать ситуацию успеха. Применение обучающей программы способствует активному формированию новых знаний, умений, навыков учащихся, а также стимулирует их к самостоятельной деятельности, которая требует гибкости мышления, интуиции, воображения, фантазии при решении проблемных задач.

Подводя итог вышеизложенному, следует отметить, что накопленный положительный опыт применения обучающей компьютерной программы для развития творческих способностей учащихся в процессе создания учебных проектов позволяет заключить, что используемые информационные технологии в процессе творчества стимулируют к нестандартному мышлению, нахождению креативных решений, работе с информацией на научном уровне.

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**ЗНАЧЕНИЕ ИЗМЕНЕНИЯ КАЧЕСТВЕННЫХ ПОКАЗАТЕЛЕЙ
ВОДНЫХ РЕСУРСОВ СИСТЕМЫ АЙДАР-АРНАСАЙСКОГО
ОЗЕРА В ИСПОЛЬЗОВАНИИ ПРИРОДНЫХ РЕСУРСОВ
СИСТЕМЫ ОЗЕРА**

***Аннотация.** Изучение вариации ААОС в течение многих лет на основе программ статистических и географических информационных систем играет важную роль в использовании природных ресурсов в регионе. В настоящее время ААОС оказывает значительное влияние на окружающую среду, гидрологию, гидрогеологию, социальную и экономическую ситуацию и имеет стратегическое значение для Узбекистана и Казахстана.*

***Ключевые слова:** озерные системы, уровень воды, гидрохимия, показатели качества, природные ресурсы*

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**THE IMPORTANCE OF CHANGING THE QUALITATIVE
INDICATORS OF THE WATER RESOURCES OF THE AIDAR-
ARNASAI LAKE SYSTEM IN THE USE OF NATURAL RESOURCES
OF THE LAKE SYSTEM**

***Annotation.** The study of AALS variations for many years based on programs of statistical and geographical information systems plays an important role in the use of natural resources in the region. At present, the AALS has a significant impact on the environment, hydrology, hydrogeology, social and economic situation and is of strategic importance for Uzbekistan and Kazakhstan.*

***Key words:** lake systems, water level, hydrochemistry, quality indicators, natural resources*

Айдар-Арнасайская озерная система (ААОС) является крупнейшим искусственным водоемом в бассейне Аральского моря. ААОС состоит из слияния трех водных озер (Арнасай, Айдаркуль и Тузкан). Он расположен на засоленных землях Арнасайской равнины Кызылкума на юго-востоке Узбекистана.

Так, с 1969 года, когда сток воды озера Айдаркуль превысил Чордарьинское водохранилище, он регулярно получал воду из Сырдарьи. Это постепенно заполняло естественное пространство Арнасайской низменности, создавая второй по величине закрытый водоем в регионе.

В новообразованной гидроэкосистеме создались очень благоприятные условия для быстрого развития флоры и фауны. Однако, в последующие годы, из-за отсутствия попусков речной воды и полного перехода на питание коллекторно-дренажными водами (Центральный Голодностепский Коллектор (ЦГК), коллектора Арнасайский, Клы и Акбулак и др.) произошло осолонение и загрязнение вод ААОС. Основной приходной статьей водного баланса Арнасайских система озер в период с 1973 до 1993 года стали коллекторно-дренажный сток в объеме около 2,5 км³/год [1].

Минерализация воды. ААОС колеблется в зависимости от гидрологического режима. К 1978 году уровень понизился на 5 м. и минерализация возросла до 7-8 г/л. Было решено приступить к реконструкции озерной системы. Были построены: дамба и водорегулирующий пропуск воды между озерами Тузканом и Айдаром, мост через протоку Арнасай, подпитывающий канал. После образования единой системы практически до 1993 года в эту систему не поступала свежая вода, а только коллекторно-дренажная. Вследствие этого минерализация значительно повысилась и составила к началу 90-х годов в оз. Тузкан – 10-11 г/л, а в оз. Айдар (которое является конечным водоемом) – 14-15 г/л [2,3].

Если не будет ежегодной строго определенной подпитки свежей воды для всей системы озер, то в скором времени минерализация начнет повышаться и водоем превратится во второй Арал. По расчетам Узгидромета, пропуски воды превышающие 1,5 куб. км приведут к затоплению новых пастбищных площадей, каждый последующий куб.км. будет повышать уровень на 0,2-0,3 м. и затоплению 50-70 кв. км площади. Пропуски свыше 3,0 куб. км приведут к подъему уровня не менее чем на 0,5 м. и затоплению до 200 кв. км площади. Основные районы затопления – северо-восточные части озер Тузкан и Айдар [4].

Содержание кислорода варьировало в пределах 7,8-9,1 мг/л. содержание кислорода в зависимости от температуры колебалось в пределах 74,8-102% насыщения, минимальные значения насыщенности наблюдалось в августе, что является экологически приемлемым. В таблице 4 приведены основные физико-химические параметры воды

Таблица №2. Основные физико-химические параметры воды

Место отбора Проб	Дата	pH	O ₂ (мг/л)	БПК ₅ , (мгO ₂ /л)	Окисляемость, (мг O ₂ /л)	Общая жесткость (мг.экв/л)
В. Арнасай	21.06.2019	7,5	9,22	1,1	64,7	47,5
Оз. Тузкан	22.06.2019	8,1	8,01	1,38	53,3	44,0
Оз. Айдар	22.06.2019	6,6	7,70	0,54	52,9	49,3
В. Арнасай	23.06.2019	7,07	7,38	3,13	32,2	47,5
В. Арнасай	23.06.2019	7,21	-	2,14	-	61

Видовой состав рыбного населения водоема и сведения о его формировании. Ихтиофауна ААСО сформировалась на основе фауны реки Сырдарья. В дальнейшем, в связи с созданием на ней озерно-товарного рыбного хозяйства, она пополнялась культивируемыми видами: белым и пестрым толстолобиком, белым амуром, карпом и карасем.

Необходимо также укрепить кормовую базу Айдаро-Арнасай путем вселения солоновато водных ракообразных и моллюсков. Таким образом, можно существенно увеличить общую рыбопродуктивность водоема. Так, если рыбопродуктивность таких мезотрофных (среднекормных) водоемов как ААСО обычно находится на уровне 0,2-0,3 ц/га, то в прудах она достигает 50-100 ц/га, а в сетчатых садках – до 10 тыс. ц/га.

Полученные результаты. Выполненные наблюдения показали, что на большей части акватории озерной системы минерализация воды превысила знаковое значение 10 г/л. Согласно химических анализов выполненных в сертифицированной лаборатории АНИДИ, в летне-осенний период 2021 года, минерализация воды в центральном плесе озера Айдаркуль составляла 10,2 г/л. В западной оконечности озера она возросла до 10,5 г/л, а на востоке озера Айдаркуль составляла порядка 10 г/л.

В Арнасайских озерах на границе с Айдаркулем соленость воды составляла 9,8 г/л, В центре озера Тузкан 9,5 г/л, а в восточной его части вблизи зоны влияния коллекторов Клы и Акбулак минерализация воды снижалась до 8,8 г/л. Наименьшая минерализация характерна для Арнасайского водохранилища (1,5 г/л) однако в новых присоединенных в 2010 году к водохранилищу южных плесах минерализация в водохранилище составила 5г/л.

На озерах Айдаркуль и Тузкан в летний период в прибрежных мелководьях и отшнуровывающихся водоемах минерализация на 15-20% выше глубоководных плесов озер, и по замерам августа сентября 2021 г составляла 11-15 г/л. Прибрежные водоемы потерявшие связь с основной водной массой озерной системы характеризовались соленостью в 15-20 г/л.

Для водоемов с грунтовым питанием в летний период соленость возрастала до 50 г/л, а для проб с солончаков, отобранных в районе ААСО, она превысила 200 г/л.

Выводы. Причиной малого объема промысла рыбы является безквотная, безконтрольная в нарушение всех правил добыча рыбы десятками самостоятельных рыболовных предприятий, арендующих участки акватории. При этом арендаторы не выполняют требования по обеспечению сохранности и воспроизводства рыбных ресурсов, ежегодному зарыблению водоемов и проведению рыбоводной мелиорации. Поэтому уловы рыбы стали существенно падать, теперь добывается малоценная плотва и другая рыба, не достигшая товарного веса.

В сложившейся ситуации крайне необходима организация ассоциации арендаторов и также вероятно государственное участие в управлении биоресурсами Айдаро-Арнакая. Лишь ассоциация арендаторов способна наладить зарыбление водоема, провести интродукционные и мелиоративные работы. Бессточный режим ААСО со временем приведет к увеличению солености, который может играть лимитирующий роль для развития пресноводных видов гидробионтов.

Использованные источники:

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ИНТЕГРАЦИЯ АГРОЭКОЛОГИИ: РОЛЬ ЭКОЛОГИЧЕСКОГО ПОДХОДА В БУДУЩЕМ СЕЛЬСКОГО ХОЗЯЙСТВА

***Аннотация:** Введение в агроэкологию: данное исследование рассматривает влияние окружающей среды на сельское хозяйство и важность экологически устойчивых методов для его развития. Оно также представляет практические решения для улучшения экологической эффективности сельскохозяйственных процессов..*

***Ключевые слова:** Сельское хозяйство, окружающая среда, экологическая устойчивость, Узбекистан, биоразнообразие, современные методы, инновации, проблемы, решения, управление ресурсами, экологическое образование.*

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AGROECOLOGY INTEGRATION: THE ROLE OF ENVIRONMENTAL APPROACH IN THE FUTURE OF AGRICULTURE

***Abstract:** Introduction to Agroecology: This study examines the impact of the environment on agriculture and the importance of environmentally sustainable practices for self-development. It also provides practical solutions to improve the environmental efficiency of agricultural processes.*

***Keywords:** Agriculture, environment, environmental sustainability, Uzbekistan, biodiversity, modern methods, innovations, problems, solutions, resource management, environmental education.*

Введение: сельское хозяйство как одна из основных отраслей человеческой деятельности всегда было связано с окружающей средой. Однако только в последние десятилетия мы начали осознавать глубокое

влияние факторов окружающей среды на аграрный сектор и, в свою очередь, роль сельского хозяйства в поддержании биоразнообразия и устойчивости экосистем.

Концепция агроэкологии привносит в сельское хозяйство новые инструменты управления, основанные на принципах устойчивого развития. Интеграция экологических аспектов в агропромышленную практику способствует созданию более эффективных и ответственных систем производства продуктов питания, способных удовлетворить потребности современного общества при сохранении природных ресурсов для будущих поколений.

Актуальность: в современном мире, где урбанизация и индустриализация растут с каждым годом, значение экологического подхода в сельском хозяйстве становится все более очевидным и незаменимым. Сельское хозяйство, воплощение человеческой цивилизации и главный источник продовольственной безопасности, оказывает большое влияние на окружающую среду. Поэтому понимание актуальности экологически устойчивых методов и практик в этой области становится необходимостью.

В сельском хозяйстве экологический подход не только способствует сохранению природных ресурсов, но и обеспечивает устойчивость и долгосрочное развитие отрасли. Внедрение органических методов земледелия, биологической борьбы с вредителями и эффективного управления водными ресурсами может помочь минимизировать негативное воздействие на окружающую среду и биоразнообразие.

Проблемы: одной из основных проблем сельского хозяйства является его негативное воздействие на почву. Использование интенсивных методов выращивания, частое применение пестицидов и удобрений приводит к деградации почвенного покрова, потере плодородия и снижению биоразнообразия. Эрозия почвы, вызванная монокультурами и неправильной циркуляцией земель, также является серьезной проблемой, угрожающей устойчивости сельского хозяйства.

Потребление воды и загрязнение водных ресурсов. Использование больших объемов воды для орошения полей, а также сброс агрохимикатов и навоза в реки и озера приводит к истощению водных ресурсов и загрязнению водоемов, что негативно сказывается на биоразнообразии водных экосистем и здоровье человека.

Решения: Решение 1: внедрение органического сельского хозяйства. Органическое сельское хозяйство предлагает методы выращивания и размножения, которые сводят к минимуму использование химических удобрений и пестицидов.

Решение 2: эффективное использование воды в сельском хозяйстве может значительно снизить потребление водных ресурсов и предотвратить загрязнение водоемов химическими веществами.

Решение 3: Агролесоводство – это метод, сочетающий выращивание культурных растений с посадкой деревьев или кустарников. Это помогает сохранить почву, увеличивает биоразнообразие и может служить дополнительным источником дохода для фермеров.

Решение 4: сельское хозяйство производит много органических отходов, таких как растительные остатки и навоз. Внедрение систем утилизации отходов, таких как компостирование и биогазовые установки, снижает загрязнение почвы и атмосферы и дает возможность производить энергию.

Решение 5: местные рынки и кооперативы помогают сократить расстояния доставки продуктов, что снижает выбросы углекислого газа при транспортировке.

Вывод: экологические проблемы в сельском хозяйстве требуют комплексного подхода и системных изменений. Органическое сельское хозяйство, устойчивые методы орошения, внедрение систем удаления отходов также могут значительно снизить негативное воздействие сельского хозяйства на окружающую среду и помочь создать устойчивые сельскохозяйственные системы.

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АНАЛИЗ УСТАЛОСТНОГО РАЗРУШЕНИЯ АЛЮМИНИЕВЫХ СПЛАВОВ, ПРИМЕНЯЕМЫХ В АВИАСТРОЕНИИ И АВТОМОБИЛЬНОЙ ПРОМЫШЛЕННОСТИ, ПРИ ВЫСОКИХ ЦИКЛИЧЕСКИХ НАГРУЗКАХ

Аннотация: В данной работе рассматривается анализ усталостного разрушения алюминиевых сплавов, применяемых в авиационной и автомобильной промышленности, при высоких циклических нагрузках. Особое внимание уделяется методам экспериментального и численного анализа, применяемым для оценки прочностных характеристик сплавов. Работа анализирует различные аспекты усталостного разрушения, включая влияние амплитуды и частоты нагрузки на долговечность материалов. Предоставляются результаты испытаний на усталость и их интерпретация, а также предлагается методика для повышения точности прогнозирования поведения сплавов. Итоги исследования направлены на оптимизацию проектирования и улучшение надежности конструкций в условиях циклических нагрузок.

Ключевые слова: усталостное разрушение, циклические нагрузки, авиационное, автомобильная промышленность, экспериментальные испытания, численное моделирование, прочностные характеристики, трещинообразование, надежность.

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ANALYSIS OF FATIGUE FAILURE OF ALUMINUM ALLOYS USED IN AIRCRAFT AND AUTOMOTIVE INDUSTRIES UNDER HIGH CYCLIC LOADS

Abstract: This paper presents an analysis of fatigue failure of aluminum alloys used in aircraft and automotive industries under high cyclic loads. Particular attention is paid to the methods of experimental and numerical analysis used to evaluate the strength characteristics of alloys. The work analyzes various aspects of fatigue failure, including the effect of load amplitude and frequency on the durability of materials. Fatigue test results and their

interpretation are presented, and a methodology for improving the accuracy of predicting the behavior of alloys is proposed. The results of the study are aimed at optimizing the design and improving the reliability of structures under cyclic loads.

Key words: *fatigue failure, cyclic loads, aircraft industry, automotive industry, experimental tests, numerical modeling, strength characteristics, crack formation, reliability.*

Введение Алюминиевые сплавы широко применяются в авиастроении и автомобильной промышленности благодаря своей легкости, прочности и устойчивости к коррозии. Однако, в условиях высоких циклических нагрузок, возникающих при эксплуатации авиационных и автомобильных конструкций, возникает проблема усталостного разрушения. Это разрушение связано с накоплением микротрещин в материале, что может привести к катастрофическим последствиям в работе техники. Анализ усталостного разрушения алюминиевых сплавов имеет критическое значение для повышения надежности и безопасности конструкций. Основной проблемой является недостаточная предсказуемость усталостного разрушения алюминиевых сплавов при высоких циклических нагрузках. Из-за сложного поведения материала под нагрузкой и вариативности эксплуатационных условий возникают трудности в оценке долговечности и сроков службы конструкций. Это может привести к авариям и снижению эксплуатационной надежности. Для решения данной проблемы требуется внедрение комплексного подхода к анализу усталостного разрушения, включающего как экспериментальные исследования, так и численные методы. Одним из ключевых решений является применение современных методов испытаний на усталость и компьютерного моделирования, которые позволяют более точно предсказать поведение сплавов в условиях циклических нагрузок и выявить потенциальные зоны риска.

Методология Одной из эффективных методик для анализа усталостного разрушения алюминиевых сплавов является метод испытаний на усталость с использованием нагрузки, варьирующейся по амплитуде. В рамках этой методики образцы сплавов подвергаются циклическим нагрузкам, которые моделируют реальные эксплуатационные условия. Для выполнения испытаний используются специальные установки, такие как машинные тестеры на усталость, которые позволяют варьировать амплитуду и частоту нагрузки.

Во время испытаний фиксируются параметры, такие как количество циклов до начала трещинообразования и до полного разрушения образца. После завершения тестов проводятся микроскопические исследования трещин и их роста, что позволяет детально анализировать механизм усталостного разрушения. Полученные данные затем используются для

построения кривых усталости, которые помогают оценить предельные характеристики материала и его поведение в различных условиях нагрузки.

Дополнительно, результаты экспериментальных исследований могут быть интегрированы в численные модели с использованием методов конечных элементов для более точного прогнозирования долговечности и выявления потенциальных слабых мест в конструкциях, что способствует оптимизации проектирования и увеличению надежности алюминиевых сплавов.

Заключение Анализ усталостного разрушения алюминиевых сплавов является важной задачей для повышения надежности конструкций в авиастроении и автомобильной промышленности. Применение комплексного подхода, объединяющего экспериментальные и численные методы, позволяет более точно оценивать поведение материала под циклическими нагрузками и разрабатывать эффективные меры по предотвращению усталостного разрушения. Это способствует увеличению безопасности и долговечности высоконагруженных конструкций, что имеет критическое значение для современных технологий и промышленности.

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АНАЛИЗ ВОЗНИКНОВЕНИЯ И РАСПРЕДЕЛЕНИЯ ОСТАТОЧНЫХ НАПРЯЖЕНИЙ В СВАРНЫХ ШВАХ, ПРИМЕНЯЕМЫХ В ПРОИЗВОДСТВЕ ШАССИ И КУЗОВОВ ТРАНСПОРТНЫХ СРЕДСТВ, И ИХ ВЛИЯНИЕ НА ДОЛГОВЕЧНОСТЬ

Аннотация: В данной работе рассматриваются аспекты возникновения и распределения остаточных напряжений в сварных швах, применяемых при производстве шасси и кузовов транспортных средств. Анализируется влияние этих напряжений на долговечность конструкций и их эксплуатационные характеристики. Особое внимание уделяется методам, позволяющим эффективно управлять остаточными напряжениями, таким как термографический контроль, методы неразрушающего контроля и численные расчеты с использованием методов конечных элементов.

Ключевые слова: остаточные, напряжения, сварка, швы, шасси, кузов, долговечность, контроль, моделирование, коррекция.

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ANALYSIS OF THE OCCURRENCE AND DISTRIBUTION OF RESIDUAL STRESSES IN WELDS USED IN THE PRODUCTION OF CHASSIS AND VEHICLE BODIES AND THEIR IMPACT ON DURABILITY

Abstract: This paper examines the occurrence and distribution of residual stresses in welds used in the production of vehicle chassis and bodies. The influence of these stresses on the durability of structures and their performance characteristics is analyzed. Particular attention is paid to methods that allow effective management of residual stresses, such as thermographic testing, non-destructive testing methods, and numerical calculations using finite element methods.

Key words: residual, stresses, welding, seams, chassis, bodies, durability, control, modeling, correction

Введение: Сварка является ключевым процессом при производстве шасси и кузовов транспортных средств, обеспечивая прочность и

структурную целостность конструкций. Однако, в процессе сварки возникают остаточные напряжения, которые могут оказывать значительное влияние на долговечность и эксплуатационные характеристики изделий. Остаточные напряжения возникают из-за неравномерного нагрева и остывания сварного шва, что приводит к деформациям и внутренним напряжениям. Понимание возникновения и распределения этих напряжений имеет критическое значение для повышения надежности и долговечности транспортных средств. Основной проблемой является то, что остаточные напряжения в сварных швах могут привести к непредвиденным деформациям и трещинам, что, в свою очередь, может существенно снизить долговечность шасси и кузовов транспортных средств. Эти напряжения могут вызвать накопление усталостных повреждений, особенно в условиях циклических нагрузок, что может негативно повлиять на безопасность и эксплуатационные характеристики транспортного средства. Одним из эффективных решений для управления остаточными напряжениями является использование специализированных методов контроля и коррекции, таких как термометрический контроль и методы предсказания напряжений. Внедрение технологий контроля температуры в процессе сварки и последующее термическое упрочнение могут значительно снизить уровень остаточных напряжений. Также рекомендуется проводить периодические проверки и использовать расчётные модели для оценки потенциальных проблемных зон.

Методология: для анализа возникновения и распределения остаточных напряжений в сварных швах, применяемых в производстве шасси и кузовов транспортных средств, а также их влияния на долговечность, следует применить комплексный подход, включающий несколько ключевых этапов.

Первоначально необходимо провести всесторонний анализ сварочного процесса. Важным аспектом является изучение и документирование основных параметров сварки, таких как температура плавления, скорость сварки, ток и напряжение. Использование термографов и инфракрасных камер позволяет измерять и контролировать температуру в процессе сварки, что критично для понимания распределения теплового воздействия. Также целесообразно провести профилирование теплового воздействия на металл, что включает моделирование температурных полей нагрева и охлаждения, чтобы понять их влияние на образование остаточных напряжений. Следующим этапом является применение методов неразрушающего контроля для диагностики сварных швов. Рентгенографический контроль позволяет обнаружить внутренние дефекты и распределение напряжений в сварных швах, визуализируя их структуру и выявляя зоны, подверженные высокому напряжению. Ультразвуковое обследование также играет ключевую роль,

так как оно позволяет выявить трещины и другие дефекты, используя ультразвуковые волны. Магнитный и капиллярный контроль можно использовать для обнаружения поверхностных трещин и дефектов, что дополнительно обеспечивает полное понимание состояния сварного соединения. Моделирование и расчёт остаются важными инструментами для анализа остаточных напряжений. Применение методов конечных элементов (МКЭ) позволяет создать точные модели сварных швов и рассчитать распределение остаточных напряжений, что дает возможность оценить влияние различных параметров сварки. Моделирование термических циклов сварки помогает понять изменения в структуре металла и возможные внутренние напряжения, выявляя зоны, подверженные максимальным напряжениям и потенциальным повреждениям. На основании полученных данных следует внедрить корректирующие меры для управления остаточными напряжениями. Оптимизация параметров сварки, таких как температура, скорость и сила тока, может существенно снизить образование остаточных напряжений. Корректировка этих параметров может включать изменение скорости сварки или применение предварительного подогрева. Термическая обработка, такая как отжиг после сварки, помогает уменьшить остаточные напряжения и улучшить механические свойства сварного шва. Внедрение новых технологий сварки и материалов, таких как сварка с контролем напряжений и специальные присадки, также способствует снижению уровня остаточных напряжений. Регулярный контроль состояния сварных швов в процессе эксплуатации является необходимым для раннего выявления потенциальных проблем. Сбор данных о реальной эксплуатации транспортных средств позволяет анализировать долговечность и определять потенциальные улучшения в процессах сварки и конструкции. Такой комплексный подход к управлению остаточными напряжениями способствует повышению надежности и долговечности сварных конструкций.

Заключение: Анализ возникновения и распределения остаточных напряжений в сварных швах является важной задачей для обеспечения долговечности и надежности шасси и кузовов транспортных средств. Применение современных методов контроля и моделирования позволяет эффективно управлять остаточными напряжениями, снижая риск возникновения трещин и деформаций. Интеграция этих методов в производственный процесс способствует увеличению срока службы и безопасности транспортных средств, что в свою очередь улучшает общую эффективность и надежность продукции.

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ГИДРОНИМЛАРНИНГ ЭКОЛОГИК ФУНКЦИЯСИ ВА УЛАРДАН ФОЙДАЛАНИШ

Annotatsiya

Ушбу мақолада мамлакатимиз жой номларининг таркиб топишида салмоқли аҳамиятга эга бўлган, сув объектлари билан боғлиқ ҳолда вужудга келган географик номлар, яъни гидронимларнинг айрим турларининг экологик функцияси таҳлил этилган. Шу мақсадда гидронимларнинг экологик функциясини кенгроқ тадқиқ этиш мақсадидан географик номлар гуруҳларга ажратилган. Натижада мамлакатимиз ҳудудидаги географик номларни табиий-экологик хусусиятлари, ўсимлик ва ҳайвонот дунёси билан тарихан боғлиқ ҳолда вужудга келган сув объектлари, маълум этник гуруҳга тегишли эканлигини билдириб турувчи этногидронимлар шунингдек сув объектларига нисбатан унга эғалиг қилувчи, уни барпо этганлиги каби тушунчалар билан аталувчи антропогидронимлар каби географик номлар гуруҳларга ажратилган. Шунингдек сув объектларидан узоқ вақт фойдаланиш натижасида юз берадиган табиий-экологик ўзгаришлар ва сув билан боғлиқ фитогидронимлар, зоогидронимларнинг тарқалиши мумкин бўлган экологик ҳудудлари кўрсатиб ўтилганлиги билан бир қаторда сув объектларини асраб-авайлаш, муҳофаза қилишида этногидронимлар ва антропогидронимларнинг экологик функциялари очиқ берилган.

Калит сўзлар: гидроним, сув объекти, гидронимика, фитогидроним, зоогидронимлар, этногидроним, антропогидроним, экологик функция, экологик топонимлар

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ECOLOGICAL FUNCTION OF HYDRONYM AND THEIR USE

Annotation

This article analyzes the ecological function of some types of hydronyms, geographical names, which are of great importance in the composition of place names of our country, which have arisen in connection with water bodies. For this purpose, geographical names are divided into groups in order to study the ecological function of hydronyms more widely. As a result, geographical names in the territory of our country are water objects that have arisen in historical

connection with natural and ecological features, flora and fauna, ethnohydronyms indicating that they belong to a certain ethnic group, as well as geographical names such as anthropohydronyms, which are called with concepts such as those who own it and built it in relation to water objects. divided into groups. In addition to the natural and ecological changes that occur as a result of long-term use of water bodies and the ecological areas where water-related phytohydronyms and zoohydronyms can spread, the ecological functions of ethnohydronyms and anthropohydronyms in the preservation and protection of water bodies are revealed.

Key words: hydronym, water body, hydronimics, phytohydronym, zoohydronyms, ethnohydronym, anthropohydronym, ecological function, ecological toponyms

КИРИШ

Бугунги кунда мамлакатимиздаги кўплаб аҳоли манзилгоҳлари ариқ, сой, булоқ, дарё бўйларига ва уларнинг атрофларида жойлашган бўлиб, инсонлар эса ана шу ҳудудларда ўрнашиб истиқомат қилган. Бунинг натижасида аҳоли ўртасида сувдан фойдаланиш маданияти, сувни исроф қилмасдан тежаб-тергаб фойдаланишга асосланган ҳаёт тарзи шаклланди. Шунингдек табиий ёки инсон томонидан яратилган ҳар қандай сув объектлари, яъни дарё, денгиз, кўл, сой, булоқ, канал, сув омбори ва қудуқлар каби географик объектларга инсонлар томонидан маълум “ном” берилишида сувнинг маза-таъми, хид, ҳарорати, миқдори, шифобахшлиги каби бир қанча ҳусусиятлари ҳисобга олинган [2].

Умумий ном билан гидронимлар деб аталувчи гуруҳга кирувчи географик номларнинг экологик функциялари ва улардан амалий мақсадларда фойдаланиш йўналишлари тўғрисида асосан бир қатор олимлар тадқиқот олиб борганлар. Хусусан, қуйидаги Ханмагомедов Х.А., Мурзаев Э.М., Жекулин В.С., Жучкевич В.А., Юзбашев Р.М., Хорнули Г.И., Қораев С., Хасанов Х каби олимларнинг ишларида ёритиб ўтилган [4]. Экологик жиҳатда аҳамияти юқори бўлган номларни ўрганишни бошлаб берган олим Х.Л.Ханмагомедов ҳисобланади. Айнан ушбу олим Географик номларнинг узок вақт сақланиб “эколого-географик оқибатлар ёдгорлигига айланиб қолиши табиий-атроф муҳитга антропоген омил таъсирини баҳолашда қўшимча материал сифатида хизмат қилишини аниқлаган. [9]. Шунингдек табиатга антропоген таъсир натижасида йўқолиб бораётган ўсимлик ва ҳайвонларни, гарчи улар йўқ бўлса ҳам ўша жой ҳамон шу дарахт ёки ўсимлик номи билан аталишини таъкидлаб ўтган эди [11]

Юқоридаги тадқиқотлардан келиб чиқиб умумий географик номларни экологик функциялари айнан маълум географик номнинг бир турини тадқиқ этишни ва унинг экологик аҳамиятини очиб бериш мақсадида ushbu тадқиқот ишида гидронимларга асосландик. Тадқиқот олдига қўйилган асосий мақсад гидроним деб аталувчи гуруҳга мансуб

бўлган географик номлари экологик аҳамиятли гуруҳларини шакллантириш ва шу асосда уларнинг умумий бажарадиган функцияларини асослашга ҳаракат қилдик.

АДАБИЁТЛАР ТАҲЛИЛИ ВА МЕТОДОЛОГИЯ

Жой номлари – топонимия доирасига сув объекти ва иншоотларнинг номлари ҳам киради. Сув объекти ва иншоотларининг номларини илмий-назарий ҳамда амалий жиҳатдан ўрганувчи соҳа гидронимика деб аталади. [7]. Ҳар қандай сув объектлари-океан, денгизлар, кўллар, дарёлар, каналлар, сув омборлари, сойлар, жилғалар, қудуқлар ва бошқа сув билан боғлиқ номлар гидронимлар (юнонча, hydro-“сув”) ва уларнинг мажмуи гидрономия дейилади [12]. Топонимистлар гидронимларни энг қадимий топонимлар деб ҳисоблашади. Ҳақиқатдан ҳам шундай. Р.А.Агеевнинг “Кўл ва дарё номларининг келиб чиқиши» китобига сўз боши ёзган Э.М.Мурзаев шундай қайд қилган: «гидронимлар вақт эрозиясига кам дучор бўлади, қадимий, шу сабабдан асл шакли ва мазмунини тиклаш анча қийин бўлган топонимлар гуруҳига киради. Уларнинг бу хусусияти тарихчи, тилшунос ва географларда катта қизиқиш уйғотиб, уларга узок ўтмишга назар ташлаш имконини беради» [3].

Ҳозирга қадар гидронимлар гуруҳига кирувчи сув объектларининг тури ортиб бормоқда. С.Қораев дастлаб гидронимлар таркибига дарёлар, кўллар, денгизлар, сойлар, жилғалар, каналлар, кўлтиқлар, бўғозлар, шаршараларни киритади. Х.Х.Хасанов гидронимлар таркибига юқоридагилардан ташқари ирмоқ, ариқ, булок, ҳовуз, қудуқ, океан номларини қўшиб ўрганишни таклиф қилади. А.В.Суперанская бу гуруҳга бўғозлар, портлар, бухталар, ботқоқликлар, шаршаралар, сув омборларнинг номларини ҳам қўшишни таклиф этади. Н.Охунов эса бу гуруҳга зовур, тўғон, қувур номларини киритади. Ҳозирда гидронимларнинг нисбатан тўла таркиби Н.Улуқов томонидан яратилган бўлиб унга кўра бу гуруҳга 36 турдаги гидрологик объектларнинг номлари киритилди [1].

А.В.Суперанская: “Географик номларни таснифисиз таҳлил қилиш ва шархлаш қийин. Топонимист ўз тадқиқотларида маълум бир таснифдан фойдаланибгина илмий хулосалар чиқариши мумкин. Тасниф турлича бўлиши табиий” деб ёзган эди [6]. Демак гидронимларни экологик функцияларини амалий мақсадларда фойдаланиш учун уларни таснифлаш кутилган натижани беради ва қуйида гидронимларнинг айрим турларини кўриб чиқамиз.

НАТИЖА ВА МУҲОКАМА

Мамлакатимиз ҳудудидаги гидронимларни ясалишида сув объектининг табиий-экологик хусусиятлари билан боғлиқ географик объектлар ўрганилди ва уларни мос равишда қуйидаги гуруҳларга бўлиш тавсия этилди.

I. Сув объектларини рангини англатувчи номлар таркибида асосан оқ, кўк, қора, сариқ каби кўча, маҳалла, кўл, дарё, сой, арик, булоқ каби объектлар номлари такрорланиб туриши кузатилди. Масалан, Оқсув (Учкўприк, Китоб, Қамаш туманларда), Кўкбулоқ (Қўрғонтепа, Ғаллаорол, Нурота, Қамаш, Денов туманларда), Қорасув (Бўстон, Фарғона, Бахмал, Косонсой, Янгикўрғон, Қамаш, Паярик, Қизирик, Миробод, Юқори Чирчиқ туманлари ва Нурафшон, Шаҳрисабз шаҳарларда), Сариксув (Улуғнор, Олмазор, Шароф Рашидов туманларда) кабилар киради.

II. Сувнинг маза-таъми билан боғлиқ гидронимлар. Ушбу гидронимлар ширин, шўр, аччиқ каби сўзлар орқали ҳосил бўлган географик объект номлари мамлакатимизда кўча, маҳалла, кўл, дарё, сой, арик, булоқ каби объектлар номида кўплаб учратишимиз мумкин. Масалан, Шўрбулоқ (Андижон шаҳри, Бахмал, Ғаллаорол, Чуст, Косонсой, Томди, Ховос, Шеробод туманларида), Ширинқудук (Қоракўл, Муборак, Учтепа, Ҳазорасп, Тупроққала туманларида), Аччиқкўл (Кўқон, Мингбулоқ, Боғот, Қўшкўпир туманларда) кабилар киради.

III. Сувнинг ҳиди ва ҳарорати билан боғлиқ гидронимлар. Мазкур таснифдаги гидронимлар ҳам мамлакатимизда бир қатор туман ва шаҳарларда мавжуд. Масалан, Қайнарбулоқ (Балиқчи, Бешарик, Ўзбекистон, Кўқон, Бахмал, Шароф Рашидов, Поп, Учқудук, Чирокчи, Пахтачи, Ургут, Сайхунобод, Олтинсой, Бўстонлик, Боғот каби туманларида), Охунқайнар (Ўзбекистон тумани), Қайнар (Бахмал, Касби, Ўзбекистон, Қўшрабод туманларида), Совуқбулоқ (Бахмал, Бойсун, Бўстонлик, Китоб, Яккабоғ, Нурота, Нуробод, Оҳангарон, Шеробод, Узун, Фориш туманлари), Иссиқкўл (Фориш тумани), Сассиқ (Фориш тумани), Сассиқсой (Данғара, Шароф Рашидов туманлари), Сассиқбулоқ (Чуст, Шеробод туманлари), Сассиқбулоқсой (Булунғур тумани).

IV. Сувнинг ўзига хос хусусиятларидан бўлган унинг шифобахшлигига нисбатан берилган гидронимлар. Юртимизда айрим сув объектларининг суви минераллиги ва ана шу сувнинг турли касалликларга шифо бўлишлигига нисбат бериш асосида номланади. Масалан, Қўтирбулоқота (Дехқонобод тумани), Қўтирбулоқ (Дехқонобод, Оқдарё, Паярик, Тойлоқ, Шеробод, Поп туманлари), Қўтирсой (Қамаш тумани).

Юқорида таъкидланганидек сувнинг табиий-экологик хусусиятлари билан боғлиқ жой номлари инсонлар ижтимоий ҳаётида муҳим экологик функцияни бажариб келган. Мисол учун шифобахшлигига кўра таснифланган Қўтирбулоқ, Қўтирсой жой номлари инсонлар учун турли хил касалликга шифо манбаси бўлиб, бундай объектларга нисбатан уларни, асраб-авайлаш, унинг атрофини тоза сақлаш, муҳофаза зонасини яратиш каби тушунчалар шаклланган ва уларга риоя қилишган албатта. Шунингдек сув объектининг ранги, маза-таъми, ҳиди ва ҳарорати билан боғлиқ бўлган жой номлари айнан шу ҳолатда сақланиб қолмаганлигини

кузатиш мумкин. Айниқса учбу объектларнинг аҳоли манзилгоҳларига яқин қисмларида ўзгариш кескинроқ эканлиги кўзга ташланади.

Мамлакатимиз ҳудудида дарахт ва ўсимлик билан боғлиқ бўлган сув объектлари ҳам гидронимлар таркибида салмоқли ўрин эгаллайди. Бундай ўсимлик ва дарахт номлари асосида яратилган сувликлар номи фитогидроним (фито < рус < юнон. Phytон-ўсимлик+гидро рус. < юнон. hydro-сув + опота-исм, ном)лар дейилади [8]. Таъкидлаш лозимки табиатда бир-биридан айро нарсанинг ўзи йўқ. Сув бор жойда гиёҳ, ўсимлик унади ва дарахт кўкаради. Чунончи, Ўзбекистон флораси турли-туман, ранго-ранг бўлиб, унинг таркибида 4000 турдан ортиқроқ ўсимликлар мавжуд. Уларнинг кўпчилигидан халқ хўжалигининг турли тармоқларида кенг кўламда фойдаланилади [10].

Юқоридаги фикрлардан келиб чиқиб Н.М.Улуқов томинидан таклиф этилган фитогидронимларни қандай дарахт ёки ўсимлик номи билан аталишига қараб қуйидаги гуруҳларга бўлиш мумкин [7].

I. Манзарали дарахт номлари билан аталган сув объектлари: Толбулоқ (Хўжаобод, Дехқонобод, Яккабоғ, Каттакўрғон, Шеробод, Паркент туманлари ва Ангрен шаҳри), Толқудуқ (Ёзёвон тумани), Толлисой (Ғаллаорол, Шароф Рашидов, Поп, Каттакўрғон, Оҳангарон туманлари), Толбулоқ (Наманган тумани), Толариқ (Зомин, Касби, Каттакўрғон, Миробод, Мирзо Улуғбек т, Паркент туманлари), Толликалон (Поп тумани), Толличашма (Чироқчи тумани), Тераклисой (Бахмал,Фориш, Бандихон, Бўстонлик туманлари), Арчалисой (Бахмал тумани), Арчасой (Фориш тумани), Чинорсой (Денов, Сариосиё туманлари), Чинорбулоқ (Олтинсой, Узун, Паркент туманлари), Обизаранг (Узун, Сариосиё, Музработ туманлари), Зарангсой (Паркент тумани) кабилар киради.

II. Мевали дарахт номлари билан аталган сув объектлари: Олмалисой (Фориш, Ғаллаорол, Поп, Чироқчи туманлари), Олмалибулоқ (Чуст, Дехқонобод, Бойсун, Бўстонлик туманлари), Олчаалисой (Зомин тумани), Олчабулоқ (Нуробод, Бойсун туманлари), Ўриксой (Фориш, Ғаллаорол туманлари), Ўриклисой (Бахмал, Шароф Рашидов, Зафаробод, Зомин, Поп туманлари), Тутлибулоқ (Зафаробод, Чуст туманлари), Жийдасой (Чуст, Поп туманлари), Жийдалисой (Сариосиё тумани), Тутбулоқ (Узун тумани), Тутлисой (Бўстонлик тумани), Тутаксой (Нурота тумани), Жийдабулоқ (Дехқонобод, Қамаши, Бойсун, Узун туманлари), Дўланасой (Китоб тумани) кабилар киради. Шунингдек мамлакатимиз сув объектлари номлари орасида қўвға, қамиш, қиёқ, хулва каби ўт ўсимликлар номи билан аталган сув объектлари ҳам учрайди.

Юқорида келтирилган тахлиллардан ҳам кўриниб турганидек, ўсимлик ва дарахт номлари асосида яратилган фитогидронимлар ўз мазмун-моҳияти шаклланиш тарихи билан ўзи мансуб ҳудуднинг табиати ва флорасини ўзида акс эттириб бир қанча эътибор қаратиш керак бўлган

экологик тоза бўлган ҳудудларни яратади. Таъкидлаш лозимки ўсимликлар табиатдаги фотосинтез жараёнида қатнашиш билан бирга ҳудуддаги сув режимини тартибга келтириш, сув ва шамол эрозиясига йўл қўймаслик каби вахифаларни бажариш билан биргаликда атроф-муҳитни табиий ва антропоген ифлосланишдан сақлаб турувчи восита бўлиб ҳам хизмат қилади. Шунингдек топонимик тадқиқотлар натижасида ўсимлик ва дарахтлар юқоридаги эндемик, ўзига хос ҳудудлари чегарасини ўтмишда ва ҳозирда аниқлаш учун ҳам амалий ёрдам беради. Бу жиҳатдан қаралганда ўсимликлар дунёси ҳам экологик топонимлар гуруҳига кириб бошқа экотопонимлар сингари муҳим илмий ва амалий аҳамиятга эгадир [5].

Мамлакатимиз ҳудудида бугунги кунда ҳайвонот дунёси билан боғлиқ бўлган сув объектлари номларини зоогидронимлар термини остида таҳлил қилиш, ҳамда мазкур объектларни экологик жиҳатларини ўрганиш мумкин. Мазкур тадқиқот натижасида мамлакатимиз ҳудудида қуйидаги ҳайвонот дунёси билан боғлиқ сув объекти номлари аниқланди: Бойбўрисой (Косон), Бўрисой (Денов), Бўрибулоқ (Қумқўрғон), Чўчқалисой (Фориш), Чўчқасой (Оҳангарон т), Чўчқаўлдисой (Иштихон), Майнабулоқ (Косонсой), Қарғаёп (Янгибозор), Бойўғлисой (Янгиқўрғон) каби номлар.

Таҳлиллар шуни кўрсатадики зоогидронимлар улар мансуб бўлган ҳудуд табиатини, ҳайвонот дунёсини ўрганишда муҳим аҳамиятга эга бўлиб, ҳар қандай сув объектига ном беришда унга хос бўлган бирор белги-хусусият, жиҳатга асосланади. Гидронимлар туркумига мансуб бўлган зоогидронимлар мазкур объектлар атрофида яшаган ҳайвонот дунёси билан бевосита мансуб бўлиб, уларни номлашда ана шу ҳайвонот дунёсига асосланган. Шунингдек, сув объектларини ифодалаган фитогидроним мавжуд бўлмаслиги, маълум давр ўтиши билан йўқ бўлиши мумкин. Ана шу жиҳати мазкур ҳайвонот дунёсига эҳтиёткорона муносабатда бўлиш кераклигини тақозо этади.

Бизга маълумки маълум ҳудудда яшаган халқ, қабила, уруғ, қавмлар номи билан аталган сув объектлари – **этногидронимлар** ҳисобланади. Этногидронимлар сув объектларининг маълум этник гуруҳга тегишли эканлигини, мансублигини, уларга алоқадорлигини билдиради [7]. Мамлакатимиз этнослар номи билан аталган сув объектлари орасида энг кўп, қипчоқ, қўнғирот, жалойир, қурама, найман, дўрмон, дутир, шунқор каби уруғ-қабилаларнинг номи энг учрайди, шунингдек сув объектлари номлари орасида ана шу ҳудудда яшайдиган миллат, халқ вакиллари (ўзбек, турк, қирғиз, тожик, уйғур, қашқар) номлари билан аталадиганлари ҳам кенг тарқалган [1]. Масалан, Ўзбекариқ (Учқўрғон тумани), Қозоқариқ (Наманган тумани), Қозоқсув (Шофиркон тумани), Қирғизбулоқ (Янгиқўрғон тумани), Наймансой (Ўзбекистон, Данғара туманлари), Найманкўл (Чирокчи тумани), Уйғурсой (Поп т), Қалмоқбулоқ (Марҳамат

тумани) Қипчоқариқ (Қўқон шаҳри) каби номлар. Мамлакатимиздаги бундай географик номларни маълум миллат, халқ номи аталишида асосан сув объектларини муҳофаза қилиш, сувни тежаш ва истеъмолга яроқли ҳолда сақлаш бўйича юқоридаги миллат ва халқларни сувга нисбатан муносабати муҳим бўлган ҳолда ўзига ҳос ижтимоий-экологик функцияни ҳам бажарган албатта.

Гидронимлар, жумладан, антропогидронимларни юзага келишида маълум ҳудуддаги кишиларнинг урф-одати, тили, маданий жиҳатдан юксалиши, ижтимоий-иқтисодий ҳаёти каби жиҳатлари билан алоқадор ҳолда юзага келади. Албатта мамлакатимизда жой номлари таркибида антропогидронимларни жой номларига айланиши кенг тарқалган табиий жараён бўлиб, бунда кишиларнинг сув объекти билан муносабати, унга эгаллиги, барпо этганлиги каби жараёнлар асос бўлиб ётади. Масалан, Абдуллахонбанди (Нурота тумани), Усмонолиш (Чуст тумани), Эшмерган ариғи (Уйчи тумани), Қиличбойарна (Гурлан тумани), Шониёзарик (Пахтачи тумани) каби номлар. Юқорида келтирилган антропогидронимлар ўзига ҳос бўлган сув объектини улуғлаш, салмоғи, аҳамияти муҳимлигини таъкидлаш, илоҳийлаштириш, муқаддаслигини очиб бериш орқали шу маскан табиатини экологик жиҳатдан сақлашга ёрдам берган [1].

ХУЛОСА

Хулоса ўрнида шуни айтиш мумкинки, мамлакатимиз аҳолисини сув объектларига ном қўйишининг экологик жиҳатларини ўрганиш бугунги кунимиз ва келажак авлод учун аҳамиятли эжанлигини кўришимиз мумкин.

Жумладан сув объектлари номи билан аталадиган гидронимлар ва уларнинг маълум турлари орқали ана шу сув объектининг олдинги ҳолати, сувнинг гидрологик хусусиятлари, сувнинг оқими режими, фитогидронимлар орқали ўсимлик ва ҳайвонот оламини яшаш ареаллари ва уларнинг ҳозирги кундаги ҳолати, этногидроним ва антропогидронимлар орқали эса сув объектининг эгаси тўғрисида маълумотларни беради албатта. Улардан объектни бугунги ҳолати ҳақида умумий маълумотлар баъзаси бўлган ГАТ маълумотларида фойдаланиш мумкин.

Шунингек гидронимларнинг экологик функцияларини билган ҳолда, улардан, табиий муҳитни муҳофаза қилиш, сув ресурсларидан оқилона фойдаланиш борасидаги ишларни ташкил этиш мумкин.

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ПРОФЕССИОНАЛЬНАЯ КОМПЕТЕНТНОСТЬ ПЕДАГОГА

Аннотация: В статье проводится комплексный анализ понятия «компетентность» и рассматриваются проблемы готовности педагогов к выполнению дистанционной образовательной деятельности. Основное внимание уделено вопросам структуры понятия. Выявлена необходимость подготовки преподавателя к дистанционной работе.

Ключевые слова: компетентность, учебно-воспитательный процесс, инновации, модульное обучение, пандемия коронавируса.

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PROFESSIONAL COMPETENCE OF A TEACHER

Abstract: The article provides a comprehensive analysis of the concept of "competence" and examines the problems of teachers' readiness to carry out distance educational activities. The main attention is paid to the issues of the structure of the concept. The need to prepare the teacher for distance work is revealed.

Keywords: competence, educational process, innovation, modular training, coronavirus pandemic.

На сегодняшний день в современном обществе наука играет важную роль. Уровень развития науки может служить одним из основных показателей развития общества, государства. В связи с этим Президент РУз уделяет особое внимание развитию науки, подготовке научных кадров, совершенствованию работы научных центров. Этому свидетельствует создание Министерства инновационного развития науки.

Система образования становится ключевым фактором общественного процесса. Современный специалист должен быть подготовлен так, чтобы был всегда готовым идти в ногу с прогрессом науки и технологии, его образование должно воспитывать в нём способность к интеллектуальному творчеству и к интеллектуальному восприятию сделанного другими. Можно сказать, что наука – это то, чему можно научить или научиться, т. е. передать знания или умения или добавить знания самому. Образовательный процесс есть процесс передачи

и получения знаний и умений.

В образовательном процессе педагог призван быть носителем идей обновления на основе сохранения и приумножения традиций образования и мирового опыта. Новые условия существования образовательной сферы, развитие науки, обновление содержания образования, развитие инновационных форм и методов обучения, возрастающее требование к качеству знаний – всё это требует повышения профессиональной компетентности и формирования готовности будущего педагога к выполнению профессиональной деятельности.

Современному обществу нужны образованные, нравственные, предприимчивые люди, способные самостоятельно принимать ответственные решения в ситуации выбора, мобильные специалисты, которые обладают чувством ответственности. Чтобы достичь этой цели, нужно не только обновить содержание и технологии образования, но и подготовить педагога, способного решать эти сложные социально - педагогические задачи. Для удовлетворения этих потребностей общества требуется современный педагог высокой культуры, глубокой нравственности, заинтересованный в развитии научного потенциала своих учащихся, способный к инновационной деятельности, самосовершенствованию и профессиональной активности.

Сегодня актуальной является проблема повышения уровня профессиональной компетентности учителя, способного свободно и активно мыслить, воплощать новые идеи и технологии обучения. Во многих постановлениях Президента отражается суть преобразований в системе образования как высшего, так и среднего специального.

Профессиональная деятельность педагога считается неполноценной, если она строится только на воспроизведении однажды усвоенных методов работы [2, 118]. Необходимо использовать методы для достижения более высоких результатов образования и методы, способствующие развитию личности самого педагога. Педагог, находящийся в постоянном поиске, гораздо быстрее достигает высших уровней педагогического мастерства. Новое модульное обучение также требует от педагога больших усилий, совершенствования знаний и методов работы с учащимися. В связи с пандемией коронавируса образование перешло на онлайн обучение во всех звеньях, начиная со школьного и заканчивая высшим. В условиях пандемии и временного карантина педагоги, как и врачи, серьёзно отнеслись к задачам, стоящим перед ними. Модульное обучение готовит учащихся к самообразованию, самостоятельности.

Модернизация системы образования в Узбекистане повлекла за собой тотальную информатизацию, существенное расширение объёма используемой компьютерной техники и интерактивных средств обучения, подключение всех образовательных учреждений к сети Интернет. Как

показал опыт проведения карантина, не может вызывать сомнения актуальность применения средств дистанционного обучения в рамках повышения педагогической компетентности работников системы образования.

Профессиональное совершенствование педагога всё более характеризуется уровнем компетентности [4, 82], определяющей эффективность и результативность педагогических действий. Актуальность отмеченной проблемы видится также в том, что вузам необходимы педагоги - профессионалы с высоким уровнем профессиональной компетентности в области интернет-технологий, способные работать в условиях возрастающего потока научной и методической информации, готовые овладевать и внедрять инновационные образовательные технологии, содействующие развитию познавательных интересов и творческих способностей обучающихся [5, 67].

Современное общество предъявляет новые требования к обучающимся. «Выпускник знающий» перестал соответствовать запросам общества. На сегодняшний день спрос идёт на «Выпускника умеющего, творческого», имеющего ценностные ориентиры. Решить эту проблему призван педагогический коллектив, который должен быть профессионалом своего дела. Но если уровень профессионализма учителей не соответствует современным требованиям, вряд ли можно рассчитывать на высокий образовательный результат, удовлетворяющий потребности общества и государства [5, 89].

Педагог должен обладать профессиональными компетенциями. Рассмотрим понятие «компетенция», для этого обратимся к толковым словарям: Круг полномочий, область подлежащих чьему-н. ведению вопросов, явлений (право) – Толковый словарь С. И. Ожегова.

Профессиональная компетенция – это способность успешно действовать на основе практического опыта, умения и знаний при решении профессиональных задач.

Компетентность – это совокупность профессионально-педагогических компетенций [6, 18].

Выделяют следующие профессионально-педагогические компетенции:

Социально-психологическая компетенция, связанная с готовностью решать профессиональные задачи, в том числе в режиме развития.

Профессионально-коммуникативная компетенция, определяющая степень успешности педагогического общения и взаимодействия с субъектами образовательного процесса.

Общепедагогическая компетенция, включающая в себя психологическую и педагогическую готовность к развёртыванию индивидуальных особенностей личности.

Предметная компетенция в сфере предметной специальности: знания в области преподаваемого предмета, методики его преподавания.

Управленческая компетенция – владение умениями проводить педагогический анализ, ставить цели, планировать и организовывать деятельность.

Рефлексивная компетенция – умение видеть процесс и результат собственной педагогической деятельности.

Информационно-коммуникативная компетенция, связанная с умением работать в сфере ИК-технологий.

Компетенция в сфере инновационной деятельности, характеризующая учителя как экспериментатора.

Креативная компетенция – умение учителя выводить деятельность на творческий, исследовательский уровень [6, 15].

Здесь приведены лишь некоторые компетенции, которые должен освоить педагог. Для того чтобы педагог владел этими компетенциями, требуется осознание им необходимости повышения своей общечеловеческой и специальной культуры и тщательной организации научно-методического общения для дальнейшего развития и обучения.

При этом компетентность учителя в области интернет-технологий представлена как совокупность его профессионально-личностной характеристики, в которой отражается достигнутый уровень умения применять интернет-технологии в обучении. Проявляется уровень компетентности педагога в его способности и готовности использовать интернет-технологии как при взаимодействии между участниками образовательного процесса, так и при ведении соответствующей урочной деятельности; в процессе создания и внедрения учебно-методических комплексов и сетевых образовательных ресурсов (учебного модуля).

Таким образом, профессиональное совершенствование педагога всё более характеризуется уровнем компетентности, который определяет эффективность и результативность педагогических действий. А это в конечном итоге заключается в том, что вузам необходимы учителя-профессионалы с высоким уровнем профессиональной компетентности в области интернет-технологий, способные работать в условиях изоляции, а также возрастающего потока научной и методической информации.

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ЛИЧНОСТНО-ОРИЕНТИРОВАННОЕ ОБУЧЕНИЕ КАК ПЕДАГОГИЧЕСКАЯ ПРОБЛЕМА

Аннотация: В статье рассматривается личностно-ориентированное обучение, где во главу угла ставится личность студента. Автор считает, что признание студента главной действующей фигурой всего образовательного процесса и есть личностно-ориентированная педагогика.

Ключевые слова: личностно-ориентированное обучение, студент, образовательный процесс, усвоение знаний.

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PERSONALLY-FOCUSED LEARNING AS A PEDAGOGICAL PROBLEM

Abstract: The article deals with student-centered learning where the personality of the student is at the forefront. The author believes that the recognition of the student as the main acting figure of the entire educational process is personality-oriented pedagogy.

Key words: student-centered learning, student, educational process, assimilation of knowledge.

Личностно-ориентированное обучение — это такое обучение, где во главу угла ставится личность студента, её самобытность, самооценность. Субъектный опыт каждого сначала раскрывается, а затем согласовывается с содержанием образования. Если в традиционной философии образования социально-педагогические модели развития личности описывались в виде извне задаваемых образцов, эталонов познания (познавательной деятельности), то личностно-ориентированное обучение исходит из признания уникальности субъектного опыта самого учащегося, как важного источника индивидуальной жизнедеятельности, проявляемой, в частности, в познании. Признание студента главной действующей фигурой всего образовательного процесса и есть, по нашему мнению, личностно-ориентированная педагогика. «С этой целью применяются методические приёмы развития логического мышления ученика, в числе которых

обучение умению ставить вопросы и отвечать на них — как кратко, так и развёрнуто» [2, 4].

При проектировании образовательного процесса мы исходим из признания двух равноправных источников: обучения и учения. Последнее не есть просто дериват первого, а является самостоятельным, личностно-значимым, а потому очень действенным источником развития личности. Традиционно образовательный процесс описывался как учебно-воспитательный, основными составляющими которого являлись обучение и воспитание. На организацию последних направлялись все усилия, так как считалось, что студент развивается только под влиянием специально организованных педагогических воздействий [1, 34].

«Обучение, которое обеспечивает полноценное усвоение знаний, формирует учебную деятельность и тем самым непосредственно влияет на умственное развитие, и есть развивающее обучение» [2, 53].

Существующие модели личностно-ориентированной педагогики можно условно разделить на следующие основные группы:

- 1) социально-педагогическая;
- 2) предметно-дидактическая;
- 3) психологическая.

Технология образовательного процесса основывалась на идее педагогического управления, формирования, коррекции личности «извне», без достаточного учета и использования субъектного опыта самого ученика как активного творца собственного развития (самообразования, самовоспитания).

Организованные формы вариативного обучения, конечно, способствовали его дифференциации, но образовательная идеология при этом не менялась: поскольку личность — продукт обучающих воздействий, значит, организуем их по принципу дифференциации. Организация знаний по научным направлениям, уровню их сложности (программированное, проблемное обучение) признавалась основным источником личностно-ориентированного подхода к обучающемуся. Создавалась ситуация, при которой дифференцированные формы педагогического воздействия (через организацию предметных знаний) определяли содержание личностного развития.

Предметная дифференциация задавала нормативную познавательную деятельность с учетом специфики научной области знания, но не интересовалась истоками жизнедеятельности самого ученика как носителя субъектного опыта, имеющейся у него индивидуальной готовности, предпочтений к предметному содержанию, виду и форме задаваемых знаний. Как показывают наши исследования, предметная избирательность учащегося складывается задолго до введения дифференцированных форм обучения и не является прямым продуктом их воздействия. Дифференциация обучения через ее формы необходима для

оптимальной педагогической поддержки развития индивидуальности, а не для ее изначального становления. В этих формах она не возникает, а лишь реализуется, наиболее оптимально развивается.

Следует особо подчеркнуть, что предметная дифференциация, как правило, не затрагивает духовной дифференциации, т.е. различий национальных, этнических, религиозных, мировоззренческих, что в значительной мере определяет содержание субъектного опыта учащегося. Предметная дифференциация, как уже отмечалось, строится с учетом содержания научного познания с опорой на классические образцы познания. На этой основе разрабатываются программный материал, научные тексты, дидактические материалы и т.п. Это приводит к углублению познания, расширению объёма научной информации, её более теоретическому (методологическому) структурированию. По такому пути идут авторы учебных программ для инновационных образовательных учреждений, где дифференцированное обучение в его различных формах выступает наиболее ярко.

Между тем, неучёт в организации предметной дифференциации духовной (более личностно-значимой для ученика) затрудняет не только регионализацию образования, но нередко порождает формализм в усвоении знаний — расхождение между воспроизведением «правильных» знаний и их использованием, стремление скрыть личностные смыслы и ценности, жизненные планы и намерения, заменить их социальным клише.

В субъектном опыте представлены и предметные, и духовные смыслы, имеющие значение для развития личности. Их сочетание в обучении не простая задача, пока, на наш взгляд, не решаемая в рамках предметно-дидактической модели.

Психологическая модель личностно-ориентированной педагогики до последнего времени сводилась к признанию различий в познавательных способностях, понимаемых как сложное психическое образование, обусловленное генетическими, анатомо-физиологическими, социальными причинами и факторами в их сложном взаимодействии и взаимовлиянии.

В образовательном процессе познавательные способности проявляются в обучаемости, которая определяется как индивидуальная способность к усвоению знаний [3, 78].

Личностно-ориентированная педагогика, строя процесс обучения и воспитания, исходила в основном из признания ведущей роли (детерминации) внешних воздействий (роли педагога, коллектива, группы), а не саморазвития отдельной личности. Аналогичным образом разрабатывались и соответствующие дидактические модели, через которые реализовывался индивидуальный подход в обучении. Он сводился в основном к разделению учащихся на сильных, средних, слабых; к педагогической коррекции через специальную организацию учебного

материала по степени его объективной сложности, уровню требований к овладению этим материалом (программированное, проблемное обучение).

В рамках такого индивидуального подхода проводилась предметная дифференциация, которая, кстати, востребовалась только одним социальным институтом — вузами. Во всех же остальных сферах человеческой жизни такая дифференциация не имела существенного значения. Общеобразовательная школа в основном готовила к вузу и этот социальный заказ выполняла через предметную дифференциацию, при этом нивелировалась духовная дифференциация (индивидуальные различия, связанные с традициями семьи, укладом жизни, отношением к религии).

Психологические модели личностно-ориентированного обучения были подчинены задаче развития познавательных (интеллектуальных) способностей, которые рассматривались, прежде всего, как типовые (рефлексия, планирование, целеполагание), а не индивидуальные способности. Средством развития этих способностей считается учебная деятельность, которая строится как «эталонная» по своему нормативному содержанию и структуре. Индивидуальные способности «просматривались» через обучаемость, определяемую как способность к усвоению знаний. Чем лучше были организованы знания в системы (по теоретическому типу), тем выше была обучаемость. Зависимая от содержания, специального конструирования учебного материала, обучаемость тем самым рассматривалась не столько как индивидуальная, сколько как типовая особенность личности (теоретики, эмпирики, обладатели наглядно-образного словесно-логического мышления и т.п.).

Проектирование личностно-ориентированной системы обучения предполагает:

- признание учащегося основным субъектом процесса обучения;
- определение цели проектирования — развитие индивидуальных способностей ученика;
- определение средств, обеспечивающих реализацию поставленной цели.

Таким образом, развитие ученика как личности (его социализация) идет не только путем овладения им нормативной деятельностью, но и через постоянное обогащение, преобразование субъектного опыта как важного источника собственного развития. Учение как субъектная деятельность ученика, обеспечивающая познание (усвоение), должно разворачиваться как процесс, описываться в соответствующих терминах, отражающих его природу, психологическое содержание. Основным результатом учения должно быть формирование познавательных способностей на основе овладения соответствующими знаниями и умениями.

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**КЛЮЧЕВЫЕ АСПЕКТЫ ФОРМИРОВАНИЯ ЗАРАБОТНОЙ
ПЛАТЫ РАБОТНИКОВ МУНИЦИПАЛЬНЫХ
ОБРАЗОВАТЕЛЬНЫХ УЧРЕЖДЕНИЙ И МУНИЦИПАЛЬНЫХ
УЧРЕЖДЕНИЙ ОБРАЗОВАНИЯ МУНИЦИПАЛЬНОГО
ОБРАЗОВАНИЯ ГОРОДСКОЙ ОКРУГ ГОРОД-КУРОРТ СОЧИ
КРАСНОДАРСКОГО КРАЯ**

Аннотация: в данной статье речь пойдет о ключевые аспекты формирования заработной платы работников муниципальных образовательных учреждений и муниципальных учреждений образования муниципального образования городской округ город-курорт Сочи Краснодарского края. Будет рассмотрена структура заработной платы в бюджетной сфере.

Ключевые слова: заработная плата, фонд оплаты труда, бюджетное образовательное учреждение.

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**KEY ASPECTS OF FORMATION OF WAGES OF EMPLOYEES OF
MUNICIPAL EDUCATIONAL INSTITUTIONS AND MUNICIPAL
EDUCATIONAL INSTITUTIONS OF THE MUNICIPAL FORMATION
OF THE URBAN DISTRICT OF THE CITY-RESORT OF SOCHI OF
KRASNODAR TERRITORY**

Abstract: this article will focus on the key aspects of the formation of wages of employees of municipal educational institutions and municipal educational institutions of the municipal formation of the urban district of the city-resort of

Sochi of Krasnodar Territory. The structure of wages in the budgetary sphere will be considered.

Keywords: wages, wage fund, budgetary educational institution.

Оплата труда в бюджетных образовательных учреждениях является важной частью системы финансирования образования. В данной статье рассмотрим ключевые аспекты, которые влияют на формирование заработной платы работников таких учреждений, а также особенности ее расчетов и выплат.

В целях совершенствования оплаты труда работников муниципальных образовательных учреждений и муниципальных учреждений образования муниципального образования городской округ город-курорт Сочи Краснодарского края (далее - МОУ и МУО), усиления материальной заинтересованности в повышении эффективности и результативности их труда разработана и применяется отраслевая система оплаты труда работников образовательных учреждений, на основании постановления администрации муниципального образования городской округ город-курорт Сочи Краснодарского края от 27 марта 2024 года № 688 «О внесении изменений в постановление администрации муниципального образования городской округ город-курорт Сочи Краснодарского края от 22 января 2021 года № 50 «Об утверждении положения об отраслевой системе оплаты труда работников муниципальных образовательных учреждений и муниципальных учреждений образования муниципального образования городской округ город-курорт Сочи Краснодарского края».

Отраслевая система оплаты труда в муниципальных образовательных учреждениях играет ключевую роль в обеспечении стабильности и качества образовательного процесса. Она регулирует механизм формирования заработной платы работников и включает в себя несколько составляющих, которые определяют размеры и условия оплаты труда.

Основные элементы отраслевой системы включают в себя

1. Законодательные нормы: заработная плата работников образовательных учреждений регулируется федеральными и региональными законами, а также постановлениями и приказами местных органов власти. Это позволяет учитывать специфические условия работы и местные реалии.

2. Классификация должностей: в муниципальных образовательных учреждениях все должности имеют четкую классификацию, которая помогает установить оклады для различных категорий работников, включая педагогов, администраторов и вспомогательный персонал.

3. Установленные тарифные ставки: важной частью отраслевой системы являются тарифные ставки, которые определяются в зависимости от квалификации, стажа и сложности выполняемых работ.

4. Надбавки и доплаты: работники имеют право на получение различных надбавок, которые могут включать выплаты за превосходные достижения, выполнение внеурочных обязательств, а также компенсации за условия труда (например, работа в сельской местности).

Система оплаты труда работников МОО устанавливается коллективными договорами, соглашениями, локальными нормативными актами МОО в соответствии с действующим законодательством Российской Федерации, Краснодарского края и муниципальными правовыми актами муниципального образования городской округ город-курорт Сочи Краснодарского края с учетом:

- единого тарифно-квалификационного справочника работ и профессий рабочих;
- единого квалификационного справочника должностей руководителей, специалистов и служащих;
- государственных гарантий по оплате труда;
- минимальных размеров окладов (должностных окладов), ставок заработной платы по профессиональным квалификационным группам;
- перечня видов выплат компенсационного характера;
- перечня видов выплат стимулирующего характера;
- рекомендаций Российской трехсторонней комиссии по регулированию социально-трудовых отношений, краевой трехсторонней комиссии по регулированию социально-трудовых отношений;
- согласования с профсоюзной организацией МОО.

Заработная плата каждого работника МОО зависит от его квалификации, сложности выполняемой работы, количества и качества затраченного труда и предельными размерами не ограничивается, за исключением случаев, предусмотренных Трудовым кодексом Российской Федерации.

Фонд оплаты труда бюджетных и автономных МОО муниципального образования городской округ город-курорт Сочи Краснодарского края, находящихся в ведении управления по образованию и науке администрации муниципального образования городской округ город-курорт Сочи Краснодарского края, формируется исходя из объема субсидий, поступающих в установленном порядке, и средств от оказания МОО услуг, предоставление которых для физических и юридических лиц осуществляется на платной основе, и от иной приносящей доход деятельности.

Система оплаты труда за счет средств, поступающих от приносящей доход деятельности, разрабатывается МОО самостоятельно с учетом подходов к формированию систем оплаты труда, определенных настоящим

Положением.

Оплата труда работников МОО производится в пределах фонда оплаты труда, утвержденного планом финансово-хозяйственной деятельности или бюджетной сметой на соответствующий финансовый год.

Экономия фонда оплаты труда, образовавшаяся в связи с оплатой дней временной нетрудоспособности за счет средств фонда социального страхования и по другим причинам, связанным с отсутствием работника, направляется на увеличение стимулирующей части фонда оплаты труда МОО.

Финансирование оплаты труда работников муниципальных образовательных учреждений осуществляется за счет бюджета территориальных образований. Финансирование образовательных учреждений происходит за счет бюджетных средств, которые выделяются из федерального, регионального и местного бюджетов. Кроме того, важными источниками могут быть дополнительные финансирования, такие как целевые субсидии и гранты. Важно, чтобы выделенные средства были оптимально распределены для покрытия всех расходов, связанных с оплатой труда. Образовательные учреждения обязаны соблюдать бюджеты, что требует строгого контроля расходования средств. Начисление и выплата заработной платы осуществляются в соответствии с установленными нормами и правилами законодательства.

Все процессы, касающиеся оплаты труда, подлежат контролю со стороны местных органов образования и финансовых управлений. Это включает в себя регулярную отчетность о расходовании средств на заработную плату и соблюдение установленной системы оплаты.

Отраслевая система оплаты труда работников муниципальных образовательных учреждений направлена на создание справедливых и прозрачных условий для работников. Она способствует не только мотивации и удержанию квалифицированных специалистов, но и улучшению качества образования, что в конечном итоге влияет на успехи учащихся.

Оплата труда в бюджетных образовательных учреждениях требует комплексного подхода и учета множества факторов. Это важно не только для привлечения и удержания квалифицированных кадров, но и для обеспечения качественного образовательного процесса. Основное внимание должно уделяться как финансовой стороне вопроса, так и нематериальным стимулам, которые способствуют профессиональному росту и развитию работников.

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МОДЕЛИРОВАНИЕ СОЦИАЛЬНЫХ ПРОЦЕССОВ

Аннотация

Статья посвящена моделированию социальных процессов, которое является важным инструментом для анализа и прогнозирования динамики изменений в социальных системах. Рассматриваются основные методы моделирования, такие как математическое, имитационное, агентное и сетевое моделирование. Особое внимание уделено применению этих методов для изучения демографических изменений, распространения информации и поведения социальных групп. В статье обсуждаются преимущества и ограничения моделирования социальных процессов, а также его роль в принятии решений на уровне социального и государственного управления.

Ключевые слова: социальные процессы, моделирование, математическое моделирование, агентное моделирование, имитационное моделирование, сетевой анализ, социальные системы, прогнозирование, социальная динамика.

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MODELING OF SOCIAL PROCESSES

Abstract

The article is devoted to modeling of social processes, which is an important tool for analyzing and forecasting the dynamics of changes in social systems. The main modeling methods, such as mathematical, simulation, agent and network modeling, are considered. Particular attention is paid to the application of these methods for studying demographic changes, information dissemination and the behavior of social groups. The article discusses the advantages and limitations of modeling of social processes, as well as its role in decision-making at the level of social and public administration.

Keywords: social processes, modeling, mathematical modeling, agent modeling, simulation modeling, network analysis, social systems, forecasting, social dynamics.

Моделирование социальных процессов — это метод, используемый для анализа, описания и прогнозирования изменений в социальных

системах. Оно предполагает использование математических, статистических, компьютерных и других формальных методов для создания моделей, которые описывают, как различные социальные явления взаимодействуют между собой.

Основные аспекты моделирования социальных процессов

Понятие социального процесса Социальный процесс — это последовательность изменений, происходящих в обществе или социальных группах, которая имеет определенную динамику и направленность. Примеры социальных процессов включают миграцию населения, социальную мобильность, распространение информации, урбанизацию, демографические изменения и многое другое.

Цели моделирования

Понимание закономерностей, лежащих в основе социальных изменений.

Прогнозирование будущих изменений и их последствий.

Оценка эффективности различных социальных и политических стратегий.

Анализ взаимодействия между различными элементами социальных систем (институтами, индивидами, группами).

Типы моделей

Математические модели: Используют формулы и уравнения для количественного описания социальных явлений. Пример: моделирование миграции с использованием демографических данных.

Имитационные модели: Строят виртуальные социальные системы, где можно наблюдать за изменениями в реальном времени, например, моделирование экономического неравенства с использованием программного обеспечения.

Агентное моделирование: Это метод, который фокусируется на моделировании поведения индивидуальных агентов (людей или организаций) и их взаимодействия с окружающей средой. Агентные модели часто применяются для изучения социальных норм, торговли, конфликтов.

Сетевые модели: Изучают взаимодействия между индивидами или группами через сеть социальных связей. Такие модели помогают понять распространение информации, эпидемий или вирусных идей через общественные группы и сети.

Примеры моделирования социальных процессов

Моделирование демографических изменений: С помощью математических уравнений можно прогнозировать численность населения в будущем, учитывая уровень рождаемости, смертности, миграции.

Моделирование распространения информации: Сетевые модели используются для изучения распространения слухов, новостей или технологий в социальных группах и интернет-сообществах.

Агентное моделирование поведения толпы: Исследования поведения толпы на массовых мероприятиях, демонстрациях или в экстремальных ситуациях, таких как эвакуация, помогают улучшить управление безопасностью.

Методологические подходы

Системный подход: Рассматривает общество как систему взаимосвязанных элементов. Каждый элемент имеет свои функции, и изменения в одном элементе приводят к изменениям в других.

Динамическое моделирование: Этот метод позволяет изучать социальные процессы во времени, выделяя ключевые этапы и зависимости.

Стохастические модели: Используются для анализа процессов, подверженных случайным факторам, таких как поведение индивидов в условиях неопределенности.

Преимущества моделирования

Возможность проведения виртуальных экспериментов с социальными системами, что невозможно в реальной жизни.

Анализ сложных взаимодействий и взаимозависимостей между элементами социальной системы.

Прогнозирование последствий различных сценариев развития общества.

Ограничения

Социальные системы слишком сложны и подвержены случайным факторам, что делает моделирование в некоторых случаях ненадежным.

Невозможность точно учитывать все социальные и культурные факторы, влияющие на поведение индивидов.

Модели могут давать упрощенное представление о реальных процессах, что требует осторожности при интерпретации результатов.

Заключение

Моделирование социальных процессов является мощным инструментом для изучения сложных социальных систем. Оно помогает понять основные закономерности социальных изменений, выявить ключевые факторы, влияющие на поведение людей и сообществ, и предложить более эффективные стратегии управления социальными процессами. Однако, как и любой метод, моделирование требует осторожного подхода и осознания его ограничений.

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АУДИТ СИСТЕМЫ МАРКЕТИНГА РОССИЙСКИХ КОМПАНИЙ: ТИПИЧНЫЕ ОШИБКИ И МЕТОДЫ ИХ ДИАГНОСТИКИ

Аннотация

Статья посвящена анализу типичных ошибок в системе маркетинга российских компаний и обсуждению эффективного метода их диагностики — аудита маркетинговой системы. Рассматриваются две формы организации аудита: внешний и внутренний, а также их преимущества и недостатки. Особое внимание уделяется конкретным методам сбора информации в процессе аудита и их влиянию на эффективность процедуры. Приводятся реальные кейсы российских компаний, демонстрирующие практическое применение методов аудита и устранение обнаруженных проблем.

Ключевые слова:

аудит маркетинга; российские компании; типичные ошибки; внешний аудит; внутренний аудит; методы диагностики; сбор информации; маркетинговая стратегия; маркетинговые коммуникации

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AUDIT OF THE MARKETING SYSTEM OF RUSSIAN COMPANIES: TYPICAL ERRORS AND METHODS OF THEIR DIAGNOSIS

Abstract

The article analyzes typical errors in the marketing systems of Russian companies and discusses an effective method for their diagnosis—the marketing system audit. Two forms of audit organization are considered: external and internal, along with their advantages and disadvantages. Special attention is paid to specific methods of information gathering during the audit process and their impact on the effectiveness of the procedure. Real cases of Russian

companies are presented, demonstrating the practical application of audit methods and the elimination of identified problems.

Key words:

marketing audit; Russian companies; typical errors; external audit; internal audit; diagnostic methods; information gathering; marketing strategy; marketing communications

Введение

В условиях динамично развивающейся экономики и усиливающейся конкуренции российские компании сталкиваются с необходимостью оптимизации своей маркетинговой деятельности для достижения устойчивого успеха на рынке [1]. Однако на практике часто возникают системные ошибки в организации маркетинга, которые негативно влияют на результаты бизнеса. Цель данной статьи — выявить типичные ошибки в системе маркетинга российских компаний и предложить эффективный метод их диагностики — аудит маркетинга.

1. Типичные ошибки в системе маркетинга российских компаний

1.1. Недостаточное понимание целевой аудитории

Описание проблемы:

- Отсутствие сегментации рынка: Многие компании не проводят детальный анализ и сегментацию своей целевой аудитории, что приводит к неэффективным маркетинговым коммуникациям.
- Игнорирование потребностей клиентов: Фокус на продукте, а не на потребностях и ожиданиях клиентов, снижает конкурентоспособность предложения.

Кейс:

Компания "ЭлектроТех", производитель бытовой техники, долгое время ориентировалась на широкий рынок без учета специфики разных сегментов. В результате маркетинговые кампании были малопродуктивными, а продажи снижались [2].

1.2. Непоследовательная маркетинговая стратегия

Описание проблемы:

- Отсутствие четкой стратегии: Разрозненные маркетинговые активности без единого плана и целей не приносят ожидаемого эффекта.
- Недооценка конкурентного анализа: Игнорирование действий конкурентов и рыночных тенденций ведет к потере рыночной доли.

Кейс:

Розничная сеть "Модный Дом" проводила акции и рекламные кампании без единой стратегии, что приводило к расходованию бюджета без значимого роста продаж [3].

1.3. Неэффективное использование маркетинговых инструментов

Описание проблемы:

- Устаревшие методы продвижения: Ориентация исключительно на традиционные каналы, игнорируя цифровые платформы и современные инструменты.
- Отсутствие интегрированного подхода: Разрозненные маркетинговые кампании без единой концепции и сообщения.

Кейс:

Компания "АльфаТур", туристический оператор, долгое время не использовала онлайн-каналы для продвижения, полагаясь только на печатную рекламу и офисные продажи. Это привело к снижению конкурентоспособности в сравнении с компаниями, активно использующими интернет-маркетинг [4].

1.4. Слабая аналитика и оценка эффективности

Описание проблемы:

- Недостаток метрик и KPI: Отсутствие системы оценки результатов маркетинговых усилий затрудняет понимание эффективности кампаний.
- Игнорирование обратной связи: Неспособность адаптироваться на основе отзывов и данных от клиентов приводит к потере лояльности.

Кейс:

Онлайн-магазин "ТехноМир" не отслеживал показатели конверсии и отказов на своем сайте, из-за чего не замечал проблем с пользовательским интерфейсом, что приводило к потере потенциальных клиентов [5].

2. Аудит системы маркетинга как метод диагностики

Аудит маркетинга — это всестороннее, систематическое и независимое исследование маркетинговой среды, целей, стратегий и деятельности компании с целью выявления проблем и возможностей для улучшения [1].

2.1. Цели аудита маркетинга

- Оценить соответствие маркетинговой стратегии целям компании.
- Выявить слабые и сильные стороны маркетинговой деятельности.
- Разработать рекомендации по повышению эффективности маркетинга.

3. Формы организации аудита

3.1. Внешний аудит

Описание:

Проводится независимыми экспертами или консалтинговыми компаниями, не связанными с организацией.

Достоинства:

- Объективность: Независимый взгляд позволяет выявить проблемы, незаметные изнутри.
- Экспертиза: Привлечение специалистов с опытом в разных отраслях и компаниях.
- Свежие идеи: Возможность внедрения передовых практик и инноваций.

Недостатки:

- Стоимость: Высокие затраты на привлечение внешних консультантов.
- Доступ к информации: Возможные ограничения в доступе к конфиденциальной информации.
- Время адаптации: Потребность во времени для понимания специфики компании.

Кейс:

Компания "БетаФарм" привлекла консалтинговую фирму "МаркетингПро" для проведения внешнего аудита. В результате были выявлены недостатки в позиционировании бренда и предложены стратегии по усилению присутствия на рынке [6].

3.2. Внутренний аудит

Описание:

Проводится силами сотрудников компании, обычно отдела маркетинга или внутреннего аудита.

Достоинства:

- Глубокое знание компании: Сотрудники хорошо понимают внутренние процессы и культуру.
- Экономия средств: Отсутствие дополнительных расходов на внешних специалистов.
- Быстрый доступ к данным: Легкость получения необходимой информации.

Недостатки:

- Предвзятость: Субъективность оценок из-за личной вовлеченности.
- Ограниченная экспертиза: Возможность недостатка опыта в специфических областях.
- Внутренние конфликты: Риск политических игр и сопротивления изменениям.

Кейс:

Торговая компания "Глобус" провела внутренний аудит маркетинга, однако из-за предвзятости некоторых сотрудников не были выявлены ключевые проблемы в коммуникациях с клиентами, что негативно сказалось на результатах [7].

4. Методы сбора информации при проведении аудита

- Анализ внутренней документации:
 - Маркетинговые планы и отчеты.
 - Бюджеты и финансовые показатели.
 - Документы по продажам и дистрибуции.
- Опросы и интервью:
 - Сотрудники компании: Для понимания внутренних процессов и проблем.

- Клиенты и партнеры: Для получения обратной связи о продукции и сервисе.
- Поставщики и дистрибьюторы: Для оценки эффективности цепочки поставок.
- Анализ рыночной информации:
 - Данные о конкурентах и отраслевых тенденциях.
 - Исследования рынка и потребительских предпочтений.
 - Статистические данные и аналитические отчеты.
- Наблюдение и тестирование:
 - Мистери-шоппинг: Оценка уровня обслуживания через скрытые проверки.
 - Анализ пользовательского опыта: Оценка взаимодействия клиентов с продуктами и сервисами.

Значимость методов:

Правильный выбор методов сбора информации повышает точность диагностики и позволяет сформировать обоснованные рекомендации по улучшению маркетинговой деятельности [8].

5. Обсуждение

5.1. Критический анализ

- Внешний аудит обеспечивает объективность и широкий взгляд, однако может быть дорогостоящим и требует тщательного выбора консультантов с учетом специфики компании и отрасли.
- Внутренний аудит более экономичен и оперативен, но рискует быть менее объективным и упускать внешние факторы, влияющие на бизнес.

5.2. Рекомендации по выбору формы аудита

- Комбинированный подход:
Использование преимуществ обоих видов аудита. Например, внутренний аудит для предварительного анализа и внешний аудит для независимой оценки и подтверждения результатов.
- Регулярность проведения аудита:
Установление графика регулярных проверок (например, ежегодно или ежеквартально) для своевременного выявления и устранения проблем.
- Выбор квалифицированных специалистов:
При привлечении внешних консультантов важно выбирать компании с проверенной репутацией и опытом в соответствующей отрасли.

5.3. Направления будущих исследований

- Влияние цифровизации на аудит маркетинга:
Изучение того, как современные технологии (Big Data, искусственный интеллект) могут улучшить процессы аудита и диагностики.

- Разработка методик для разных отраслей: Адаптация методов аудита к специфике различных секторов экономики (ИТ, производство, услуги и т.д.).

Заключение

Аудит системы маркетинга является важным инструментом для выявления и устранения типичных ошибок в деятельности российских компаний. Выбор между внешним и внутренним аудитом зависит от многих факторов, включая размер компании, бюджет, цели и внутренние ресурсы. Использование комбинированного подхода и регулярное проведение аудита помогут компаниям повысить эффективность маркетинговых стратегий и укрепить свои позиции на рынке.

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ПРЕДУПРЕЖДЕНИЕ ГЕОЛОГИЧЕСКИХ ОСЛОЖНЕНИЙ ПО УХОДУ БУРОВЫХ РАСТВОРОВ В ПЛАСТ ПРИ БУРЕНИИ СКВАЖИН

Аннотация. В статье приведены сравнительные анализы разработанных буровых растворов с многофункциональными свойствами для предупреждения геологических осложнений. В качестве, которого, был выбран реагент под условным названием УМС. Буровые растворы на основе мраморной пудры, шорсуйской глины, а также баритового концентрата, обработанные реагентом УМС, сохраняли свои первоначальные технологические параметры при длительном взаимодействии с глинистыми отложениями.

Ключевые слова: нефть, газ, площадь, предупреждение, бурение, геологические осложнения, буровые растворы, пористые породы, водоприток, газопроявление, осложнение, вязкость.

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PREVENTION OF GEOLOGICAL COMPLICATIONS IN THE CARE OF DRILLING FLUIDS IN THE FORMATION DURING DRILLING

Annotation. *The article presents comparative analyses of the developed drilling fluids with multifunctional properties to prevent geological complications. As which, a reagent was chosen under the conditional name UMS. Drilling fluids based on marble powder, Shorsu clay, and barite concentrate treated with the UMS reagent retained their original technological parameters during prolonged interaction with clay deposits.*

Keywords: *oil, gas, area, prevention, drilling, geological complications, drilling fluids, porous rocks, water inflow, gas occurrence, complication, viscosity.*

В республике в условиях роста потребности в нефти и газа из года в год требует поиска новых площадей, открытия новых месторождений и бурения новых скважин для увеличения добычи углеводородного сырья. Для этого необходимо уделять большое внимание развитию и внедрению передовых современных технологий и программных комплексов по предупреждению геологических осложнений и безаварийной проводке скважины. Исходя из этого, разработка буровых растворов с многофункциональными свойствами, а также создание новых технологий с целью предупреждения геологических осложнений в горно-геологических условиях имеет большое научное и практическое значение при строительстве скважин.

Геологический осложнений тесно связан с геологическими, технологическими, физико-химическими и другими факторами. Пористые породы, естественные и искусственно созданные трещины, кавернозные поры отслеживаются в пластах горных пород. Поры, соединенные между собой, образуют поровые каналы, по которым продвигаются флюиды и пластовые воды. Исходя из размера пор, скорость фильтруемых флюидов различна [1, 3].

Уход бурового раствора в продуктивных пластах происходит под давлением. Давление пласта в новых неопроискованных скважинах способствует уходу бурового раствора, который происходит часто из-за превышения гидростатического давления. Недоопределение давления пласта приводит к различным осложнениям. Разработанная авторами [6, 7, 8] тампонажная смесь на основе «микросферы» и полимера была рекомендована для ликвидации ухода жидкости в продуктивных горизонтах.

При возникновении катастрофического поглощения, водопритокков, обводнения скважин без газопроявления, установка цементных мостов путем доставки тампонажного раствора на контейнере, спускаемом на каротажном кабеле, с последующим сливом раствора в зону ухода дали положительные результаты [1, 3, 7, 8].

Значительным является открытие месторождения нефти и газа в Сурхандарьинской нефтегазоносной области, хотя горно-геологическое

строение этого района сложное и сильноизменчивое. Выявление закономерностей расположения стратиграфических слоев и их распространение вызывает определенные трудности, так как территория осложнена разнообразными видами тектонических нарушений. Однако интерес к изучению геологического строения и нефтегазоперспективности этого региона привлекло в него множество иностранных инвестиций [1, 2].

Так, например, при бурении скв.1 месторождения «25 лет независимости РУз» на глубине 275 м была встречена зона ухода буровых растворов. Буровой раствор имел плотность $1,30 \text{ г/см}^3$ и условную вязкость 45 с. Интенсивность ухода составляла $15 \text{ м}^3/\text{ч}$. Со снижением плотности раствора до $1,15 \text{ г/см}^3$ уже не наблюдалось ухода раствора. Скважину пробурили до глубины 497 м, спустив и зацементировав кондуктор диаметром 299 мм. После обвязки устья скважины противовыбросовым оборудованием продолжили углубление скважины [4]. Для предупреждения геологических осложнений нам были выбраны реагент под условным названием УМС, используемые в процессе бурения скважин, представляют собой высокомолекулярные органические высокогидрофильные соединения, в основном, растворимые в воде и образующие вязкие растворы, которые состоят из длинных макромолекул [2, 5].

Изучена плотностная характеристика и условной вязкости промывочной жидкости, приготовленной на основе пресной воды и влияние на этот процесс облегченного реагента УМС. Результаты исследования приведены на рис.1-3.

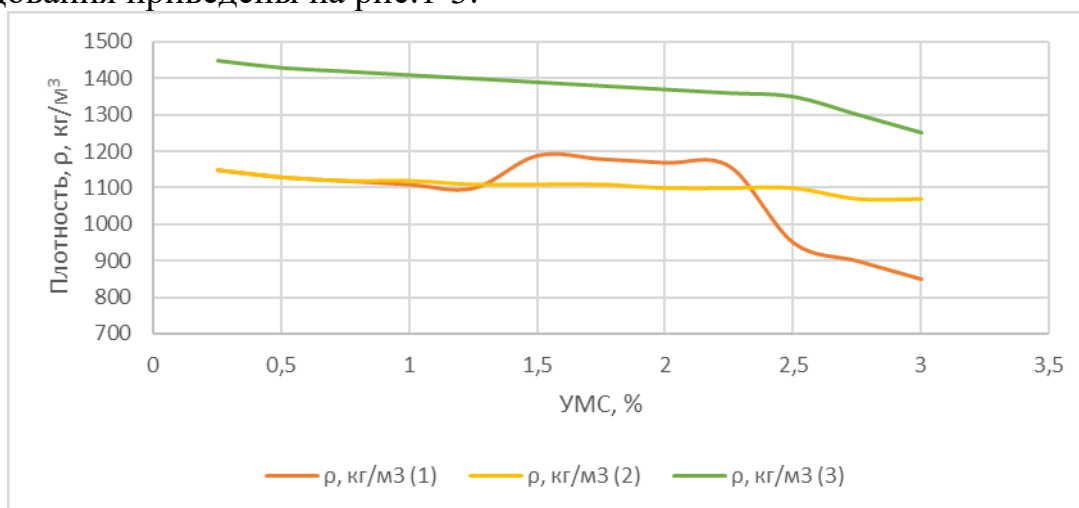


Рис. 1. Зависимость плотности буровых растворов с различными добавками с применением УМС:

1 — с мраморной пудрой; 2 — с шорсуйской глиной; 3 — с баритовым концентратом

Это объясняется тем, что на фильтрационной корке поровые каналы закупориваются дисперсными частицами смазывающей добавки, а также появлением на поверхности смазки в виде тонкой пленки.

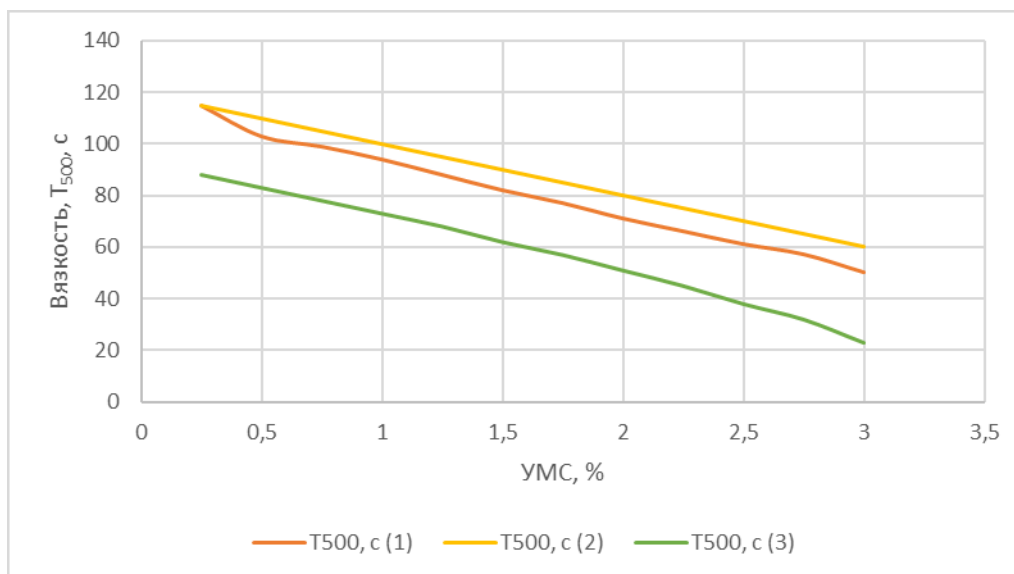


Рис. 2. Зависимости вязкости буровых растворов различными добавками с применением УМС:

1 – с мраморной пудрой; 2 – с шорсуйской глиной; 3 – с баритовым концентратом

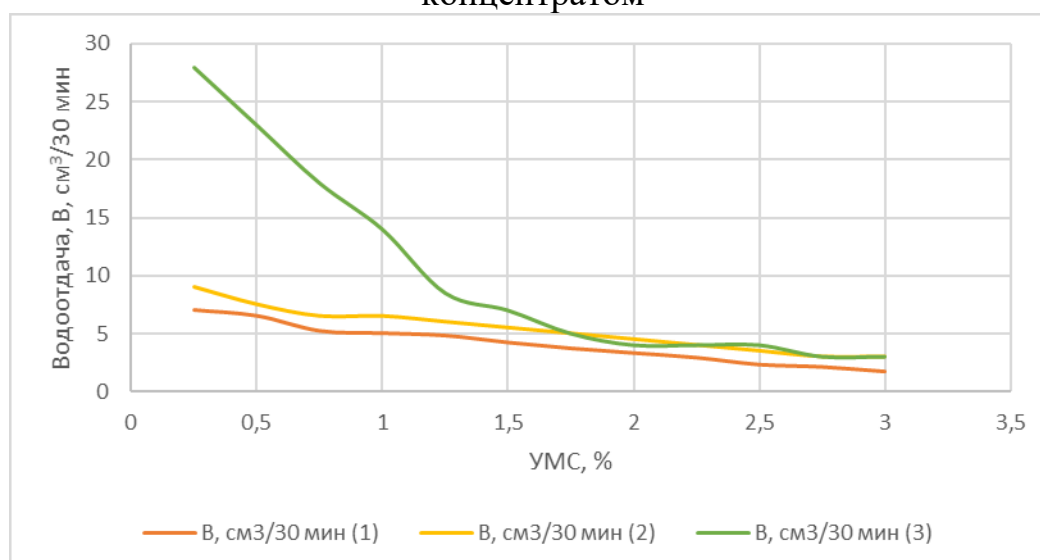


Рис. 3. Зависимости водоотдачи буровых растворов различными добавками с применением УМС:

1 – с мраморной пудрой; 2 – с шорсуйской глиной; 3 – с баритовым концентратом

Разработанный буровой раствор содержит в себе реагент УМС, который повышает их стабильность в процессе бурения скважин, а также при добавке в раствор реагента 0,5 и 3,0% начальная плотность снизилась соответственно от 950 до 700 кг/м³. При увеличении концентрации УМС плотность уменьшается и вязкостные характеристики значительно возрастают, который обеспечивает высокое стабилизирующее действие при длительном отстое бурового раствора, а также снижает плотностный характеристике от 0,95 до 0,7г/см³.

Буровые растворы на основе мраморной пудры, шорсуйской глины, а также баритового концентрата, обработанные реагентом УМС, сохраняют свои первоначальные технологические параметры при длительном взаимодействии с глинистыми отложениями и её можно рекомендовать для применения бурового раствора при прохождении геологических осложнений.

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ФЛОТАРЕАГЕНТЫ ДЛЯ ОБОГАЩЕНИЯ СУЛЬФИДНЫХ ПОЛЕЗНЫХ ИСКОПАЕМЫХ

Аннотация: В статье указаны основные флотареагенты применяемые в добыче золота из сульфидных полезных ископаемых. Также проведена информационные данные о работы за последние годы по переработке сульфидных руд сложного состава. Дано материалы по некоторых сульфидных руд которые имеет огромное значение в обогащение полезных ископаемых. Указано некоторые результаты реагентов после флотационного обогащения. Показан группы и типы флотируемой и не флотируемой руды .

Ключевые слова: минералы, спирт, T92, сульфидная руда, флотации, температура, извлечения.

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FLOT REAGENTS FOR ENRICHMENT OF SULPHIDE FOSSIL USERS

Abstract: The article indicates the main flotation reagents used in the extraction of gold from sulfide minerals. Information was also provided on the work in recent years on the processing of sulfide ores of complex composition. Materials

are given on some sulfide ores which are of great importance in the beneficiation of minerals. Some results of reagents after flotation enrichment are indicated. Groups of types of floatable and non-floatable ore are shown.

Key words: minerals, alcohol, T92, sulfide ore, flotation, temperature, extraction.

Введение. Заводы горнодобывающей промышленности для извлечения золотосодержащих сульфидных руд используют фотореагенты для более полного извлечения и разделения полезных ископаемых. При флотационном обогащении медно-молибденовой руды вместо традиционного пенообразователя Т-92, импортируемого из России, можно применить синтезированное на основе кретонового альдегида и этилового спирта соединение 1,1,3-триэтоксибутан (ТЭБ) [1-2], которое с успехом может быть использовано в качестве пенообразователя.

Методы и результаты исследований. Все руды по крупность частиц золота в которых находится в широком диапазоне — от тонкодисперсного до крупного, обогащаются по комбинированным схемам, включающим гравитационные процессы для извлечения крупного золота ($d > 0,1$ мм): отсадочные машины, шлюзы, винтовые сепараторы, гидроциклоны, концентраторы. Флотационный процесс используется перед извлечением тонкодисперсного золота, а часто и для выщелачивания щелочными цианидами. Особенностью флотации золото - серебряных или платиновых руд является низкое содержание металла и высокая плотность этих минералов (Золото и платина), а также часто отсутствие сульфидов или других минерализаторов пены.

Золотосодержащие руды классифицируются по характеру месторождения и в зависимости от сопутствующих рудных и нерудных минералов, например, кварцево-полевошпатовые руды, руды окисленных зон и т. п.

И. Н. Плаксин отмечает, что флотация применима к золотосодержащим рудам в следующих случаях:

а) Золото преимущественно или исключительно связано с сульфидами, и сульфидов достаточно для стабилизации пены и обеспечения флотации частиц золота.

б) Руда не содержит сульфидов, но содержит достаточное количество оксидов железа, серицита (россыпное золото).

в) Для разделения сульфидов, содержащих золото, от сульфидов, не содержащих золото.

г) Для выделения теллуридов золота и золотоносного пирита из хвоста цианирования (после их активации Cu^{2+}).

И. Н. Плаксин отмечает, что первый тип руд Au — кварцевые, малопригодны для флотации, так как отсутствуют сульфиды, стабилизирующие пену, а низкое содержание (несколько г/т золота) не

может минерализовать пену (создать трёхфазную пену). Поэтому для обеспечения флотационного извлечения частиц золота необходимо вводить в пульпу сульфиды и т. п.

Во второй группе руд золото связано с сульфидными минералами и минералами пустой породы.

К третьему типу относятся руды, содержащие минералы, вызывающие высокий расход цианида, преимущественно медные минералы.

Цель исследований: определение количества флотируемых веществ, их взаимодействие с флотореагентами и образование комплексных с флотореагентами соединений.

В таких рудах перед цианированием должна предшествовать флотация. В рисунки №1 дано технологическая флотационно-сорбционная схема золотосодержащих сульфидных руд. В месторождение Кукпотас-Узбекистан применяем следующие технологическая схема:

Сульфидная руда, крупностью 120 – 150 мм, подается в шаровую мельницу на измельчение, измельченная руда поступает на классификацию. Пески классификации возвращаются на измельчение, а слив с Т:Ж=1:3,5...4,0 и 85% класса 74мк, поступает на основную флотацию.

Снизу создано схема по данным исследование и рекомендована промышленных испытаний. см рис №1. На классификацию подается медный купорос (400 г/т). на основную флотацию – бутиловый ксантогенат (150 г/т), вспениватель – Т-66 (80 г/т). концентрат основной флотации направляется на перечистку. Хвосты основной флотации на контрольную флотацию. Концентрат первой перечистки, направляется на вторую перечистку, хвосты первой перечистки, направляются на основную флотацию. Концентрат контрольной флотации направляется на основную флотацию. Хвосты контрольной флотации, после сгущения, направляются на цианирование. Концентрат второй перечистки направляется на сгущение и фильтрацию. Хвосты второй перечистки направляются на первую перечистку, на контрольную флотацию подается бутиловый ксантогенат (50 г/т) и вспениватель – Т-66 (20 г/т).

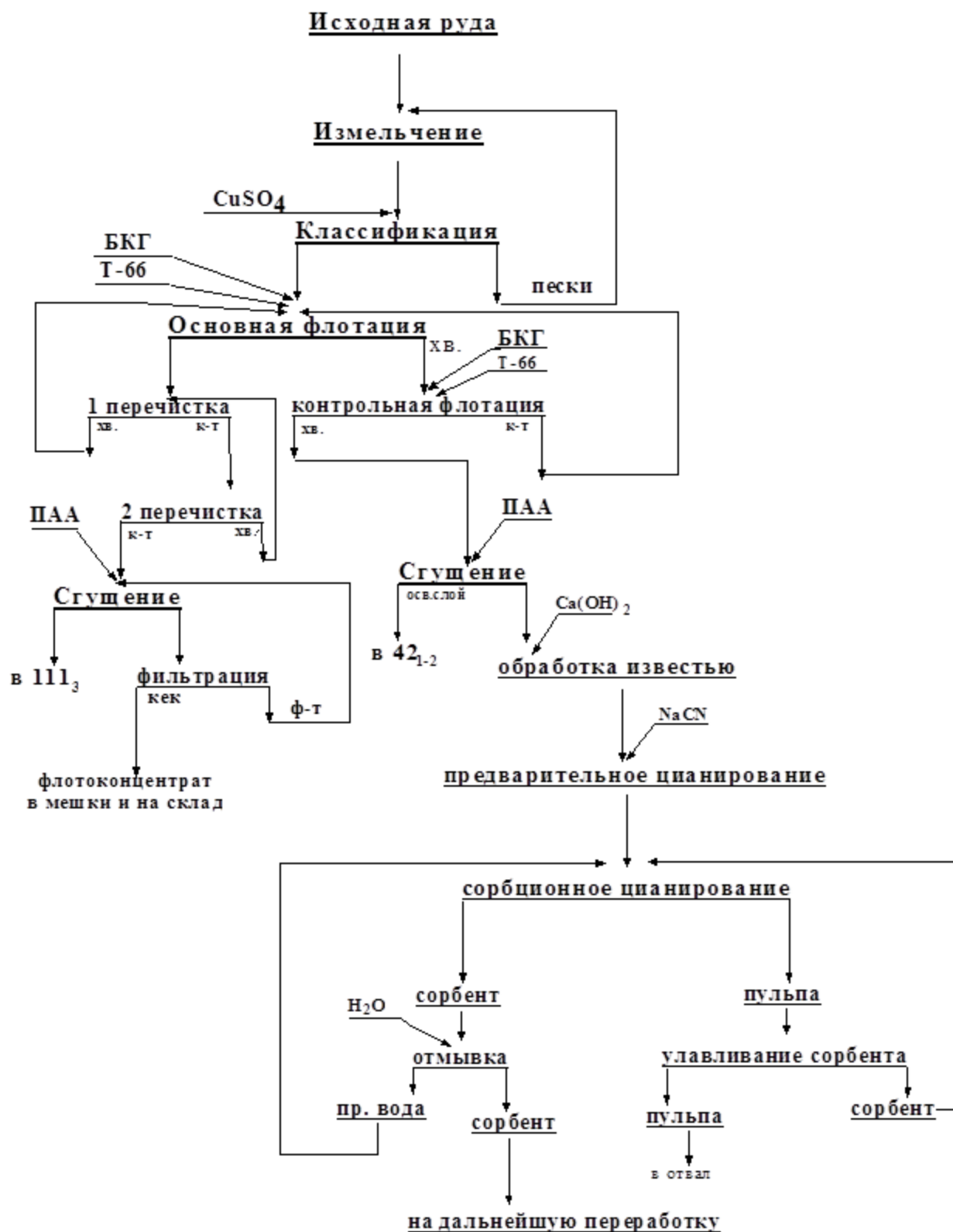


Рисунок 1. Флотационно-сорбционная схема золото - сульфидных руд

Углистые (графитовые) руды, цианирование которых затрудняется осаждением золота на угольных частицах. Необходимо выделение углистого вещества в отдельный углисто-золотой концентрат.

Флотация позволяет извлечь из руды сопутствующие золоту сульфиды меди, свинца, пирита, арсенопирита и другие, а также выделить (удалить) вещества, затрудняющие процесс извлечения золота: углерод, сурьму и др.

Наиболее важным условием, определяющим извлечение золота при любом процессе, является крупность частиц золота. Нижний предел крупности золотин для амальгамации составляет 26–37 мкм (в нашей стране этот метод запрещен), для цианирования — 2–9 мкм. Максимальный размер золота при флотации должно быть — менее 200 мкм. Колебания применимости методов обогащения зависят от формы нахождения Au и физических свойств руды. Золото-мышьяковистые, сурьмянистые и теллуристые руды. Упорная часть этих руд выделяется флотацией, а затем подвергается цианированию.

Силикаты — важные неметаллические соединения. Их происхождение эндогенное, главным образом магматическое, а силикаты экзогенного происхождения — это продукты выветривания или изменения первичных (эндогенных) минералов.

Таким образом при флотации выявлены следующие проблемы:

- избыточная сорбция гидроксидных и кальциевых ионов при флотации является причиной недоизвлечения золота при перечистой флотации.

- депрессантами для свободного золота являются карбонаты, фосфаты и арсенаты, некоторые из них могут быть трансформированы в активаторы.

- при добавлении гидросульфида натрия NaHS образуется жидкое стекло Na_2SiO_3 , которое само по себе является депрессантом.

- флотореагенты образуют покрытия на основе гидроксида железа и затрудняют флотацию золота.

- мономеры собирателя БКК превращаются в димеры (например ксантат в диксантат). В нейтральной или кислой среде выявлен обратный эффект из-за локального торможения процесса окисления БКК

Исследования granulометрической характеристики частиц золота, проведенные Хековым на продуктах пяти крупнейших месторождений Канады, показали, что 75% золота в рудах представлено частицами размером 0,1–0,01 мкм, частиц менее 10 мкм — обычно около 20%.

Осуществление эффективной извлечение золотосодержащих руд требует создания оптимальных условий подготовки пульпы и режима флотации: крупные золотины должны быть выделены перед флотацией гравитационными методами, крупность при флотации руды должна быть менее 0,2 мм. Предлагается заменить применяющиеся в настоящее время

вспениватели Т-80 и Т-92 на менее стойкие вспениватели, наподобие Флотанола Ц-7, используемой Красноярской ЗИФ.

Установлено, что извлечение частиц золота выше 0,2 мм стремится к нулю, а ниже — достигает 95%.

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ПУШТА ОЛИШДА БИР ЙЎЛА МАЪДАНЛИ ЎҒИТ СОЛУВЧИ ИШ ОРГАНИ ПАРАМЕТРЛАРИ ВА УНИНГ ИШ СИФАТИГА ТАЪСИРИ

Аннотация: Ушбу мақолада муаллиф чигитни пуштага экиб, ўғитни сепишда ўғит, тартибли ҳаракати тасма эни бўйлаб сепилиши нотекислиги камайтириши тўғрисида сўз юритган.

Калим сузлар: Маъданли ўғитлар, асосий ва экиш олди меъёрлари, пушта шакллантириши, чигит, пахта етиштириши, чизиқ, ёнбош ўғит ўтказгич, тикка нисбатан ўрнатилиш бурчаги, орқа томонининг олд.

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PARAMETERS OF A SINGLE-WAY MINERAL FERTILIZER WORKING BODY AND ITS INFLUENCE ON WORK QUALITY

Abstract: In this article, the author talked about reducing the unevenness of spreading the fertilizer, orderly movement along the width of the belt when planting the seed in the field and spreading the fertilizer.

Key words: Mineral fertilizers, basic and pre-sowing standards, cotton formation, seed, cotton cultivation, strip, lateral fertilizer transfer, installation angle relative to the upright, front of the back.

Маъданли ўғитлардан фойдаланиш самарадорлигини ошириш йўлларида бири уларни асосий ва экиш олди меъёрларини бир вақтда солишдир. Буни амалга ошириш учун пушта шакллантиришда бир йўла ўғит солиш мақсадга мувофиқдир.

Адабиётларда келтирилган таҳлилидан чигитни пуштага экиб, пахта етиштиришда чизиқнинг икки ён томонига ҳамда остига жойлашиши лозим. Шунга кўра ишлаб чиқарилган ўғитлагичда [1] ўғитни экиш чизиғининг икки ён томонига агротехник талаб даражасида солинишини ўрганишда ёнбош ўғит ўтказгич узунлигининг (l_e), тикка нисбатан ўрнатилиш бурчаги (β), орқа томонининг олд томонига нисбатан қисқарин бурчаги (θ) ва юриш баландликлари ўзгартирилди.

Иш сифати ўғитни экиш чизиғига нисбатан тушиш масофаси, сепилаётган ўғит тасмасини кенлиги ҳамда у бўйича ўғитнинг сепилиш нотекислиги билан баҳоланди. Бу кўрсаткичлар ўғитларнинг

донадорлигидан келиб чиқиб 10 мм кенгликдаги катакчаларга бўлинган мосламадан фойдаланиб аниқланди. Бунга ўғитни экиш чизиғидан тушиш масофаси ва ўғит сепилаётган тасма эни мосламадаги ўғит тушган катакчаларини санаб, ўғитни тасма кенглиги бўйича сепилиш нотекислиги ҳар бир катакчаларга тушган ўғит массаси ўлчаб аниқланди.

Тажрибаларни ўтказиш учун ёнбош ўғит ўтказгичнинг тикка нисбатан ўрнатилиш бурчагини ўзгартириш имкониятига эга бўлган иш органи ҳамда турли узунлик ва қисқартириш бурчагига эга бўлган ёнбош ўғит ўтказгичлар тайёрланди (1- расм).

Тажрибавий иш органи ёнбош ўғит ўтказгичининг тикка нисбатан ўрнатилиш бурчагини ростловчи туткич 3 ёрдамида, юриш баландлиги уни тикка нисбатан силжитиш йўли билан, ёнбош ўғит ўтказгичнинг узунлиги ва у орқа томонини олд томонига нисбатан қисқартириш бурчаги турли узунлик ҳамда қисқартириш бурчагига эга бўлган ёнбош ўғит ўтказгичлар (1,а ва б-расмлар) ҳисобига ўзгартирилди

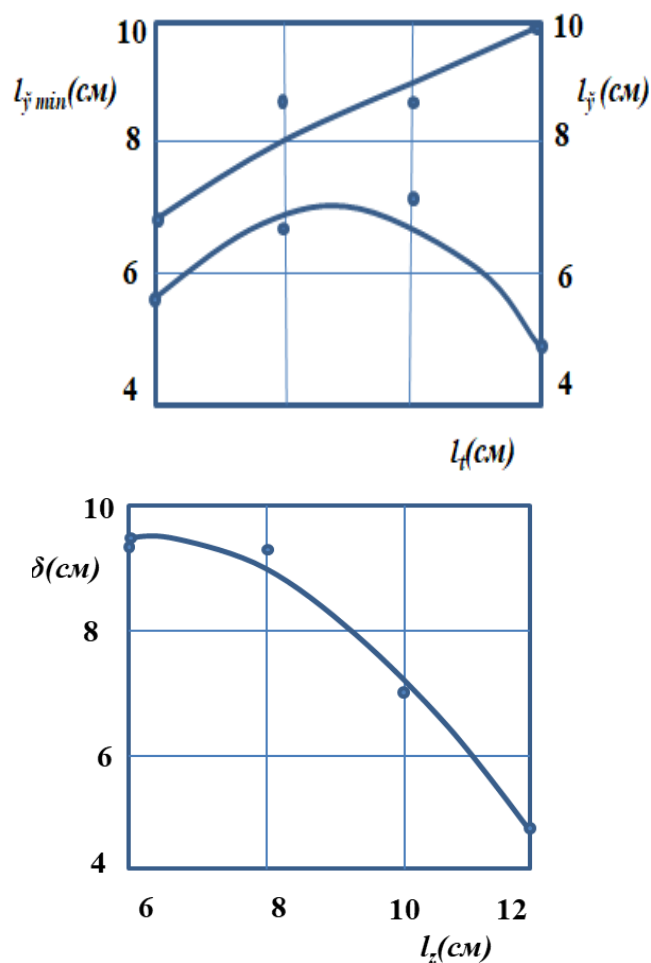


1-расм. Тажрибавий иш орган (а), турли хил узунлик (б) ва қисқартириш бурчаги (в)га эга бўлган ёнбош ўғит ўтказгичлар.

Тажрибаларда ёнбош ўғит ўтказгичини тикка нисбатан ўрнатилиш бурчаги 25° дан 70° гача 15° интервалда, юриш баландлигини 4 см дан 10 см гача 2 см ораликларда, узунлиги 6 см дан 12 см гача 2 см интервалда ҳамда қисқариш бурчаги 30° дан 60° гача 20° интервалда ўзгартирилди.

Ўтказилган тажрибалар натижаларидан (2-расм) кўриниб турибдики, ёнбош ўғит ўтказгич узунлигининг ортиши билан ўғитнинг экиш чизиғидан тушиш масофаси ортмоқда, бунга ёнбош ўғит ўтказгичда ўғитнинг экиш чизиғига нисбатан узоқроқ юриши сабаб бўлмоқда. Ёнбош ўғит ўтказгичнинг узунлиги 6,0 см дан 10,0 см га ортганда, ўғит тасмасининг кенглиги 5,8 см дан 7,0 см гача кенгаймоқда, 10 см дан 12 см

гача узайганда, бу кўрсаткич 7,0 см дан 5,0 см гача камаймоқда. Буни ёнбош ўғит ўтказгич узунлиги 10,0 см дан ортганда, олд томолаги ўғит тезлиги билан орқа томондаги ўғит тезлиги ўртасидаги фарқ камайгани билан изҳлаш мумкин. Ўғитни сепилиш кенлиги бўйича нотекислиги ёнбош ўғит ўтказгич узунлиги 6 см дан 12 см гача ортганда 9, 14 фоиздан 4,60 фоизга камаймоқда. Бунга ёнбош ўғит ўтказгичнинг узунлиги ортиши билан унда ҳаракатланаётган ўғит бўлакчаларининг бир тартибли ҳаракатга ўтиши сабаб бўлмоқда.



а)

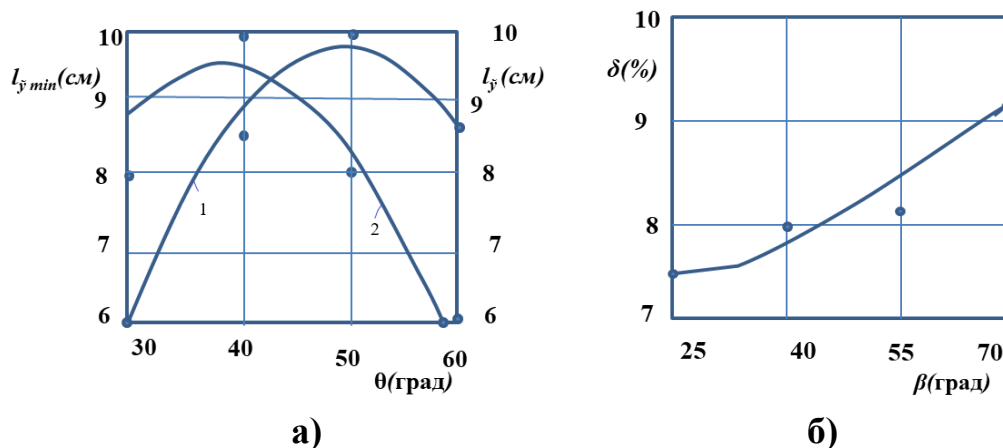
б)

а) ўғитнинг экиш чизиғидан тушиш масофаси (1) ва ўғит сепилаётган тасма кенлиги (2); б) тасма кенлиги бўйича ўғитнинг сепилиш нотекислиги.

2-расм. Иш органи иш кўрсаткичларини ёнбош ўғит ўтказгичнинг узунлигига боғлиқ равишда ўзгариши.

Ёнбош ўғит ўтказгичнинг ўрнатилиш бурчаги бўйича ўтказилган тажрибалар натижаларидан (3-расм) кўриниб турибдики, бу бурчак 55° бўлганда ўғитларнинг экиш чизиғидан тушиш масофаси максимал қийматга эга бўлмоқда, сўнгра бу масофа камайиши кузатилди. Ёнбош ўғит ўтказгичининг ўрнатилиш бурчаги 25° дан 55° гача ортиши билан унинг узунлиги ўзгармас бўлгани учун ўғитни экиш чизиғидан эркин

ҳаракатга ўтиш масофаси ортмоқда ва эришган тезлиги билан узоқроққа тушмоқда, аммо бу қиймат 55° дан катта бўлганда у ўғитнинг ташқи ишқаланиш бурчагидан катта бўлганлаги учун ўғит тезлиги камайиб, яқин масофага келиб тушмоқда.



а) ўғитнинг экиш чизиғидан тушиш масофаси (1) ва ўғит сепилаётган тасма кенлиги (2); б) тасма кенлиги бўйича ўғитнинг сепилиш нотекислиги.

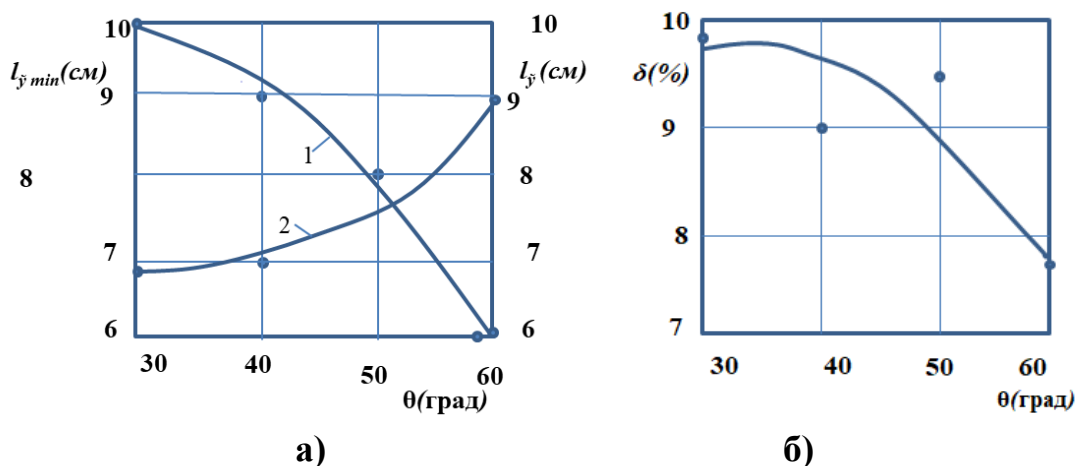
3-расм. Иш органи иш кўрсаткичларини ёнбош ўғит ўтказгичнинг ўрнатилиш бурчагига боғлиқ равишда ўзгариши.

Бу ҳолат тасманинг кенлигига ҳам таъсир кўрсатиб, учиш масофаси камаймоқда. Шу сабабларга кўра ўғитни тасма кенлиги бўйича сепилиш нотекислиги ортиб бормоқда.

Шундай қилиб, ёнбош ўғит ўтказгич ўрнатилиш бурчаги 25° дан 55° гача ортганда ўғитнинг экиш чизиғидан тушиш масофаси 6,0 см дан 8,0 см га ортмоқда, $55-70^{\circ}$ оралиқда эса 8,0 см дан 7,4 см га камаймоқда. Тасма кенлиги бу бурчак $25-40^{\circ}$ оралиғида бўлганда ортмоқда, $40-70^{\circ}$ оралиқда камаймоқда. Ўз навбатида бу ўғитнинг сепилиш нотекислиги ёмонлашишига олиб келмоқда.

Ўтказилган тажриба натижаларидан (4-расм) кўриниб турибдики, ёнбош ўғит ўтказгичнинг қисқартириш бурчаги 30° дан 60° га ошиши билан ўғитнинг экиш чизиғидан тушиш масофаси 10 см дан 6 см га қисқарди, лекин тасма кенлиги 7 см дан 9 см га кенгайди. Бунга сабаб қисқартириш бурчаги ортиши билан ёнбош ўғит ўтказгич орқа катталашади ва шу сабабли ўғит солаётган тасмаси кенлиги ортади.

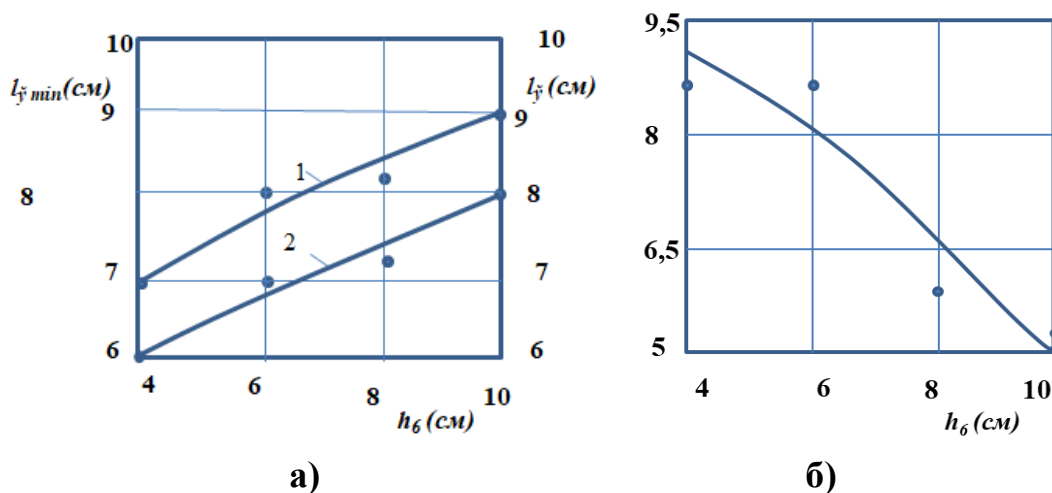
Тасма эни бўйича ўғитнинг сепилиш нотекислиги 9,5 фоиздан 7,8 фоизга камайди. Қисқартиришнинг ҳар бир градусларига боғлиқ ҳолда нотекислик тавсифини таҳлил этадиган бўлсак, у бир маромда ўзгармаслигини кўрамиз. Жумладан, қисқартириш бурчаги 30° дан 50° га



а) ўғитнинг экиш чизиғидан тушиш масофаси (1) ва ўғит сепилаётган тасма кенлиги (2); б) тасма кенлиги бўйича ўғитнинг сепилиш нотекислиги.

4-расм. Иш органи иш кўрсаткичларини ёнбош ўғит ўтказгичнинг қисқартириш бурчагига боғлиқ равишда ўзгариши.

Ўзгарганда ўғитнинг сепилиш нотекислиги бир маромда, 50° дан 60° га ўзгарганда кескин суратда камаймоқда.



а) ўғитнинг экиш чизиғидан тушиш масофаси (1) ва ўғит сепилаётган тасма кенлиги (2); б) тасма кенлиги бўйича ўғитнинг сепилиш нотекислиги.

5-расм. Иш органининг иш кўрсаткичларини ёнбош ўғит ўтказигичнинг юриш баландлигига боғлиқ равишда ўзгарири.

Хулоса

Тажрибалар натижаларидан (5-расм) кўриниб турибдики, юриш баландлигининг 4 см дан 10 см га ошиши, ўғитни экиш чизиғидан тушиш масофаси 7 смдан 9 см га ўғит тасмасининг кенлиги юриш баландлиги 4 см да 9,14%ни ташкил этган бўлса, 10 см да 5,2% ни ташкил эган, яъни камайган. Буларни қуйидагича изоҳлаш мумкин: ёнбош ўғит ўтказгичдан чикқадан кейин узоқроқ муддат эркин ҳаракатда бўлиб, қўндаланг тезлик

ҳисобига экиш чизигидан узоқроқ масофага бориб тушмоқда ҳамда ўғитни тартибли ҳаракати тасма эни бўйлаб сепилиши нотекислиги камаймоқда.

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БИОТЕХНОЛОГИЧЕСКИЕ ПОДХОДЫ К УЛУЧШЕНИЮ ФУНКЦИОНАЛЬНЫХ СВОЙСТВ СУХОГО МОЛОКА

Аннотация: В данной работе рассматривается применение биотехнологических подходов для улучшения функциональных свойств сухого молока. Анализируется метод ферментативной модификации белков, который включает использование протеаз и липаз для повышения растворимости, улучшения вкусовых качеств и увеличения стабильности питательных веществ. В статье предоставляется всестороннее исследование воздействия ферментативной обработки на физико-химические и органолептические свойства молочного порошка. Рассматриваются различные аспекты, такие как сохранность витаминов, консистенция после растворения и устойчивость к комкованию. В результате проведенного исследования установлено, что ферментативная модификация позволяет достичь значительных улучшений в растворимости (увеличение на 25%), сохранности питательных веществ (повышение на 30%) и вкусовых качествах, что подтверждается положительными отзывами 80% участников дегустации.

Ключевые слова: Биотехнология, ферментация, сухое молоко, растворимость, витамины, консистенция, комкование, питательные вещества, органолептика, модификация

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BIOTECHNOLOGICAL APPROACHES TO IMPROVING THE FUNCTIONAL PROPERTIES OF DRY MILK

Abstract: This paper discusses the application of biotechnological approaches to improving the functional properties of milk powder. The method of enzymatic modification of proteins is analyzed, which includes the use of proteases and lipases to increase solubility, improve taste and enhance nutrient stability. The article provides a comprehensive study of the effect of enzymatic treatment on the physicochemical and organoleptic properties of milk powder. Various aspects such as vitamin retention, consistency after dissolution and resistance to caking are considered. As a result of the study, it was found that enzymatic modification allows achieving significant improvements in solubility

(increase by 25%), nutrient retention (increase by 30%) and taste, which is confirmed by positive feedback from 80% of tasters.

Key words: Biotechnology, fermentation, dry milk, solubility, vitamins, consistency, clumping, nutrients, organoleptics, modification

Введение. Сухое молоко является важным компонентом пищевой промышленности, используемым в различных продуктах питания, включая кондитерские изделия, детское питание и напитки. Однако в условиях роста потребностей рынка и требований к качеству продуктов, возникает необходимость улучшения его функциональных свойств, таких как растворимость, вкусовые характеристики и питательная ценность. Биотехнологические подходы играют ключевую роль в разработке технологий, которые могут значительно повысить качество и функциональность сухого молока, применяя новейшие достижения науки и техники для улучшения структуры белков, содержания биоактивных веществ и устойчивости к внешним воздействиям.

Методология. Ферментативная модификация белков сухого молока является эффективным биотехнологическим подходом для улучшения его функциональных свойств. Основной принцип методики заключается в использовании ферментов, таких как протеазы и липазы, которые способствуют расщеплению белков и жиров на более мелкие компоненты, повышая их растворимость и биодоступность.

Процесс начинается с растворения сухого молока в воде при контролируемой температуре (около 40-45°C). Затем в раствор добавляются ферменты, которые воздействуют на белки и липиды. Важно контролировать параметры процесса, такие как температура, уровень pH и продолжительность ферментативной обработки. Оптимальный уровень pH для работы большинства протеаз — это диапазон 6,0-7,5. Время обработки может варьироваться от 30 минут до нескольких часов в зависимости от концентрации фермента и желаемого уровня модификации белков.

После ферментативной обработки раствор подвергается сушке. Применяется метод распылительной сушки для восстановления сухого состояния молока с улучшенными функциональными свойствами. Полученный продукт обладает улучшенной растворимостью, устойчивостью к комкованию и сохранением биодоступности питательных веществ, что является важным для длительного хранения и дальнейшего использования в пищевой промышленности.

Методика ферментативной модификации может быть адаптирована для различных условий и масштабов производства, от лабораторных исследований до промышленного уровня.

Результат. В ходе исследования была применена методика ферментативной модификации белков сухого молока с использованием протеаз и липаз для улучшения его функциональных свойств. Основной

целью исследования было повышение растворимости продукта и стабилизация питательных веществ при длительном хранении.

По результатам проведённых экспериментов установлено, что ферментативная обработка привела к значительному улучшению растворимости сухого молока. Растворимость продукта увеличилась на 25% по сравнению с контрольной группой, которая не подвергалась ферментативной модификации. Это позволило устранить проблему комкования и повысить удобство использования сухого молока в производстве различных продуктов питания.

Кроме того, в результате микроинкапсуляции биологически активных компонентов, таких как витамины А и D, их сохранность увеличилась на 30% после процесса сушки по сравнению с необработанным образцом. Это свидетельствует о высокой эффективности метода в защите питательных веществ от разрушения во время технологических операций.

Вкус и органолептические свойства продукта также улучшились, что было подтверждено результатами сенсорного анализа: 80% участников дегустации отметили улучшенные вкусовые характеристики модифицированного продукта по сравнению с традиционным сухим молоком.

Данное исследование подтвердило эффективность ферментативной модификации белков для улучшения функциональных свойств сухого молока и повысило его качество как для конечного потребителя, так и для промышленного использования.

Таблица 1.

Оценка функциональных свойств молочного порошка

Показатель	Контрольная группа	Обработанная группа	Изменение (%)
Растворимость	100%	125%	+25%
Сохранность витаминов А и D	70%	100%	+30%
Оценка вкусовых качеств (доля положительных отзывов)	-	80%	-
Содержание белка	90%	92%	+2%
Содержание жира	15%	14%	-1%
Консистенция после растворения	85%	95%	+10%
Устойчивость к комкованию	70%	90%	+20%

Заключение. Биотехнологические подходы, такие как ферментация и микроинкапсуляция, предлагают эффективные решения для улучшения функциональных свойств сухого молока. Эти технологии позволяют не

только повысить растворимость и стабильность молочного продукта, но и улучшить его питательную ценность, сохраняя биоактивные компоненты. Внедрение данных методов в промышленное производство сухого молока имеет потенциал улучшить качество конечных продуктов, отвечая современным требованиям потребителей и стандартам качества.

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ВЛИЯНИЕ СМЕРТНОСТИ НА ЕСТЕСТВЕННЫЙ ПРИРОСТ НАСЕЛЕНИЯ

***Аннотация:** В статье на основе статистических данных проанализированы показатели смертности на уровне регионов республики за годы независимости и по настоящее время, которые сгруппированы по полученным результатам.*

***Ключевые слова:** смертность, коэффициент смертности, географическое соотношение, группировка, причины смерти.*

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THE INFLUENCE OF MORTALITY RATE ON NATURAL POPULATION INCREASE

***Abstract:** In the article are analyzed based on statistical data and grouped according to the obtained results of the death rates at the level of the republic's regions from the years of independence to the present.*

***Key words:** death rate, death coefficient, geographic coefficient, clustering, grouping, causes of death*

Одним из основных критериев, характеризующих естественное движение населения, является уровень смертности. Этот процесс представляет собой процесс гибели населения и поколений в определенной социальной среде в определенный период или время. На колебание уровня смертности влияют оценка уровня жизни населения в определенном регионе, условия труда, эффективность здравоохранения, санитарная культура общества, экологическое состояние среды обитания, а также самосохранение населения.

Ученые впервые классифицируют причины смерти среди населения на две группы: эндогенные и экзогенно обусловленные. Смерть в результате врожденных заболеваний, которые вытекают из биологии каждого человека и связаны с наследственностью, - это эндогенные причины. Смерть в результате врожденных нарушений, связанных с наследственностью, чаще встречается среди новорожденных, и иногда смерть по той же причине может наступать и среди пожилых людей.

В целом, люди очень редко умирают от эндогенных причин. Абсолютное большинство смертей среди населения связано с экзогенными причинами. Они происходят в результате внешнего воздействия на организм человека. Внешнее воздействие относится ко всем средам, в которых живут люди (природная среда, искусственная среда, созданная руками людей благодаря их труду, социальная среда).

Частота смертей среди населения зависит от многих факторов и она являлось непрерывным и неизбежным процессом, оказывает большое влияние на темпы воспроизводства населения. При этом смертность является и биологическим, и социальным процессом. Поэтому на уровень смертности влияют также различные факторы, присущие каждому общественно-экономическому строю. На смертность оказывают определенное влияние и исторически сложившиеся особенности возрастного состава населения в каждый конкретно изучаемый период времени.

Естественный прирост населения также зависит от уровня смертности. В связи с этим существует определенная степень несоответствия в отношении социально-экономического развития, демографической ситуации и экологического состояния регионов. В частности, если мы посмотрим на это с точки зрения экологической ситуации, то в течение нескольких лет утверждалось, что высыхание Аральского моря негативно скажется на здоровье населения, проживающего вокруг него. Баланс природы в этом районе значительно изменился.

Особенно серьезное воздействие на окружающую среду оказывает подъем пылевых соляных бурь из засушливых районов Аральского моря. Плохое экологическое состояние можно также наблюдать в крупных городах и промышленных центрах (Чирчик, Ангрен, Навои и др.). Подобные неудобства условий проживания и недостаточное обеспечение чистой питьевой водой также в определенной степени приводят к увеличению смертности. В основном это характерно для пустынных и горных районов.

Известный российский демограф Б. С. Урланис высказывает следующие мысли о смертности населения и ее причинах: «Смерть может быть на разных уровнях. Каждый рожденный рано или поздно умрет. Есть поговорка: первый шаг ребенка – это его первый шаг к смерти. Однако конец этого дела иной. Продолжительность жизни человека варьируется или колеблется от нескольких секунд до 100 лет и более» [3].

Анализ статистических данных показывает, что уровень смертности в Узбекистане за последние годы несколько снизился. Например, в 1991 году уровень смертности в республике составлял 6,2 промилле, а в 2005 году этот показатель снизился до 5,4 промилле, то есть за рассматриваемый период смертность снизилась на 0,8 промилле.

Кроме того, в 2006 году уровень смертности составлял 5,3 промилле, к 2021 году он снизился до 5,0 промилле, и мы видим, что за исследуемый период смертность снизилась до 0,3 промилле. Разница в снижении смертности за первый анализируемый 15-летний период больше, чем снижение за следующие 15 лет (0,8; 0,3 ‰).

Анализируя этот процесс на уровне регионов, отмечается, что в эти годы уровень смертности в Ташкентской области незначительно вырос (6,6-6,8‰). Однако в городе Ташкенте этот показатель частично изменился (8,6‰), в то время как в 1995-1996 годах он несколько увеличился (9,2-9,3‰). Также в Республике Каракалпакстан, в зависимости от экологической ситуации, уровень смертности выше (5,8 ‰).

При этом уровень смертности в Сурхандарьинской и Кашкадарьинской областях, имеющих высокий уровень рождаемости, значительно ниже (4,0 ‰), чем в других регионах. Такая же ситуация, то есть низкий уровень смертности, приводит к высокому естественному приросту населения в этих регионах. Согласно анализу статистических данных, в период с 1991 по 2001 год уровень смертности то снижался, то увеличивался. Однако в течение 2002-2004 годов отчетливо заметно ее снижение. Во многом это можно объяснить принятием новых реформ в системе здравоохранения республики и их фактической реализацией.

Уровень смертности в городе Ташкенте несколько выше. На это влияют возрастной и национальный состав населения, миграция, урбанизированная социальная среда, транспортные и экологические условия. Вышеизложенное частично относится и к Ташкентской области, поскольку регион непосредственно окружает столицу и, несомненно, находится под влиянием демографической ситуации столицы.

Таким образом, на основе изучения территориальных особенностей смертности регионов республики можно наблюдать определенный демографический переходный период от первых лет независимости до наших дней. Изменения смертности в демографических процессах этого периода целесообразно изучить в двух периодах.

Первый период - это период значительного снижения смертности, включая 1991-2005 годы, а во втором периоде, т.е. в 2006-2021 годах, изменения показателей смертности не претерпевают значительных колебаний. В частности, мы можем разделить регионы республики на следующие группы в соответствии с показателями смертности за 1991-2005 годы (первый период):

- Регионы с высоким уровнем смертности (6,1 ‰ и более): город Ташкент и область, Республика Каракалпакстан;
- Регионы со средней смертностью (5,5-6,0 ‰): Сырдарьинская, Навоийская, Андижанская, Ферганская, Хорезмская, Самаркандская;
- Регионы с низкой смертностью (5,4 ‰ и менее): Сурхандарьинская, Кашкадарьинская, Джизакская, Бухарская, Наманганской области.

Следует отметить, что в Узбекистане особое внимание уделяется здоровью матерей и детей, а введение многих льгот приводит в большинстве случаев к снижению детской смертности. Также сокращение числа детей в семьях, то есть снижение рождаемости, обуславливает и снижение общей смертности.

Группировка регионов республики по уровню смертности в 2006-2021 гг. (второй период):

- Регионы с высоким уровнем смертности (5,4 ‰ и более): город Ташкент и область;
- Регионы со средней смертностью (4,8-5,3 ‰): Республика Каракалпакстан, Сырдарья, Фергана, Андижан;
- Регионы с низкой смертностью (4,7 ‰ и менее): Кашкадарьинская, Джизакская, Сурхандарьинская, Самаркандская, Бухарская, Наманганской, Навоийская, Хорезмская области.

Согласно результатам группировки, регионы с высокой смертностью в первом периоде ко второму периоду сократились на один. Однако в первый период провинций с низким уровнем смертности было 5, в то время как ко второму периоду, то есть к 2026-2021 годам, их стало 8. Видно, что в последующие годы наблюдается снижение уровня смертности на уровне провинций республики.

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ИССЛЕДОВАНИЕ ПРЕОБРАЗОВАТЕЛЕЙ ТОКА В НАПРЯЖЕНИЕ

***Аннотация.** В статье приведены результаты аналитических исследований статических и динамических характеристик электромагнитных преобразователей тока трехфазной электрической сети источников реактивной мощности, построенные на основе плоской измерительной обмоткой.*

***Ключевые слова:** ферромагнитный сердечник, математическое моделирование, характеристика управления, вольт-амперная характеристика*

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STUDY OF CURRENT-TO-VOLTAGE CONVERTERS

***Abstract:** In article given results of the analytical research of static's and dynamics characteristics of the electromagnetic converters of the current three-phase electric network of reactive power, constructed on base of the flat measuring windings.*

***Key words:** ferromagnetic core, mathematical modeling, control characteristic, current-voltage characteristic.*

Становление экономики государства сопровождается развитием электроэнергетических систем ростом объема и мощности промышленных потребителей электроэнергии. Проблема энерго и ресурсосбережения напрямую связана с ущербом от срыва технологического процесса и недоотпуска электроэнергии, возникающим при авариях в трехфазных электрических сетях источников реактивной мощности системы электроснабжения [1-3]. Обеспечение надежности системы электроснабжения можно только при комплексном решении взаимосвязанных вопросов, начиная от выбора первичного преобразователя тока и напряжения, и заканчивая выбором систем и устройств учета, контроля и защиты источников реактивной мощности, построенные на основе современных многофазных электромагнитных

преобразователей тока в напряжение с плоскими измерительными обмотками. Для управления и регулирования с непрерывным процессом, имеющих в различных отраслях экономики, большое значение имеет надежность электроавтоматики, так как перерывы электропитания и неправильный контроль электроэнергии подобных объектов ведут к значительному экономическому ущербу. Бесперебойность электроснабжения, надежное отключение поврежденных участков электроэнергетической системы и потребителей электроэнергии а также постоянный контроль и регулирования в необходимых режимах обеспечивается преобразовательными элементами автоматики (ПЭА) В работе приведены результаты исследования электромагнитных преобразователей тока в напряжение.

Классические электромагнитные измерительные преобразователи тока в напряжение электрической энергии не обеспечивают требуемой точности, предъявляемые современными системами релейной защиты, автоматизированными системами контроля и учета электроэнергии [1-3].

На чертежах представлена конструкция электромагнитного преобразователя тока в напряжение: на рис.1 А) – общий вид преобразователя; на рис. 1.Б) – изоляционные пластинки с плоскими измерительными катушками.

Устройство содержит (рис.1 А),Б)) плоские измерительные катушки 1,2 и 3, изоляционные пластинки 4, 5 и 6, стержня 7, 8, 9, 10, 11 и 12, магнитопровод с стержнями трехлучевой звездообразной формы с общим основанием 13, первичные обмотки 14 (фаза А), 15 (фаза В) и 16 (фаза С) и дополнительные сердечники 17, 18 и 19.

Преобразователь работает следующим образом.

При протекании тока в одной 14, второй 15 или третьей 16 фазах электрической сети, в стержнях 7, 8, 9, 10, 11 и 12 магнитопровода с стержнями трехлучевой звездообразной формы с общим основанием 13 появляются магнитные потоки Φ_1 , Φ_2 и Φ_3 , которые в зазорах между торцами стержней 7, 8, 9, 10, 11 и 12 магнитопровода с стержнями трехлучевой звездообразной формы и дополнительными сердечниками 17, 18 и 19 пересекают витки плоских измерительных катушек 1,2 и 3 (рис.1.Б)), при этом:

$$\Phi_1 = (I_A * W_{п1}) / R_{\mu 1}, \quad (1), \quad \Phi_2 = (I_B * W_{п2}) / R_{\mu 2}; \quad (2)$$

$$\Phi_3 = (I_C * W_{п3}) / R_{\mu 3}, \quad (3)$$

где I_A , I_B , I_C – первичные фазные токи, протекающие по токопроводам трехфазной электрической сети, $W_{п1}$, $W_{п2}$, $W_{п3}$ – числа витков первичной обмотки возбуждения (в данной конструкции $W_{п1} = W_{п2} = W_{п3} = 1$ – каждая первичная обмотка в виде одного витка одна первичная обмотка располагается в выемке между стержнями магнитопровода), $R_{\mu 1} = R_{\mu 2} = R_{\mu 3}$ – соответственно суммарные магнитные сопротивления стержней магнитопровода с

стречнями трехлучевой звездообразной формы, воздушного зазора и дополнительного сердечника на пути магнитных потоков Φ_1 , Φ_2 и Φ_3 .

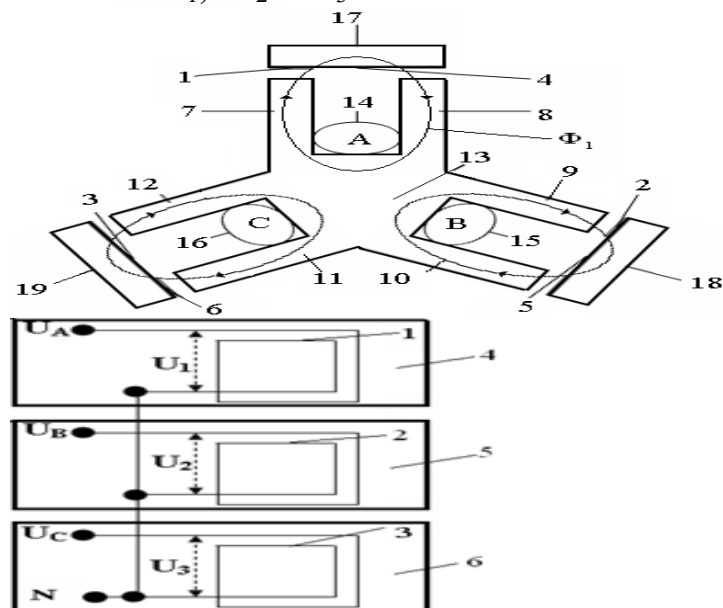


Рис.1 Электромагнитный преобразователь тока в напряжение

А - общий вид преобразователя

Б - изоляционные пластинки с плоскими измерительными катушкамагничивания сердечников НИ₁-НИ₂ выражением $H = kB^9$, мгновенные значения токов в элементах цепи могут быть найдены из выражений

Напряжение на выходе каждой плоских измерительных катушек U_1 , U_2 , и U_3 , определяются в зависимости взаимовлияния магнитных потоков в стержнях магнитопровода с стречнями трехлучевой звездообразной формы (рис.1 Б):

$$U_1 = 4.44 * f * W_{B1} * \Phi_1, \quad (4)$$

$$U_2 = 4.44 * f * W_{B2} * \Phi_2, \quad (5)$$

$$U_3 = 4.44 * f * W_{B3} * \Phi_3, \quad (6)$$

где : W_{B1}, W_{B2}, W_{B3} – числа витков плоских измерительных катушек,

$W_B = W_{B1} = W_{B2} = W_{B3}$ – плоские измерительные катушки выполняются с одинаковыми числами витков W_B .

f – частота питающей электрической Выходные напряжения U_a , U_b и U_c преобразователя тока в напряжение определяются на основе соединения плоских измерительных катушек : $U_a = U_1$; $U_b = U_2$; $U_c = U_3$. Следовательно, магнитные потоки Φ_1 , Φ_2 и Φ_3 , созданные токами одной фазы I_A , двух фаз: I_A и I_B или I_B и I_C и трех фаз : I_A , I_B и I_C электрической сети, в трех торцах стержней 7, 8, 9, 10, 11 и 12 магнитопровода с стрежнями трехлучевой звездообразной формы и с общим основанием 13, и дополнительными сердечниками 17, 18 и 19 позволяют получить информацию о токах электрической сети в виде выходных напряжении U_a , U_b и U_c плоских измерительных катушек 1, 2 и 3, расположенные неподвижно на изоляционных пластинках 4, 5 и 6 с напряжениями U_1 , U_2 , и U_3 на выходе. Благодаря выполнения магнитопровода с стрежнями трехлучевой звездообразной формы с общим основанием и выемками у торцов, неподвижного расположения первичных обмоток в выемках магнитопровода, расположения плоских измерительных катушек в неподвижных изоляционных пластинках в зазорах между торцами каждой пары стержня магнитопровода и дополнительным сердечником, позволяет эффективно преобразовать токи одной, двух, трех фаз в напряжение, вследствие чего существенно повышается точности преобразования и расширяется функциональные возможности преобразования токов трехфазной электрической сети.

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БИОМАССА ЭНЕРГИЯСИДАН САМАРАЛИ ФОЙДАЛАНИШНИ ТАДҚИҚ ҚИЛИШ

Аннотация: *Чиринди энергиясидан самарали фойдаланишни тадқиқ қилиш ушбу жараёнлар натижасида биогаз (метан ва карбонат ангидрид), органик кислоталар, спиртлар ва ацетон олинади.*

Юқори намлик (чиқинди сув, маиший чиқиндилар, органик қолдиқларни гидролизлаш маҳсулотлари) бўлган биомасса биологик жараёнлар билан қайта ишланади: анаэроб ҳазм қилиш ва ферментация.

Калит сўзлар: *Энергия тежаши, энергия самарадорлиги, энергетик тежамкорлик, ишончли фаолият, энергия сарфи, қайта тикланувчи энергия манбалари.*

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RESEARCH ON THE EFFICIENT USE OF BIOMASS ENERGY

Abstract: *Research on the efficient use of biomass energy As a result of these processes, biogas (methane and carbon dioxide), organic acids, alcohols and acetone are obtained. Biomass with high humidity (waste water, household waste, organic residue hydrolysis products) is processed by biological processes: anaerobic digestion and fermentation.*

Keywords: *energy saving, energy efficiency, energy saving, reliable activity, energy consumption, renewable energy sources.*

Юқори намлик (чиқинди сув, маиший чиқиндилар, органик қолдиқларни гидролизлаш маҳсулотлари) бўлган биомасса биологик жараёнлар билан қайта ишланади: анаэроб ҳазм қилиш ва ферментация. Ушбу жараёнлар натижасида биогаз (метан ва карбонат ангидрид), органик кислоталар, спиртлар ва ацетон олинади. Намликка қараб, биомасса термохимёвий ёки биологик усуллар билан қайта ишланади. Намлиги паст бўлган биомасса (қишлоқ хўжалиги ва шаҳар қаттиқ чиқиндилари) термохимёвий жараёнлар билан қайта ишланади: тўғридан-тўғри ёниш, пиролиз (термал парчаланиш), суюлтириш, гидролиз. Натижада сув буғлари, электр энергияси, ёқилғи газы, водород, суюқ ёқилғи, кўмир, глюкоза олинади.

Биоэнергия - бу "биомасса энергияси, биогаз ва биомассани қайта ишлаш махсулотларини бошқа энергия турларига айлантириш."

Биомасса ердаги қайта тикланидиган энергиянинг энг истиқболли манбаларидан биридир. Бу ҳақиқатга биомассанинг муҳим энергия салоҳияти ва бу энергия манбасининг нисбатан оддий янгилашиши каби ўзига хос хусусиятлари ёрдам беради. Бундан ташқари, ушбу турдаги ёқилғини ишлаб чиқариш ва улардан фойдаланиш катта молиявий инвестицияларни талаб қилмайди.

"Биомасса" атамаси ўсимлик ва ҳайвонот манбаларидан барча қайта ишланадиган органик моддаларни бирлаштиради. Биомасса бирламчи (ўсимликлар, ҳайвонлар, микроорганизмлар ва бошқаларга бўлинади.) ва иккиламчи (бирламчи биомасса ва одамлар ва ҳайвонларнинг чиқиндиларини қайта ишлаш чиқиндилари). Биоёқилғининг уч тури мавжуд: суюқ (этанол, метанол, биодизел), қаттиқ (ўтин, сомон) ва газсимон (биогаз, водород).

Биомассадан энергия ишлаб чиқариш дунёнинг кўплаб мамлакатларида энг жадал ривожланаётган тармоқлардан биридир.

Биомассадан энергиядан фойдаланишнинг энг истиқболли йўналишларидан бири ундан биогаз ишлаб чиқаришдир. Биогаз қурилмалари ва қурилмалари Россиянинг исталган минтақаларида куннинг исталган вақтида, органик чиқиндилар ва энергия биомассаси мавжуд бўлган деярли ҳамма жойда ишлаши мумкин.

Гўндан биогазни энг самарали ишлаб чиқариш. Унинг бир тоннасидан 10-12 м³ метан олиш мумкин. Дала деҳқончилигидан 100 million тонна донли сомон каби чиқиндиларни қайта ишлаш 20 миллиардга яқин маблағни бериши мумкин. м³ метан. Пахта етиштириладиган ҳудудларда йилига 8-9 million тонна пахта пояси қолади, ундан 2 миллиардгача пахта олиш мумкин. м³ метан. Худди шу мақсадлар учун маданий ўсимликлар ва ўтларнинг тепаларини йўқ қилиш мумкин.

Россияда ҳар йили Халқ хўжалигининг турли соҳаларида 300 million тоннагача (қуруқ моддалар) ишлаб чиқарилади, шундан: қишлоқ хўжалигида 230 million тонна – чорвачилик ва паррандачиликда 130 million тонна ва ўсимликчиликда 100 million тонна; шаҳарларда – 70 million тонна: 60 million тонна қишлоқ хўжалиги ишлаб чиқаришида. қаттиқ маиший чиқиндилар ва 10 million тонна канализация лойи. Белгиланган миқдордаги чиқиндиларнинг энергия салоҳияти 190 million тонна кубни ташкил қилади.t., ҳақиқатан ҳам 45 million тоннагача су олиш мумкин. Биомассадан энергия олиш технологияларидан фойдаланиш учун энергия ишлаб чиқаришнинг хом ашё манбасига яқинлиги зарур ("ноанъанавий биомасса" учун бу қишлоқ хўжалиги корхоналари, фермер хўжаликлари), бу сизга нисбатан арзон энергиянинг мақбул миқдорини олиш имконини беради. Россияда чернозем вилояти, Krasnodar ўлкаси, Марказий Россия ва

Жанубий Сибирда биомассада энергия ишлаб чиқаришни ташкил этиш мақсадга мувофиқдир.

Геотермик энергия - бу " геотермик сувларнинг энергиясини бошқа энергия турларига айлантириш."Геотермал манбалар деярли битмас-туганмас ва олинган энергия миқдори бўйича юқори даражада башорат қилиш қобилиятига ега.

Халқаро энергетика агентлиги таснифига кўра геотермал энергия манбалари 5 турга бўлинади :

1. геотермик курук буг ь конлари;
2. нам буг ь манбалари (иссиқ сув ва буг ь аралашмалари);
3. геотермик сув конлари (иссиқ сув ёки буг ь ва сувни ўз ичига олади);
4. magma билан иситиладиган курук иссиқ тошлар;
5. magma, қайси ериган жинслар ҳисобланади.

Сув, буг ёки уларнинг аралашмасининг ҳароратига қараб, геотермик манбалар паст ҳароратли ва ўрта ҳароратга (130-150 гача) ва юқори ҳароратга (150 дан ортиқ) бўлинади. Геотермик манбанинг ҳарорати асосан уни ишлатиш хусусиятини белгилайди.

Геотермал энергиядан фойдаланиш бир қатор аниқ афзалликларга ега:

1. ушбу турдаги энергия захиралари деярли тугамайди;
2. геотермик энергия жуда кенг тарқалган;
3. геотермал энергиядан фойдаланиш катта харажатларни талаб қилмайди.

Бироқ, шу билан бирга, геотермал энергия иккита муҳим камчиликка ега:

1. унинг манбасида геотермал энергиянинг заиф концентрацияси;
2. буг заҳарли газларни ўз ичига олади ва сув олтингугурт ва бошқа аралашмаларни ташийд.

Россияда геотермал энергия потенциал фойдаланиш бўйича биринчи ўринда туради. Россияда ушбу турдаги энергиянинг умумий захиралари 2000 МВт га баҳоланмоқда.

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РАСЧЕТ КОМПЕНСИРУЮЩИХ УСТРОЙСТВ РЕАКТИВНОЙ МОЩНОСТИ

***Аннотация:** Компенсация реактивной мощности не требует больших материальных затрат и должна осуществляться прежде всего на самих предприятиях.*

***Ключевые слова:** активная энергия, электрические лампы, реактивная мощность, полная мощность*

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CALCULATION OF REACTIVE POWER COMPENSATING DEVICES

***Abstract:** Compensation of reactive power does not require large material costs and should be carried out primarily at the enterprises themselves.*

***Key words:** active energy, electric lamps, reactive power, apparent power*

Электрическая энергия, вырабатываемая электрическими станциями, передается в электрическую сеть потребителей одновременно в виде активной и реактивной мощности. Часть потребителей из сети используют чисто активную мощность (электрические лампы накаливания, нагревательные приборы, печи сопротивления), при этом ток совпадает по фазе с приложенным напряжением. Другая часть потребителей, при наличии в цепи индуктивного сопротивления, в процессе работы потребляет не только активную, но и реактивную мощность, необходимую для создания электромагнитных полей (электродвигатели, сварочные и силовые трансформаторы).

Активная электрическая энергия, используемая электроустановками, преобразуется в другие виды энергии: механическую, тепловую, энергию сжатого воздуха и газа. Определённый процент активной энергии расходуется на потери.

При подключении к электрической сети активно-индуктивной нагрузки ток I отстаёт от напряжения U на угол сдвига φ . Косинус этого угла ($\cos \varphi$) называется коэффициентом мощности.

Электроприёмники с такой нагрузкой потребляют как активную P , так и реактивную Q мощность. Реактивная мощность $\operatorname{tg} \varphi = \frac{Q}{P}$.

Прохождение в электрических сетях реактивных токов обуславливает добавочные потери активной мощности в линиях, трансформаторах, генераторах электростанций, дополнительные потери напряжения, требуют увеличения номинальной мощности или числа трансформаторов, снижает пропускную способность всей системы электроснабжения.

Полная мощность: $S = \sqrt{P^2 + Q^2} = P / \cos \varphi$;

потери активной мощности: $\Delta P = (P^2 + Q^2) R / U^2$;

коэффициент мощности: $\cos \varphi = P / S = P / \sqrt{P^2 + Q^2}$;

потери напряжения: $\Delta U = (PR + QX) / U$,

где P , Q , S – соответственно активная, реактивная и полная мощности; R и X – соответственно активное и реактивное сопротивления элементов электрической сети; U – напряжение сети.

Основная часть реактивной мощности индуктивного характера на промышленных предприятиях потребляется асинхронными двигателями (60-65 % общего её потребления), трансформаторами, включая сварочные (20-25%), вентильные преобразователи, реакторы и прочие электроустановки.

Одним из основных вопросов, решаемых как на стадии проектирования, так и на стадии эксплуатации систем промышленного электроснабжения, является вопрос компенсации реактивной мощности, включающий выбор типа компенсирующих устройств, расчет и регулирование их мощности, а также их размещение в схеме электроснабжения. При этом передача реактивной мощности от мест генерации до мест потребления существенно ухудшает технико-экономические показатели систем электроснабжения.

Мерами по снижению потребления реактивной мощности являются: естественная и искусственная компенсация.

Естественная компенсация реактивной мощности не требует больших материальных затрат и должна проводиться на предприятиях в первую очередь. К естественной компенсации относятся:

упорядочение и автоматизация технологического процесса, ведущие к выравниванию графика нагрузки и улучшению энергетического режима оборудования (равномерное размещение нагрузок по фазам, смещение времени обеденных перерывов отдельных цехов и участков, перевод энергоёмких крупных электроприёмников на работу вне часов максимума энергосистемы и, наоборот, вывод в ремонт мощных электроприёмников в часы максимума в энергосистемы);

создание рациональной схемы электроснабжения за счёт уменьшения количества ступеней трансформации;

замена трансформаторов и другого электрооборудования старых конструкций на новые, более совершенные с меньшими потерями на перемагничивание;

замена малозагруженных трансформаторов и двигателей трансформаторами и двигателями меньшей мощности и их полная загрузка;

применение синхронных двигателей вместо асинхронных, когда это допустимо по условиям технологического процесса;

ограничение продолжительности холостого хода двигателя и сварочных трансформаторов, сокращение длительности и рассредоточение по времени пуска крупных электроприёмников;

улучшение качества ремонта электродвигателей, уменьшение переходных сопротивлений контактных соединений;

отключение при малой нагрузке (например, в ночное время, в выходные и праздничные дни) части силовых трансформаторов.

Искусственная компенсации реактивной мощности графически отображена на рис.1.

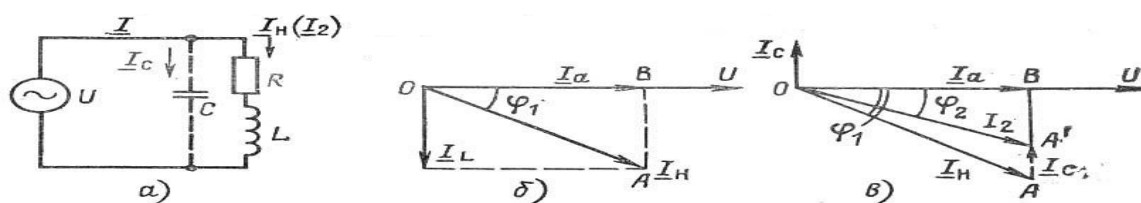


Рис. 1

потребитель имел активную мощность P , соответственно ток I_a (отрезок OB на рис. 1-б) и реактивную мощность от индуктивной нагрузки Q_1 с соответствующим током I_L (отрезок BA). Полной мощности S_1 соответствует вектор I_H (отрезок OA). Коэффициент мощности до компенсации $\cos\varphi_1$.

Векторная диаграмма компенсации представлена на рис.1-в. После компенсации, т.е. после подключения параллельно нагрузке компенсирующей установки с мощностью Q_k (ток I_c), суммарная реактивная мощность потребителя будет уже $Q_1 - Q_k$ (ток $I_L - I_c$) и соответственно снизится угол сдвига фаз с φ_1 до φ_2 и повысится коэффициент мощности с $\cos\varphi_1$ до $\cos\varphi_2$. Полная потребляемая мощность при той же потребляемой активной мощности P (токе I_a) снизится с S_1 (ток I_H) до S_2 (ток I_2) (отрезок OA'). Следовательно, в результате компенсации можно при том же сечении проводов повысить пропускную способность сети при активной мощности.

Повышение пропускной способности сети означает уменьшение технологического расхода электроэнергии на ее транспорт и улучшение качества поставляемой потребителям электроэнергии.

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ИССЛЕДОВАНИЕ НАДЕЖНОСТИ ЭЛЕКТРОМАГНИТНОГО ПРЕОБРАЗОВАТЕЛЯ

***Аннотация.** В статье приведены результаты аналитических исследований статических и динамических характеристик электромагнитных преобразователей тока трехфазной электрической сети источников реактивной мощности, построенные на основе плоской измерительной обмоткой.*

***Ключевые слова:** ферромагнитный сердечник, математическое моделирование, характеристика управления, вольт-амперная характеристика*

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STUDY OF RELIABILITY OF ELECTROMAGNETIC CONVERTER

***Abstract:** In article given results of the analytical research of static's and dynamics characteristics of the electromagnetic converters of the current three-phase electric network of reactive power, constructed on base of the flat measuring windings.*

***Key words:** ferromagnetic core, mathematical modeling, control characteristic, current-voltage characteristic.*

В настоящее время применение электромагнитных преобразователей для систем управления электрическими величинами с высокой точностью, линейностью выходных характеристик, унифицированными выходными величинами, расширение спектра преобразуемых электрических величин ограничено из-за недостаточного формирования принципов построения, методов расчета и проектирования распределенных магнитных систем преобразователей. Применяемые классические методы исследования магнитных цепей и систем преобразования не обеспечивают необходимую точность, особенно при несимметрии трехфазного первичного тока электрической сети, не обладают достаточной общностью, охватывая только величины и параметры цепей электрической и магнитной природы.

Классические однофазные трансформаторы тока имеют сложную преобразовательную часть, большие весогабаритные показатели, трудоемки при проектировании и эксплуатации в системах управления, не обеспечивают унифицированность выходной величины при совместной работе с современной техникой обработки информации. Низкая точность анализированных устройств обусловлена рядом недостатков существующих систем преобразования тока, поскольку измерительные комплексы создавались ранее, а также создаются и в настоящее время по типовым проектам, разработанным еще в XX веке, в которых не предусматривались решения для обеспечения высокой точности преобразователями тока и унифицированности выходного сигнала первичных измерительных преобразователей.

Методы расчёта надёжности элементов и комплекса устройств электромагнитных преобразователей первичного тока находятся в состоянии непрерывного развития. По принципиальным основам расчёты надёжности элементов и комплекса устройств электромагнитных преобразователей первичного тока делятся на элементные (аппаратурные) и функциональные (параметрические).

Рассмотрим электромагнитный преобразователь первичного тока как элемент, условно состоящий из двух последовательно соединенных элементов, в одном из которых могут появляться внезапные отказы, а в другом – постепенные. Внезапные отказы появляются вследствие резкого, внезапного изменения преобразуемых токов под воздействием одного или нескольких случайных факторов внешней среды либо вследствие ошибок работы частей электромагнитный преобразователь первичного. При постепенных отказах наблюдается плавное, постепенное изменение параметра электромагнитный преобразователь первичного в результате износа отдельных частей или всего электромагнитный преобразователь первичного в целом.

Вероятность безотказной работы электромагнитный преобразователь первичного представим произведением вероятностей.

$$P_{\text{тр}}(t) = P_{\text{в}}(t) P_{\text{п}}(t), \quad (1)$$

где: $P_{\text{в}}(t)$ и $P_{\text{п}}(t)$ — соответственно вероятности безотказной работы электромагнитного преобразователя первичного тока, соответствующих внезапному и постепенному отказу вследствие износа. Вероятности работоспособных состояний основных узлов электромагнитного преобразователя первичного тока представлены в таблице 1.

Анализируя принцип преобразования ЭМПТН с ПИО составляется таблица возможных работоспособных состояний элементов (табл. 1.), которые позволяют определить элементную надежность каждого узла электромагнитного преобразователя первичного тока.

Как видно из табл.1., существует семь возможных работоспособных состояний узлов электромагнитного преобразователя первичного тока.

Просуммировав вероятности всех возможных работоспособных состояний узлов, получим вероятность работоспособности электромагнитного преобразователя первичного тока:

$$P = p_1 + p_2 + p_3 + p_1 p_2 p_3 - p_1 p_2 - p_2 p_3 - p_1 p_3 \quad (2)$$

Вероятность работоспособности основных элементов (первичная обмотка, магнитопровод, ПИО) узлов электромагнитного преобразователя первичного тока соответственно равна:

$$p_1 = 0,97; p_2 = 0,99; p_3 = 0,97.$$

Таблица 1

Вероятности работоспособных состояний основных узлов электромагнитного преобразователя первичного тока

№	Состояние	Вероятность	Работоспособные узлы электромагнитного преобразователя первичного тока
1	C ₁	P ₁ P ₂ , P ₃	1-Первичная обмотка, 2-магнитопровод, 3-ПИО.
2	C ₂	P ₁ P ₂ (1-P ₃)	1;2
3	C ₃	P ₁ P ₃ (1-P ₂)	1;3
4	C ₄	P ₂ P ₃ (1-P ₁)	2;3
5	C ₅	P ₁ (1-P ₂)(1-P ₃)	1

Тогда вероятность работоспособности узлов электромагнитного преобразователя первичного тока:

$$P = 0,97 + 0,99 + 0,97 + 0,97 \cdot 0,99 \cdot 0,97 - 0,97 \cdot 0,99 - 0,99 \cdot 0,97 - 0,97 \cdot 0,97 = 0,98.$$

В основе расчёта функциональной надёжности узлов электромагнитного преобразователя первичного тока лежит анализ преобразования токов трехфазной электрической сети - входного тока $I_{\text{ЭВХ}}$ в $U_{\text{ЭВЫХ}}$ – выходное напряжение, выполняемый в узлах электромагнитного преобразователя первичного тока. Функциональная надёжность узлов электромагнитного преобразователя первичного тока рассчитывается в следующей последовательности:

- формируется вид функции $U_{\text{ЭВЫХ}}$, т.е. записывается уравнение преобразования $I_{\text{ЭВХ}}$ в $U_{\text{ЭВЫХ}}$, устанавливающее связь между величинами, используемые в конструкциях электромагнитного преобразователя первичного тока [10]:

$$U_{\text{ЭВЫХ}} = K_{\mu\Delta} T_{\mu} P_{\mu} K_{\text{Э}\mu} T_{\text{ЭВХ}} P_{\text{ЭВХ}} I_{\text{ЭВХ}} \quad (3)$$

- на основании анализа уравнения преобразования $I_{\text{ЭВХ}}$ в $U_{\text{ЭВЫХ}}$ составляется структурная схема расчёта надёжности узлов электромагнитного преобразователя первичного тока и рассчитывается надёжность, обусловленная полными отказами элементов узлов электромагнитного преобразователя первичного тока (p_1).

Для узлов электромагнитного преобразователя первичного тока анализ уравнения (3), позволил установить, что обрыв первичной обмотки

- обмотки возбуждения $T_{\text{эвх}}P_{\text{эвх}}=0$, выход из строя (поломка) магнитопровода $T_{\mu}P_{\mu}=0$, обрыв вторичной измерительной обмотки $T_{\text{эвх}}P_{\text{эвх}}=0$, потери связи магнитопровода с первичным током $K_{\text{Ф}\mu U_{\text{э}}} = 0$, $K_{I_{\text{э}}F_{\mu}} = 0$, приводит к полному отказу узлов электромагнитного преобразователя первичного тока. С учётом катастрофических отказов $p=0,98$ суммарная надёжность узлов электромагнитного преобразователя первичного тока составит:

$$P = P_{\text{кат}} P_{\text{пар}} = 0,98 \times 0,98 = 0,96$$

Как видно из выполненного расчёта, на величину параметрической надёжности наибольшее влияние оказывает изменение м.д.с. F и индукции при действии температуры окружающей среды и старения материалов.

Суммарная надёжность МФ ЭМПТН с ПИО составляет

$$P = P_{\text{кат}} P_{\text{пар}} = 0,98 \times 0,98 = 0,96,$$

где: $P_{\text{кат}}$ – катастрофическая надёжность, $P_{\text{пар}}$ – параметрическая надёжность.

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ТЎЛҚИНЛИ ЭЛЕКТР СТАНЦИЯЛАР

Аннотация: Тўлқинли электр станцияларини қуришдан иқтисодий фойдаларни баҳолашда шуни ёдда тутиш керакки, тўлқинлар пайтида сув сатҳининг энг кучли тебранишлари чекка денгизларга хосдир. Ушбу қирғоқларнинг аксарияти кам аҳоли яшайдиган жойларда жойлашган бўлиб, иқтисодий фаолият ва электр энергиясини оммавий истеъмол қилиш жойларидан сезиларли даражада олиб ташланган.

Калим сўзлар: Энергия тежаш, энергия самарадорлиги, энергетик тежамкорлик, ишончли фаолият, энергия сарфи, қайта тикланувчи энергия манбалари.

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WAVE POWER STATIONS

Abstract: Assessing the economic benefits of the construction of wave power plants, it should be borne in mind that the marginal seas are characterized by strong fluctuations in the water level of the sleeves during tides. Many of these shores are located in sparsely populated areas and are significantly removed from areas of economic activity and mass electricity consumption.

Keywords: energy saving, energy efficiency, energy saving, reliable activity, energy consumption, renewable energy sources.

Тўлқинли электр станцияларини қуришдан иқтисодий фойдаларни баҳолашда шуни ёдда тутиш керакки, тўлқинлар пайтида сув сатҳининг энг кучли тебранишлари чекка денгизларга хосдир. Ушбу қирғоқларнинг аксарияти кам аҳоли яшайдиган жойларда жойлашган бўлиб, иқтисодий фаолият ва электр энергиясини оммавий истеъмол қилиш жойларидан сезиларли даражада олиб ташланган. Бундан ташқари, у ҳисобга йил фасллари электр стансиялари чиқимларни қоплаш анча жозибадор сезиларли уларнинг қуввати ортади сифатида бўлади, деб ҳақиқатни олиш зарур 5 ва яна ҳам шундай учун 15 million квт. Бироқ, мамлакатнинг чекка ҳудудларида бундай миқёсдаги тўлқин станцияларини қуриш жуда қўп пул талаб қилади ва ҳар доим ҳам тавсия етилмайди.

Шамол ер юзасининг қуёш нурлари ва атмосферанинг пастки қатламлари томонидан нотекис исиши натижасида ҳосил бўлади-ҳаво

массалари ер юзасига ва ундан юқорига, ердан 7-12 км баландликда ҳаракатлана бошлайди. Шундай қилиб, шамол энергияси қуёш фаолиятининг натижасидир. Шамол турбиналарини жойлаштириш учун энг фойдали жойлар — шамол энергиясини конвертация қилиш учун тузилмалар — қирғоқ чизиклари (қирғоқдан камида 10-12 км), ҳароратнинг пасайиши ва кучли ва барқарор шамол (камида 5 м/с).

Дунёда энг кенг тарқалгани учта пичоқли ва горизонтал айланиш ўқиға ега шамол турбиналарининг дизайни. Бундан ташқари, вертикал айланиш ўқи бўлган шамол турбиналарини қуришга уринишлар қилинган, чунки улар ишлашни бошлаш учун жуда паст шамол тезлигини талаб қиладиган афзалликларға ега деб ишонилади. Бироқ, тормоз механизми билан боғлиқ муаммолар туфайли бундай шамол генераторлари шамол энергетикаси саноатида амалий тақсимланмаган.

Шамол ёрдамида электр энергиясини ишлаб чиқариш бир қатор афзалликларға ега:

1. зарарли чиқиндиларсиз экологик тоза ишлаб чиқариш;
2. мавжудлиги;
3. амалий битмас-туганмаслик.

Бироқ, шамол энергияси бир қатор камчиликларға ега:

1. нотекис энергия чиқиши;
2. энергияни сақлаш зарурати;
3. шовқиннинг ифлосланиши ва телевизор сигналини қабул қилиш учун шовқин мавжудлиги;
4. қушлар ва ҳашаротларнинг учишига аралашиш;
5. шамол турбиналарининг юқори нархи;
6. батареяларни ўрнатиш учун катта майдонларға еҳтиёж.

Россиянинг умумий шамол салоҳияти 26000 млн.т., техник салоҳияти 2000 млн.т. ва иқтисодий салоҳияти 10 млн.т.

Шамол энергиясининг салоҳияти Россия ҳудудида нотекис тақсимланган. 2-иловада келтирилган Россия Федерациясининг шамол ресурслари харитасида шамол энергияси манбаларининг ер сатҳидан 50 метр баландликда жойлашганлиги кўрсатилган. Ушбу харитаға кўра, шамолнинг ўртача тезлиги Barents, Кара, Bering ва Охоцк денгизлари бўйлаб тўпланган. Шамол тезлиги нисбатан юқори бўлган ҳудудларға (5-6 м/с) шимолда Шарқий Сибир, Чукчи ва Лаптев денгизлари ва Шарқда Япония денгизи қирғоқлари киради. Ўрта ва қуйи Volga минтақаларида, Уралсда, Ғарбий Сибирнинг дашт минтақаларида ва Байкал кўлида ҳам муҳим манбалар мавжуд.

Россиянинг аксарият ҳудудларида кундузи шамол тезлиги тунга қараганда юқори ва бу фарқлар қишда камроқ сезилади. Россиянинг аксарият минтақаларида ўртача шамол тезлигининг йиллик йўналиши аҳамиятсиз ва 1 дан 4 м/с гача ўзгариб туради, ўртача 2-3 м/с. юқори амплитудалар

Россиянинг Европа қисмининг марказида, Шарқий ва Ғарбий Сибирда, шунингдек узок Шарқда кузатилади. улар 4 м/с га етади. Россиянинг Европа қисмининг жануби-Шарқий ва жануби-ғарбий қисмида ва Марказий Сибирда йиллик 2 м/с дан кам амплитудалар кузатилади.

Тўлқинли гидроэнергетика - тўлқинлар энергиясини бошқа энергия турларига айлантириш.

Гелгит электр станциялари (ИЕС) юқори оқим ва паст оқим пайтида сув сатҳининг максимал фарқлари билан қирғоқларда жойлашган. Песнинг ишлаш принципи қуйидагича: кўрфазда унинг бир қисмини океандан ажратиб турадиган тўғон қурилмоқда. Юқори оқим ва паст оқим пайтида тўғоннинг турли томонларида сув сатҳининг пасайиши ҳосил бўлади, сув тўғон орқали пастки сатҳга қараб оқади ва бир йўналишда (юқори оқимда), сўнгра бошқа томонда (паст оқимда) айланадиган тескари турбиналарни ҳаракатга келтиради.

Маълумки, республикамызда иқтисодиёт барқарор ўсишини таъминлашга ва аҳолининг фаровонлик даражасини оширишга, ёқилғи-энергетика ресурсларига бўлган талаб – эҳтиёжни узлуксиз қаноатлантиришга қаратилган нефть – газ, электр энергетика, кўмир, кимё, қурилиш индустриясини ривожлантиришнинг узок муддатли стратегияси амалга оширилмоқда. Шу билан бирга, ёқилғи – энергетика тармоғининг мавжуд қувватлари энергия ресурсларига ортиб бораётган талаб-эҳтиёжни тўлиқ даражада таъминламайпти, мамлакатимиз иқтисодиётининг энергия сарфи ҳажми ривожланган мамлакатларнинг ўртача кўрсаткичидан анча юқоридир.

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ЭНЕРГЕТИКАДА ТЕХНИК КОМПЕТЕНЦИЯЛАРНИ РИВОЖЛАНТИРИШНИНГ ДИДАКТИК ТИЗИМИНИНГ ТАРКИБИЙ МОДЕЛИ

Аннотация: Бўлажак мутахассис муҳандиснинг нормал касбий фаолиятини таъминлаш зарурати жамиятда юқори самарали ахборот технологияларини, университетда замонавий педагогик ва психологик фаннинг илгор ютуқларини жорий этиш асосида ўқув жараёнининг юқори технологик қобилиятини сақлаб қолиш вазифасини такомиллаштириш.

Калим сўзлар: Ахборот технологиялари, интеллектуал, техник компетенция, технологик таълим.

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STRUCTURAL MODEL OF THE DIDACTIC SYSTEM FOR THE DEVELOPMENT OF TECHNICAL COMPETENCIES IN ENERGY

Annotation: The need to ensure the normal professional activity of a future specialist engineer to improve the task of maintaining the high technological capabilities of the educational process on the basis of the introduction of highly effective information technologies in society, advanced achievements of modern pedagogical and Psychological Science at the University.

Keywords: Information technology, intellectual, technical competence, technological training.

Бўлажак муҳандис талаба учун зарур бўлган ваколатлар тузилмасидан келиб чиқиб, биз куйидаги кўрсаткичлар ва мезонларни тақдим этамиз, улар талабаларнинг ахборот технологияларидан фойдаланган ҳолда физика дарсларида ўқув ва экспериментал фаолият жараёнида компетенцияларнинг ривожланишини ташхислашда қўлланилиши мумкин. Ушбу кўрсаткичлар ва мезонларнинг баъзилари фақат техник ваколатларга тегишли, баъзилари эса юқори малакали мутахассислар учун зарур бўлган умумийдир.

Кўрсаткичлар:

- техник билимларнинг мавжудлиги;
- техник кўникмаларни шакллантириш;

- техник университетда ўқиш учун қиймат йўналишларининг устуворлиги ва келажакдаги касбий ва бошқа фаолиятларда техник компетенцияларни қўллаш;
- техник компетенцияларни ўз-ўзини ривожлантиришда эҳтиёжлар ва мотивларнинг мавжудлиги;
- ривожланган техник қобилиятлар.

Мезонлар:

- техник билимларнинг изчиллиги, чуқурлиги, ҳажми, мустаҳкамлиги;
- стандарт, ўзгартирилган ва ижодий вазиятда техник кўникма ва билимларни самарали қўллаш;
- қиймат йўналишларининг маълум бир тузилиши;
- ўқув жараёнига қизиқиш: техник университетда ўқишга бўлган эҳтиёж, техник билимларни ўрганиш ва қўллашда юқори мотивация;
- техник фикрлашнинг изчиллиги: ақлнинг прогностиклиги, техник билимларни узатиш ва бирлаштириш, акс эттириш, техник муаммоларни ҳал қилишда операцияларнинг минималлаштирилиши ва бошқалар.

Кейин техник ваколатлар қуйидагича ифодаланиши мумкин.

Умумий билим:

- гуманитар ва ижтимоий-иқтисодий фанлар соҳасидаги асосий назариялар;
- инсоннинг инсонга, жамиятга, атроф-муҳитга муносабатини тартибга солувчи ахлоқий ва ҳуқуқий нормалар;
- тирик ва жонсиз табиатда содир бўладиган жараёнлар ва ҳодисалар;
- фикрлаш маданиятининг умумий қонунлари;
- келажакдаги касбининг моҳияти ва ижтимоий аҳамияти, фаолиятнинг маълум бир соҳасини белгилайдиган фанларнинг асосий муаммолари, уларнинг яхлит билим тизимидаги ўзаро боғлиқлиги;
- соғлом турмуш тарзи ҳақида;
- бошқариш усуллари;
- педагогик фаолият асослари;
- технологик фаолият соҳасига тааллуқли қарорлар, фармойишлар, буйруқлар, услубий ва норматив материаллар;
- техника фанлари, техника ва технологияларни ривожлантиришнинг асосий илмий-техник муаммолари ва истикболлари;
- технологик объектлар, муҳандислик тизимлари, материаллар, маҳсулотлар ва иншоотлар, ускуналар ва технологик линияларни лойиҳалаш, яратиш ва улардан фойдаланиш тизимлари ва усуллари;
- экспериментал ва назарий тадқиқотларни ўтказиш усуллари;
- тадқиқот ва ишланмалар бўйича махсус илмий ва патент адабиёти;
- замонавий офис ускуналари, компьютер технологиялари, алоқа ва алоқа воситалари;
- квант физикаси: корпускуляр-тўлқинли дуализм, принтсип

ноаниқликлар, квант ҳолатлари, суперпозиция принтсипи, квант ҳаракат тенгламалари, физик катталиқ операторлари, атомлар ва молекулаларнинг энергия спектри, кимёвий боғланиш табиати;

- статик физика ва термодинамика: термодинамиканинг урта принтсипи, термодинамик ҳолат функциялари, фазавий мувозанат ва фазавий трансформациялар, мувозанатсиз термодинамика элементлари, классик ва квант статистикаси, кинематик ҳодисалар, зарядланган зарралар тизимлари, конденсацияланган ҳолат;

- жисмоний семинар.

Махсус фанлар бўйича билим:

- мутахассислик асослари тўғрисида;

- муайян ишлаб чиқаришнинг замонавий усуллари ва ўзига хос хусусиятлари тўғрисида;

- технологик материалларнинг таснифи ва хусусиятлари ва имкониятлари тўғрисида

уларнинг замонавий ишлаб чиқаришда қўлланилиши;

- материаллар ишлаб чиқариш технологияси тўғрисида;

- саноат объектларининг ўзига хос хусусиятлари тўғрисида;

- битта объектнинг тузилиши ҳақида;

- технологик жараённинг назарий тушунчалари ва методологияси ва унинг баҳолаш тоифалари тўғрисида.

- дизайн ва ишлашнинг турли босқичларида технологик материалларнинг роли тўғрисида.

Кўникмалар:

- касбий ва ижтимоий фаолиятнинг ҳар хил турларида гуманитар ва ижтимоий-иқтисодий фанлар усулларида фойдаланиш;

- ижтимоий лойиҳаларни ишлаб чиқишда инсоннинг инсонга, жамиятга, атроф-муҳитга муносабатини тартибга солувчи ахлоқий ва ҳуқуқий нормаларни ҳисобга олиш;

- ишингизни илмий асосда ташкил қилинг,

- касбий функцияларни амалга ошириш билан боғлиқ вазифаларни белгилаш ва шакллантириш, уларни ҳал қилиш учун у ўрганган фанларнинг усулларида фойдаланиш қобилияти;

- ёзма ва оғзаки нутқда унинг натижаларини тўғри (мантикий) тартибга солиш;

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ЭНЕРГЕТИКА САНОАТИДА ИСТИҚБОЛЛИ ЭНЕРГИЯ ЗАХИРАЛАШ ҚУРИЛМАЛАРИНИ ҚЎЛЛАШ

Аннотация – Мақолада энергетик тизимда энергия захиралаш қурилмаларидан фойдаланиш долзарблиги, уларнинг турлари, афзаллик ва камчиликлари кўрсатилган. Энергия захиралаш қурилмаларининг техник ва иқтисодий хусусиятлари таҳлил қилинган. Олиб борилган таҳлилар асосида республикаимиз иқлимига мос, аҳолининг ижтимоий-иқтисодий ҳолатига тўғри келадиган энергия захиралаш қурилмалари танлаб олинган. Бундан ташқари ҳозирги кунда республикаимиздаги электр энергияси нархидан, энергия захиралаш технологияларидан олинган электр энергияси нархига яқин ёки паст бўлган қурилмалар тавсия қилинган.

Калим сўзлар: Ахборот технологиялари, интеллектуал, техник компетенция, технологик таълим.

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APPLICATION OF PROMISING ENERGY STORAGE DEVICES IN THE ENERGY INDUSTRY

Annotation-The article shows the relevance of using energy backup devices in the power system, their types, advantages and disadvantages. The technical and economic characteristics of energy-saving devices are analyzed. Based on the analysis, energy-saving installations were selected that correspond to the climate of the republic, the socio-economic situation of the population. In addition, devices whose cost is close to or lower than the cost of electricity obtained from energy-saving technologies are currently recommended.

Keywords: Information technology, intellectual, technical competence, technological training.

Энергияни захиралаш ҳар қандай тизимнинг ажралмас қисми ҳисобланиб табиатда жуда кенг тарқалган. Ҳар қандай жисмнинг мавжуд бўлиши аслида унинг таркибидаги энергиянинг бир тизим сифатида бирлашганини билдиради. Масалан инсоннинг тириклиги ёки ҳаракатланиши унинг танасидаги молекулаларнинг кимёвий энергияни сақлай олиши аниқланиб, агар ушбу кимёвий энергия молекулаларда сақланмаса тана ҳалокатга учрайди ва тизим ишдан чиқади. Инсоннинг

кучсизланиб қолиши ҳам аслида молекулалардаги кимёвий энергиянинг камайиши сабабли юзага келади. Бошқа материяларда ҳам худди шундай жараён кузатилади.

Энергия захиралаш қурилмаларидан фойдаланиш айниқса қайта тикланадиган энергия манбаларидан фойдаланишда кенг қўлланилади. Чунки бундай энергия манбаларидан фойдаланишда асосий камчилик, бирламчи энергиянинг табиат томонидан ҳосил қилинишидир. Бу ерда бирламчи энергияни ҳосил қилишда ёки мавжуд энергияни бошқариш фақатгина табиат томонидан амалга оширилади. Ёқилғи энергетик ресурслардан электр энергияси олишни эса инсон омили орқали бошқарса бўлади. Шу сабабли қайта тикланадиган энергия манбаларидан фойдаланишда захиралаш қурилмаларидан фойдаланмаслик электр энергияси таъминоти ишончлигига салбий таъсир кўрсатади. Қайта тикланадиган энергия манбаларида захиралаш қурилмаларидан фойдаланиш, электр энергиясига талаб бўлмаган вақт оралиқларидаги энергия оқимларини захиралаш ва ушбу энергиядан энергия истеъмоли юқори бўлган вақт оралиқларида фойдаланиш имкониятини яратади. Сўнги вақтларда захиралаш қурилмаларидан фойдаланишнинг долзарблиги ушбу қурилмаларга бўлган эътиборни кучайтирди ва ушбу соҳада илмий изланишлар олиб бориш учун етарлича асос бўлмоқда.

Қайта тикланадиган энергия манбаларини марказлашган электр тармоғи билан ишлатишда энергия захиралаш қурилмаларидан фойдаланиш кўпгина камчиликларни бартараф этиши мумкин, яъни қайта тикланадиган энергия манбаларидан чиқадиган қувватни силлиқлаш, тармоқда электр энергияси бўлмаганда электр энергияси билан таъминлаш, шунингдек, паст юкланиш даврида захиралаш қурилмаларини тармоқ қувватини захиралаш орқали қувват балансини сақлаб туриш ва электр энергиясига талаб юқори бўлганда қўшимча қувват билан таъминлаш [1]. Аммо, электр таъминотида энергия захиралаш қурилмаларидан ҳаддан ташқари кўп фойдаланиш катта харажатларга олиб келиши ва бу энергия захиралаш тизимларидан электр энергияси етказиб бериш учун тижорат мақсадларида фойдаланишда халақит бериши мумкин.

Электр энергияси асосий хусусияти шундан иборатки ушбу энергия тури ишлаб чиқарилиши билан истеъмол қилиниши керак[2].

$$E(t) = \int_t p(r)dr = \int_t v(r)i(r)dr; \quad (1)$$

Электр токи бу – вақт бирлиги ичида зарядланган заррачаларнинг оқимидир:

$$i(t) = \frac{d}{dt} q_e(t); \quad (2)$$

Демак электр энергияси фақатгина электр энергиясига талаб бўлган ҳолатдагина ишлаб чиқарилиши керак. Шу сабабли ушбу энергия манбасидан фойдаланишда кўпгина ноқулайликлар кузатилади. Масалан ҳосил бўлган вақтда истеъмолчи бўлмаслиги ёки аксинча истеъмолчи

бўлмаган вақтда энергия бўлмасли мумкин. Бундан ташқари электр энергиясини бошқа тур энергия сифатида захираланган энергияни, ишлатиш учун қулай бўлган энергияга генерацияланиши деб қараш мумкин. Масалан, ИЕС ларда кўмир, газ ва нефтнинг захиралаган кимёвий энергиясини электр энергиясига айлантириш, Қуёш ва атом электр станцияларида атом энергиясидан электр энергияси ишлаб чиқариш, гидроэлектростанцияларда сувнинг потенциал ва кинетик энергиясидан электр энергияси ишлаб чиқариш ва ҳоказо. Шу сабабли электр энергиясини захиралашни ҳам фақатгина энергияни бошқа турига айлантириш орқали амалга ошириш мумкин. Мисол учун электр энергиясини иссиқлик энергиясига айлантириш ва иссиқлик энергиясини захиралаш, бундан ташқари электр энергиясини кимёвий энергия кўринишида, потенциал ва кинетик энергия ва ҳоказо энергиялар кўринишида захиралаш мумкин[3].

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ПРОБЛЕМЫ ГЕОЭКОЛОГИЧЕСКОГО СОСТОЯНИЯ ЗАРАФШАНСКОГО НАЦИОНАЛЬНОГО ПАРКА И ПУТИ ИХ ОПТИМИЗАЦИИ

***Аннотация.** Сохранение уникальных и неповторимых ландшафтных комплексов природы как ориентира для будущих поколений является одной из актуальных задач современности. В данной статье анализируется геоэкологическая ситуация Зарафшанского национального природного парка, предлагаются предложения и рекомендации по охране экосистем Национального природного парка и их использованию в целях экотуризма, а также их сохранению.*

***Ключевые слова.** заповедник, экосистема, комплекс, заказчик, ландшафт, компонент, природные парки, стандарт.*

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PROBLEMS OF THE GEOECOLOGICAL STATE OF THE ZARAFSHAN NATIONAL PARK AND WAYS OF THEIR OPTIMIZATION

***Abstract** Preservation of the unique and unrepeatable landscape complexes of nature as a benchmark for future generations is one of the urgent issues of today. In this article, the geoecological situation of the Zarafshan National Nature Park is analyzed, suggestions and recommendations are given for the protection of ecosystems in the National Nature Park and their use for ecotourism purposes, as well as their preservation.*

***Key words.** reserve, ecosystem, complex, customer, landscape, component, natural parks, standard.*

Введение. В последние годы в связи с развитием науки и техники и постоянным использованием человечеством природных ресурсов, охрана природы и ее компонентов стала актуальной проблемой. Охрана природы направлена на защиту целостности ландшафтов, взаимного баланса природных компонентов. Существует множество форм охраны ландшафта. Это: заповедники, заказники, заповедники, национальные парки. Охрана природы также требует охраны природных комплексов (ландшафтов) в некоторых регионах с особым режимом. Территории, охраняемые таким особым режимом, являются природными объектами, охраняемыми государством, непосредственно отделенными от экономического развития. Необходимость установления особого режима охраны отдельных участков территории основана на сознательном отношении людей к природным ресурсам земли, которые резко изменяются и сокращаются в результате хозяйственной деятельности человека в условиях научно-технической революция..

В нашей стране по указанным выше признакам организованы особо охраняемые или охраняемые территории - ландшафты - заповедники, различного рода заповедники, природные парки и памятники. В настоящее время основным и практическим методом охраны природы являются охраняемые территории, то есть природные объекты, использование которых в хозяйстве полностью запрещено.

Охраняемая территория служит эталоном естественного состояния природных комплексов. Географические, геофизические, биологические и другие процессы можно изучать на примере природных комплексов, сравнительно мало измененных человеком. Знание процессов, характерных для разных типов и комплексов природных территорий, важно для проектирования природных изменений и прогнозного анализа антропогенного воздействия на географическую среду.

Наша главная цель – защитить и сохранить лесные ландшафты, которые редки в нашей республике и с каждым годом исчезают. В качестве примера рассмотрим Зарафшанский национальный природный парк. В 2018 году Зарафшанский природный заповедник был преобразован в Зарафшанский национальный природный парк, что основано на полном использовании всех возможностей территории в будущем.

Основная часть. По решению Республики Узбекистан, на основании Самаркандского приказа от 1 сентября 1975 года создан Зарафшанский государственный заповедник, специализирующийся на сохранении Зарафшанского золотого фазана, лекарственного растения Бегемот (Гиппопот хол Жомроидест), и сохранение лесов и ландшафтов, типичных для Центральной Азии.

Зарафшанский национальный природный парк расположен на правом берегу реки между городом Джомбой и одним водоразделом в середине реки Зарафшан. Его длина составляет 47 км. местами снижается до 300 м. представляет собой Общая площадь заповедника – 2352 г. из них 30% покрыто лесами, заповедник расположен в Джомбойском и Булунгурском районах Самаркандской области, вблизи заповедника расположены крупные и густонаселенные пункты, принадлежащие Управлению лесного хозяйства Министерства сельского и водного хозяйства республики. Узбекистана, г. Самарканд (10 км) г. Джомбой (4-5 км). Зарафшанский национальный природный парк площадью 2352 г расположен в юго-восточной части Самаркандской области на территории Джомбойского и Булунгурского районов и состоит из двух отдельных (верхнего и нижнего) участков вдоль реки Зарафшан. Расстояние между участками 300 м, ширина 100-1400 м. Общая длина составляет 47 км. Район находится в 8 км от города Самарканда. Он начинается с вершин Чопонота. Река Зарафшан тянется вверх по течению от своего правого берега до Первомайской ГЭС.

Западная граница Национального природного парка проходит по середине реки Зарафшан, а южная граница по системе пересекает границу с Таджикистаном, ведет от бывших колхозных земель к трассе Ташкент-Термиз, по ней проходит дорога. северная граница заповедника.

Зарафшанский национальный природный парк расположен в средней части бассейна реки Зарафшан, протянувшейся в широком направлении между отрогами Зеравшанского и Туркестанского хребтов. На правом берегу реки Зарафшан имеются аллювиальные террасы, как более низкие, так и более высокие. Промежуточная терраса наблюдается у села Равотоя, ее высота над хребтом 1,2-2 м. По этой террасе проходит восточная граница заповедника. Северо-западная часть заповедника проходит через современное русло реки и нижнюю террасу. Высота террасы 1-5 м, не выше современного русла реки.

Юго-восточная часть заповедника находится в глубине нижнего и верхнего выходного конуса в современном русле реки Зарафшан, а его терраса находится на высоте 10-15 м над руслом. Вся территория заповедника напоминает русло реки и склоненную к ее течению пустыню. Голость местности нарушена старыми и нынешними ручьями, набережными, каналами и плотинами. Его высота варьируется от 620 до 900 м над уровнем моря.

С геологической точки зрения Зерафшанская котловина образует синклинальную кривую, ее крылья поднимаются к окружающим горным хребтам, она сложена гораздо более древними отложениями, а ее дно – третичными отложениями. Верхний слой третичной толщи состоит из красной глины, поверх которой в долине реки Зарафшан покрыты мощные слои современных отложений крупных осадочных пород реки.

Климат этого региона типичен для континентальных субтропиков и характеризуется большими амплитудами температуры воздуха в суточном и годовом интервалах, заметна строгая периодичность атмосферных осадков в зимне-весенней половине. Самый холодный месяц – январь (-2, – 70 С), самый теплый – июль (35,40 С).

Амплитуда колебаний температуры типична для сухих субтропиков. Она очень высока в течение всего года и в течение дня. Относительная влажность воздуха зимой 63-78%, летом 23-34%.

Осадки в Зарафшанском национальном природном парке очень низкие, 100-400 мм, выпадают осенью-зимой. Осадки в виде дождя и снега выпадают с начала декабря до первой декады марта. Число дней со снежным покровом не превышает 30 дней. Постоянного снежного покрова не бывает, но в отдельные годы он может сохраняться длительное время. Встречаются также туманы небольшой продолжительности.

Для района бассейна реки Зарафшан характерен длительный период солнечного света, который составляет 2877 часов в году. Дни открытых дверей составляют 150-160 дней.

На территории заповедника основным почвообразующим фактором служат отложения подземных вод. Почвообразующие породы представляют собой осадочные отложения реки Зарафшан. Эволюционная схема почвообразования следующая: новые месторождения, полевые неаллювиальные, полевые аллювиальные, полево-пустынные, светло-серые почвы.

В юго-восточной части Национального природного парка скальные образования образуются за счет глубокого просачивания почвы и грунтовых вод. Здесь растения образуют густой покров. Наиболее распространенными типами почв являются аллювиально-полевые и неаллювиальные. По механическому составу аллювиально-полевые почвы делятся на 4 типа: глинистые и тяжелые песчаные, средние и легкие песчаные, суглинистые и песчаные, каменисто-песчаные.

Отличительной особенностью лесной растительности национального парка является то, что она развивается в особых гидротермических условиях (при высоких летних уровнях воздуха, в умеренную и дождливую погоду). Условия его жизни и развития часто зависят от биологических особенностей. Лесные растения приспособлены к развитию крупной корневой системы, заболоченных и заболоченных земель. Лесные растения устойчивы к засолению до полного созревания. Фитоценоз

лесных растений отличается разнообразием и связан с исключительно неравномерным слоем почвы.

Лес в национальном парке разделен на три формации: а) древесный лес, б) кустарниковый лес, в) травяной лес. Формации разделены на 46 объединений в зависимости от особенностей их места.

Зарафшанский национальный парк отличается своей фауной. На территории национального парка зарегистрировано 30 видов млекопитающих, 200 видов птиц, 8 видов рептилий, 2 вида водных и наземных обитателей. В каналах и ручьях плавает 8 видов рыб, из них 5 относятся к семейству карповых, 2 — к семейству угрей и 1 — к семейству лакка. Среди обитателей воды и суши встречаются обыкновенная озерная лягушка и зеленая лягушка. Фауна рептилий сравнительно невелика: азиатский белоголовый орлан, быстрая ящерица, подводные змеи, элачипоровая змея, песчаная гремучая змея, сардины. С наступлением теплых весенних дней можно увидеть степных черепах, активность которых продолжается 2-3 месяца. Фауна птиц на территории Национального природного парка красочна и разнообразна. Их насчитывается более 200 видов, из них 10 оседлых, 30 подвижных, 36 зимующих и 100 постоянно летающих.

Самый красивый зарафшанский фазан обитает в лесах Узбекистана уже тысячи лет. На территории Национального природного парка обитают бухарская славка, сорокопут, чернозобая инуя, каменная славка, чернолобый дрозд, южный соловей, тростниковая птица, водяной выюрок, илоед, малый рыболов, малый кузнечик и другие. территория национального парка.

На основании решения Кабинета Министров Республики Узбекистан от 7 февраля 2018 года №82 «Зарафшанский национальный природный парк» создан на базе Зарафшанского государственного заповедника, площадь которого составляет 2426 га. Из них зона отдыха составляет 352 га. В этом районе организовано три туристических маршрута. В первом направлении можно наблюдать золотых фазанов и птиц. По второму направлению планируется знакомство с оленями Бухары. Третье направление связано с уникальной флорой и природным ландшафтом парка.

Согласно соответствующему решению Кабинета Министров, в 2020 году начались работы по созданию на территории парковой зоны базы отдыха. Для местных и иностранных туристов были созданы возможности приехать, насладиться уникальными видами парка и развлечься. В рамках этого процесса на территории создается зоопарк общей площадью 2 га.

Будет создана возможность наблюдать и наблюдать за бухарским хангули и другими редкими животными, птицами и растениями в естественных условиях. Когда национальный парк заработает на полную мощность, планируется увеличить численность животных с 70 видов.

Сегодня в Зарафшанском национальном природном парке сохраняются дикие животные, такие как ламы, индийские козы, лебеди, павлины, фазаны, волки, лисы, львы и сойки. На охраняемой территории парка обитает более двадцати бухарских оленей, а в открытой природе – около сотни.

На основе десятилетней программы развития экотуризма разработана система туристического обслуживания. На начальном этапе в качестве туристических направлений будут выбраны три территории и окажутся услуги по пешему туризму, авто-, велосипедному и конному туризму.

Первый участок национального парка, то есть 4 километра, определен как туристическое направление. Маршрут начинается от въездных ворот и ведет к реке Зарафшан внутри Тураназора. В этом процессе можно посетить питомник бухарского оленя и зарафшанского золотого фазана, питомники экспериментальных участков. Под руководством руководителей отдела организуются автомобильные, велосипедные и конные маршруты.

Эти направления начинаются с первой части и заканчиваются в третьей части. На этом 10-километровом участке парка туристы смогут познакомиться с природной красотой национального парка, флорой и фауной..

Также на 15 гектарах территории планируется построить специальные приюты для ухода за дикими животными. Выделены три участка, на двух из них создаются условия для выращивания африканских страусов, газелей и верблюдов. С незапамятных времен регион, богатый природой и природными лекарствами, избирался для лечения некоторых заболеваний человека. Эксперты говорят, что пора начать лечение пациентов природными методами в медицинском центре, который будет построен на территории площадью 10 гектаров.

Сейчас необходимо обеспечить реализацию задач, поставленных в Концепции развития лесного хозяйства Республики Узбекистан до 2030 года, утвержденной постановлением главы нашего государства от 6 октября 2020 года, в частности, по увеличению доходов, полученные от выращивания лекарственных растений, охоты и экотуризма на землях лесного фонда.

Будущие возможности Зарафшанского национального природного парка. Зарафшанский национальный природный парк создан в целях развития экотуризма и сохранения естественного состояния окружающей среды. Зарафшанский национальный природный парк восстанавливает и сохраняет исчезающую популяцию зарафшанского фазана, охраняет виды птиц и животных в их естественной среде обитания, увеличивает популяцию бухаро-хонгульского оленя, выращивает все виды лесных

растений, особенно лекарственные кустарники, чаканду и др. на территории заповедника.

Разработка мер по охране растительных экосистем, животных экосистем, прибрежных экосистем, лесных экосистем Зарафшанского национального природного парка и принципов их использования в экотуризме. Проведение постоянной мониторинговой работы на территории национального парка и на основе этого разработка ежегодных мероприятий.

Восстановление и сохранение исчезающей популяции зарафшанского фазана, охрана других видов птиц и животных в естественной среде обитания, увеличение популяции бухарского хунгульского оленя, изучение фауны, мигрирующей на территории национального парка.

В дальнейшем важное значение в обеспечении баланса имеет создание научной основы восстановления и увеличения биологического разнообразия роц или кайровых лесов, являющихся одними из самых уникальных ландшафтов, и разработка мер по ее реализации. Следовательно, заповедники и национальные парки играют важную роль в охране природы Узбекистана. В этой сфере, в Зарафшанском национальном природном парке, предусмотрена защита от эрозии почв, охрана флоры и фауны, чистоты воды и воздуха, сохранение красивых мест и замечательных памятников природы. Зерафшанская долина – одна из древних и красивых долин Центральной Азии. Река Зарафшан издавна служила источником воды для освоенных земель между Туркестанским и Зеравшанским хребтами.

Взаимоотношения природы и человека – одна из важнейших проблем, которая интересовала каждого с незапамятных времен. В частности, быстрый рост промышленности и транспорта, старение населения и урбанизация, химизация сельскохозяйственного производства, неплановая эксплуатация земель, небрежное использование водных ресурсов, с одной стороны, дают возможность использовать больше ресурсов наших стран, а с другой стороны, негативно влияет на окружающую среду, в результате чего наступает нарушение ее первоначального естественного баланса. В результате при загрязнении воздуха и воды ускоряется эрозия почв, сокращаются или исчезают некоторые виды растений и животных, наносится ущерб природным ресурсам и памятникам.

До недавнего времени леса занимали большие площади. Однако вырубка растений, добыча полезных ископаемых, выпас скота и искусственное изменение русел рек привели к уменьшению ее площади примерно на 10%. Такое варварское поведение продолжается и сейчас. Леса являются одной из наиболее пострадавших экосистем в Узбекистане.

Столь уникальная и разнообразная флора и фауна характерна только для территории Средней Азии, включая Узбекистан.

Ландшафт Зерафшанской долины состоит в основном из лесных массивов шириной в несколько километров. Он состоит из непроходимой растительности и имеет свою уникальную флору и фауну.

Красивый ландшафт реки Зарафшан с древних времен был богат природными ресурсами. Даже в «Бобурноме» Мирзо Бабура есть сведения о русле реки Зерафшанской долины. Например, подчеркивалась сложность переправы через речные ущелья, ее стратегическое значение, богатство зверями и птицами. Даны ценные сведения о характеристиках реки Зарафшан, холма Кухан (Чопонота), русла Даргом. Однако благоприятный климат этой земли и плодородие почвы обусловили быстрое развитие земледелия. Это, в свою очередь, привело к изменению окружающих природных компонентов на берегах реки Зарафшан. Отчуждение земель привело к утрате разнообразной растительности, сокращению лесных площадей и замене их культурными ландшафтами. Такие изменения привели к исчезновению некоторых видов животных, а также миграции некоторых на земли, где влияние человека не заметно. В 1948 году сохранившиеся фруктовые сады были переданы Самаркандскому лесному хозяйству. Позже это помещение было превращено в помещение для приказов.

Выводы. Охранять и сохранять лесные ландшафты, редкие в нашей республике и исчезающие с каждым годом, и передавать их будущим поколениям как ориентир.

Сегодня мы считаем, что в целях защиты уникальных лесных ландшафтов Зарафшанского национального природного парка, сохранения существующих на них территорий и развития экотуризма в будущем необходимо реализовать следующие меры.

Зарафшанский национальный природный парк, включающий охрану лесных ландшафтов, сохранение существующих территорий и создание искусственных территорий, развитие маршрутов экотуризма и разработку методических указаний по охране природы. Борьба с тайным использованием лесных ландшафтов и повышение их экологической грамотности. Обучение туристов, приезжающих использовать лесные ландшафты в рекреационных целях, не наносить вреда природе. Разработать конкретный план действий по развитию экотуризма в Зарафшанском национальном природном парке и организовать использование лекарственных растений в народной медицине района. Сегодня сокращение площади лесов продолжается за счет незаконного расширения населением посевных площадей. Ярким примером этого является расширение посевов риса, пшеницы и сахарного тростника на площади садов. Население, занимающееся выпасом скота, и рекреационные лесные пожары ускоряют этот спад. В целях

предотвращения подобных ситуаций и сохранения существующих лесных ландшафтов необходимо усилить реализацию вышеуказанных мер государством конкретными законами и постановлениями и осуществить его контроль. Исходя из изложенных представлений, можно сказать, что улучшение экологической ситуации в районе является условием экологической стабильности.

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ПОВЫШЕНИЕ ЭФФЕКТИВНОСТИ КОРПОРАТИВНОГО УПРАВЛЕНИЯ НА ПРЕДПРИЯТИЯХ С ГОСУДАРСТВЕННЫМ УЧАСТИЕМ

***Аннотация:** В данной статье рассмотрены роль и значения государства как участника в управлении предприятиями, положительные результаты внедрения в их деятельность принципов и методов корпоративного управления. А также особенности развития корпоративного управления на предприятиях с государственным участием.*

***Ключевые слова:** менеджмент, инвестор, корпоративное управление, предприятие с государственным участием, акционерное общество (АО), общество с ограниченной ответственностью (ООО).*

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IMPROVING THE EFFICIENCY OF CORPORATE MANAGEMENT IN ENTERPRISES WITH STATE PARTICIPATION

***Abstract:** This article examines the role and significance of the state as a participant in the management of enterprises, the positive results of the introduction of principles and methods of corporate governance into their activities. As well as the specifics of the development of corporate governance in enterprises with state participation.*

***Keywords:** management, investor, corporate governance, state-owned enterprise, joint-stock company (JSC), limited liability company (LLC).*

В настоящее время наблюдается быстрый рост интереса общественности к проблеме корпоративного управления и развитию рыночных отношений. Причина подобной ситуации состоит в том, что проблемы корпоративного управления тесно связаны с некоторыми наиболее характерными для настоящего времени явлениями в мировой экономике. К ним относятся: возрастание в экономике роли частного сектора; усиление тенденции глобализации и расширение мирового хозяйства; новые условия конкуренции для компаний и развития предпринимательства. Как подчеркивал Президент Республики Узбекистан

Ш. Мирзиёев: «Наша цель – чтобы среди соотечественников появились сотни тысяч собственников и акционеров. Граждане Узбекистана должны иметь возможность инвестировать свои сбережения и получать высокие доходы. Думаю, здесь уместно повторить: если народ богат, то и государство будет богатым и сильным» [1].

Собственник «по своему усмотрению владеет, пользуется и распоряжается принадлежащим ему имуществом» [2]. Но владение, пользование и распоряжение корпоративной собственностью представляет из себя очень сложный и трудный процесс, что делает все более насущной необходимостью формирование эффективных институтов корпоративного управления, которые могли бы существенно дополнять и усиливать механизм рыночной конкуренции и способствовать становлению эффективной институциональной среды. Данная проблема актуальна в условиях глубокой и широкомасштабной трансформации в экономике Узбекистана, вызванной как научно-техническим прогрессом, так и ее системными и структурными преобразованиями, осуществляемыми в процессе формирования рыночной среды и развитии многоукладной экономики. Проблема исследования корпоративного управления в настоящее время является одним из самых актуальных направлений современных экономических исследований. Корпорации в Узбекистане еще не полностью справляются с ролью ключевого звена нашей экономики. Между тем, корпоративное управление — это важнейший институт современной экономики. В промышленно развитых странах он является неотъемлемым атрибутом системы власти.

В Узбекистане за годы независимости уделено особое внимание обеспечению прав и свобод граждан, демократизации государственной структуры, углублению рыночных реформ, созданию необходимых гарантий в деле защиты частной собственности, предпринимательства, малого и среднего бизнеса, работа в данном направлении последовательно продолжается. Расширены масштабы политических, социально-экономических, духовно-правовых реформ, приняты стратегические программы, направленные на развитие различных форм предпринимательства для устойчивого роста национальной экономики в условиях рыночных отношений и эффективного использования имеющихся возможностей, создание организационно-правовой базы данной сферы, дальнейшее их совершенствование и либерализацию экономики.

Одним из важных направлений долгосрочных государственных программ реформирования, структурных преобразований и диверсификации экономики является обеспечение надежной защиты интересов частного предпринимательства и малого бизнеса, повышение роли частной собственности и поступательное сокращение присутствия государства в экономике, в связи с чем в Узбекистане уже проведена

значительная работа в данном направлении. В частности, сформирована нормативно-правовая база корпоративного управления, во всех акционерных обществах созданы органы корпоративного управления, функционируют организации, оказывающие консалтинговые услуги, приняты соответствующие решения правительства по ускорению процессов внедрения систем управления качеством на предприятиях.

Особое внимание уделяется широкому привлечению в хозяйствующие субъекты иностранных инвесторов, созданию благоприятных условий для их активного участия в корпоративном управлении, модернизации, техническом и технологическом перевооружении производства.

В условиях Узбекистана наиболее приемлемым и оправдывающим себя вариантом является такая форма собственности, когда владельцами акций становятся, наряду с отечественными, и иностранные инвесторы. В нашей стране уже действует свыше 4 тысяч таких предприятий, созданных с участием иностранного капитала. Есть примеры успешного функционирования предприятий, полностью основанных на иностранном капитале и зарубежных методах корпоративного управления. Основной тенденцией экономического развития страны стало ежегодное увеличение объемов иностранных инвестиций и стабильный рост их доли в совокупных инвестициях в основной капитал Узбекистана (Табл. 1).

Изучая вопросы корпоративного управления, можно сделать вывод о важности роли государства как участника в управлении предприятиями. Она заключается в следующем:

- государство инвестирует средства в отдельные отрасли экономики или отдельные регионы с целью их развития;
- государство обеспечивает контроль за функционированием стратегических отраслей экономики;
- государство создает источники доходов для пополнения государственного бюджета и создает рабочие места.

Также, цели государства, как акционера, носят гораздо более сложный и комплексный характер, по сравнению с целями и задачами частных собственников. Государство может руководствоваться разными целями, не связанными с финансовыми результатами компании [3].

Таблица 1

Структура инвестиций в основной капитал по источникам финансирования, в % к общему объему [4].

Показатели	2017 г.	2018 г.	2019 г.	2020 г.	2021 г.
Всего	100	100	100	100	100
в.т.ч.					
Республиканский бюджет	4,8	4,6	9,0	6,8	8,8
Средства предприятий и населения	47,3	42,0	29,3	40,8	37,1

Государственные целевые фонды	11,4	11,3	4,3	2,1	2,4
Иностранные инвестиции и кредиты	23,8	24,3	43,6	42,7	43,7
Кредиты коммерческих банков и другие заемные средства	12,7	17,8	13,8	7,6	8,0

Источник: Государственный комитет по статистике. www.stat.uz

Любое акционерное общество, в том числе с государственным участием в капитале, имеет развитую сеть корпоративных отношений. Основными участниками корпоративных отношений являются субъекты, связанные с функционированием компании, оказывающие влияние на ее деятельность или зависящие от нее, в той или иной форме или степени. Прежде всего, это органы управления акционерным обществом, акционеры, персонал, в том числе менеджмент. Каждый участник корпоративных отношений является носителем определенных интересов и стремится их реализовать [5].

Вступление Узбекистана на путь инновационного развития поставило перед предприятиями реального сектора экономики ряд проблем, главными из которых являются развитие современных организационно-правовых форм хозяйствования, реформирование системы управления производством и введение распространенных в мировой практике методов и инструментов управления, позволяющих максимизировать их прибыль, внедрять последние достижения науки и техники, а также сглаживать причины конфликтов всех участников деятельности предприятия.

Широкие перспективы для успешного решения указанных задач открывает система корпоративного управления, позволяющая интегрировать усилия высших и исполнительных органов управления в вопросах выработки взвешенной стратегии развития производства, освоения выпуска новой продукции и внедрения прогрессивных форм хозяйствования. Поэтому в Стратегии управления и реформирования предприятий с государственным участием на 2021-2025 годы среди приоритетных направлений управления государственными активами отмечена необходимость обеспечения полного перехода предприятий с государственным участием на рыночные условия, полное внедрение в их деятельность современных методов корпоративного управления [6].

В заключение можно отметить, что предпринимаемые меры в последние семь лет руководством республики, в этом направлении, создали широкие возможности для развития системы корпоративного управления, что, в свою очередь, позволит значительно повысить эффективность управления государственными активами.

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ПЕРСПЕКТИВЫ ИСПОЛЬЗОВАНИЯ НИЗКОНАПОРНЫХ ГИДРОТЕХНИЧЕСКИХ СООРУЖЕНИЙ

Использование низконапорных гидротехнических сооружений играет важную роль в устойчивом обеспечении и управлении надземных вод в отрасли экономики. В период эксплуатации разрушение и повреждение низконапорных гидротехнических сооружений вызваны воздействием различных объективных и субъективных факторов.

Ключевые слова: *низконапорные гидротехнические сооружения, основание, водные ресурсы, проектирование, строительство, эксплуатация.*

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The use of low-pressure hydraulic structures plays a key role in the sustainable provision and management of surface water in the economic sector. During operation, the destruction and damage of low-pressure hydraulic structures are caused by the impact of various objective and subjective factors.

Keywords: *low-pressure hydraulic structures, foundation, water resources, design, construction, operation.*

Водные ресурсы в странах Центральной Азии все больше сокращаются, все больше усугубляя экономические проблемы региона. Изменение климата создает необычные погодные условия, и эти проблемы, вероятно, сохранятся и в будущем. В ближайшее десятилетие изменение климата и рост потребления воды в соседних странах приведут к сокращению водозабора Узбекистаном из рек Амударья и Сырдарья. В результате процесс засухи и опустынивания может усилиться и серьезно повлиять на уровень жизни населения. Одним из решений по компенсации потерь воды и предотвращению ее дефицита являются водо-, энерго- и ресурсосберегающие технологии, поскольку тенденция сокращения биоразнообразия продолжается.

В связи с быстрым ростом населения в нашей республике потребность в водных ресурсах увеличивается с каждым днем. Особое место занимают вопросы нехватки водных ресурсов и повышения уровня обеспечения населения устойчивыми водными ресурсами. Поэтому гидротехнические сооружения (ГТС) играют важную роль в экономном

использовании и управлении водными ресурсами в различных отраслях экономики страны [1,2].

Наряду со смягчением и устранением этих проблем, одной из актуальных задач является строительство новых ГТС в обеспечении устойчивой водой отраслей экономики нашей республики. Причиной этого является отсутствие территорий, позволяющих осуществлять проектирование и строительство ГТС в геологически невозможных местах ведущими инженерами и специалистами.

В связи с дефицитом водных ресурсов в последние годы большое внимание уделяется проектированию, строительству и эксплуатации низконапорных ГТС. В Узбекистане низконапорных ГТС больше, чем крупных. Большая работа проделана ведущими учеными и специалистами в области проектирования и строительства низконапорных ГТС. Ими разработаны методы расчета на основе существующих проблем, а также разработано программное обеспечение для быстрого выявления отказов и дефектов.

Но их результаты, на мой взгляд, остаются поверхностными. Причиной тому являются: проблемы с расчетом совместной работы основания и сооружений, позволяющих учитывать сложные инженерно-геологические условия; отсутствие нормативной и исследовательской документации на проектирование и строительство; заключается в том, что предшествующий опыт применения новых типов строительства недостаточен.

Тем не менее, ждут решения проблемы разработки ресурсосберегающих технологий использования низконапорных ГТС и укрепления их оснований, применения экономически эффективных технологических мер при проектировании и строительстве.

В 2023 году новая редакция Закона «О безопасности гидротехнических сооружений» [3] была разработана в целях поддержания существующих водохозяйственных объектов нашей страны в техническом состоянии, обеспечения их безопасности и надежного использования. Большинство низконапорных ГТС эксплуатируются более 40 лет. За время использования возник ряд разрушений и повреждений. Их распределение по высоте представлено на рис. 1. Это требует их своевременного ремонта, восстановления и реконструкции, а также оснащения современным оборудованием, поддержания их в техническом состоянии, обеспечения их безопасной и надежной эксплуатации. В сфере строительства признается, что принципы проектирования основания крупных ГТС неправильно применяются к низконапорным ГТС, что приводит к дополнительным затратам. Именно поэтому, учитывая существующие проблемы, особое внимание уделяется эффективному использованию низконапорных ГТС, поиску путей эффективного решения текущих задач, связанных с повышением прочности и устойчивости их оснований.

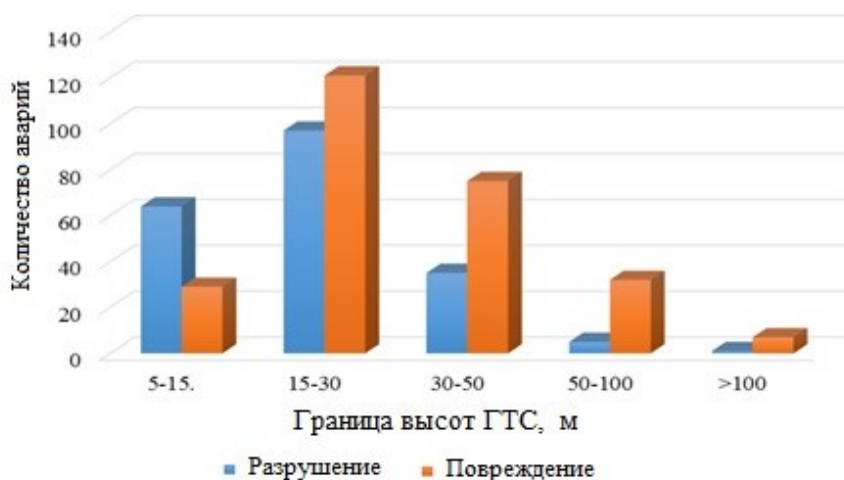


Рис. 1. Зависимость аварий от высоты сооружений

Определенные разрушения и повреждения низконапорных ГТС вызваны влиянием различных объективных и субъективных факторов. Объектив включает в себя стихийные бедствия, такие как ураганы, проливные дожди, оползни, землетрясения и многое другое. К субъективным причинам относятся: ошибки в проектировании, нарушение технических регламентов при строительстве, нецелевое использование объектов и т.д. Многие разрушения ГТС являются результатом экономии средств, которая проявлялась в недостаточных предварительных исследованиях, низком качестве используемых строительных материалов, необоснованном уменьшении размеров сооружений.

Несмотря на значительный прогресс в технологии строительства, совершенствование его технологии, улучшение качества используемых строительных материалов, а также рост общего уровня знаний и технических решений, аварии на плотинах в настоящее время происходят.

Крайне актуальны вопросы обеспечения длительной безопасной эксплуатации строящихся и эксплуатируемых низконапорных ГТС. Само собой разумеется, что для успешного решения этой важной задачи необходимо эффективно использовать весь положительный и отрицательный мировой опыт гидротехнического строительства [4].

Однако нельзя игнорировать факторы, которые рано или поздно приводят к недопустимому ухудшению состояния сооружения даже при правильной эксплуатации. К таким факторам относятся, например, ухудшение материала ГТС и ослабление основания, изменение их прочности, водонепроницаемости и других свойств с течением времени. Поэтому в необходимых случаях необходимо заранее предусмотреть капитальный ремонт, устойчивость сооружения или даже заменить старые, ослабленные сооружения более современными, изготовленными из современных материалов и хорошо спроектированными.

В заключение отметим, что проблема эксплуатируемых низконапорных ГТС требует безотлагательного и незамедлительного решения. Большинство из них эксплуатируются в течение 40 и более лет без обслуживания и реконструкции и считаются объектами высокого риска. Это подчеркивает необходимость уделять особое внимание вопросам обеспечения безопасности и повышения устойчивости.

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ТРАДИЦИОННЫЕ ОБРАЗОВАТЕЛЬНЫЕ ТЕХНОЛОГИИ И ПУТИ ИХ МОДЕРНИЗАЦИИ

Аннотация

В статье рассматриваются традиционные образовательные технологии и пути их модернизации. Традиционные методы обучения, сформировавшиеся на протяжении многих лет, продолжают быть основой образовательной системы. Тем не менее, с учетом быстрого прогресса технологий и меняющихся потребностей общества, возникает необходимость модернизировать эти методы для увеличения их эффективности и значимости.

Ключевые слова: технология, процесс, личность, педагогика, методист.

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TRADITIONAL EDUCATIONAL TECHNOLOGIES AND WAYS OF THEIR MODERNIZATION

Abstract

The article discusses traditional educational technologies and ways of their modernization. Traditional teaching methods that have evolved over the years continue to be the basis of the educational system. However, given the rapid progress of technology and the changing needs of society, there is a need to modernize these methods to increase their effectiveness and significance.

Key words: technology, process, personality, pedagogy, methodologist.

В современном мире образование играет ключевую роль в формировании личности и профессиональных навыков человека. Традиционные образовательные технологии, которые сложились за многие годы, остаются основой образовательного процесса. Однако, учитывая стремительное развитие технологий и изменяющиеся потребности общества, существует необходимость в модернизации этих технологий для повышения их эффективности и актуальности.

Вооруженные существующим традиционным образовательным процессом, образовательные учреждения оказались бессильны реализовать поставленный перед ними государственный и общественный заказ.

По мнению известного ученого-дидактика М.Н. Махмутова традиционная схема организации учебного процесса не может в достаточной степени развивать мыслительные способности учащихся, не может удовлетворить их потребности в знаниях, интерес к науке, не может обеспечить активное мышление и превращение знаний в убеждения.

Действительно, при сравнении традиционного образовательного процесса с образовательным процессом, основанным на современных педагогических технологиях, отчетливо видна разница между ними

К традиционным типам уроков, разработанным и практикуемым известными дидактами и методистами, мы подошли на основе методических принципов историко-логического единства. Необходимо отметить, что каждый урок считался достижением дидактической или специальной методики и успешно использовался на практике, отвечая соответствующим дидактическим целям и критериям.

Не умаляя роли и значения лекций, семинаров и тестовых занятий, основанных на традиционных образовательных технологиях, в образовательном процессе необходимо думать о путях их совершенствования с учетом требований настоящего времени. При совершенствовании данных занятий внимание уделяется следующему:

1. Гуманизация и демократизация педагогических отношений. Практиковать кооперативную педагогику.

2. Демократизация образовательного процесса. Предоставление ученикам выбора.

3. Активизировать познавательную деятельность студентов, создать комфортную социально-психологическую среду, основанную на взаимной солидарности.

4. Эффективная организация творческой и самостоятельной работы студентов.

5. Использование элементов современных образовательных технологий на лекциях, семинарах и тестовых занятиях.

При преподавании биологии в средних специальных и профессиональных учебных заведениях целесообразно использовать лекции, семинары и тестовые занятия.

Одним из фундаментальных элементов традиционного образования является лекционная форма обучения. Лекции позволяют преподавателям передавать значительные объемы информации большому числу студентов одновременно. Однако современное развитие цифровых технологий открывает новые возможности для совершенствования этого метода. Например, видеолекции и онлайн-курсы позволяют значительно расширить аудиторию и сделать обучение доступным для студентов из удаленных регионов. Более того, современные программные средства позволяют интегрировать интерактивные элементы, такие как опросы и тесты, что способствует более глубокому усвоению материала.

Семинарские занятия и дискуссии также занимают важное место в традиционном образовании, способствуя развитию критического мышления и навыков публичного выступления. В рамках модернизации образовательных технологий можно использовать онлайн-платформы для проведения виртуальных семинаров, где студенты могут обмениваться мнениями и участвовать в дискуссиях в режиме реального времени, независимо от своего местоположения. Такие платформы также позволяют записывать занятия, что дает возможность студентам пересматривать материал и более тщательно готовиться к экзаменам.

Лабораторные работы и практические занятия, которые традиционно проводятся в специализированных аудиториях, также могут быть модернизированы с помощью виртуальной и дополненной реальности. Современные технологии позволяют создавать виртуальные лаборатории, где студенты могут проводить эксперименты, моделируя различные сценарии и изучая их результаты. Это особенно полезно для тех учебных заведений, которые не имеют возможности обеспечить студентов необходимым оборудованием и материалами.

Практика написания рефератов и курсовых работ, направленная на развитие исследовательских навыков, может быть модернизирована с помощью использования онлайн-библиотек и данных. Современные образовательные платформы предоставляют студентам доступ к огромным массивам информации, что позволяет значительно расширить исследовательскую базу и повысить качество работ. Кроме того, использование программного обеспечения для анализа данных позволяет проводить более глубокие и обоснованные исследования.

Таким образом, современные технологии открывают огромные возможности для модернизации традиционных образовательных методов. Внедрение цифровых инструментов и платформ позволяет сделать процесс обучения более гибким, интерактивным и доступным, что в конечном итоге способствует формированию высококвалифицированных специалистов, готовых к вызовам современного мира.

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РОЛЬ МАРКЕТИНГА В ИННОВАЦИОННОМ РАЗВИТИИ ДЕЯТЕЛЬНОСТИ СФЕРЫ ТУРИЗМА

***Аннотация:** В данной статье рассмотрены вопросы инновационного развития сферы туризма, причины и факторы, препятствующие повышению эффективности их деятельности, а также даны предложения по решению существующих проблем.*

***Ключевые слова:** экономика, туризм, частный бизнес, туристская деятельность, туристские ресурсы, маркетинг, турбизнес, турпродукт*

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THE ROLE OF MARKETING IN THE INNOVATIVE DEVELOPMENT OF TOURISM ACTIVITIES

***Abstract.** This article discusses the issues of innovative development of the tourism sector, the reasons and factors hindering the increase in the efficiency of their activities, and also offers suggestions for solving existing problems.*

***Keywords:** economy, tourism, private business, tourist activity, tourist resources, marketing, tourist industry, tourist product*

Введение. В настоящее время важным условием столь быстрого развития экономической отрасли является, ускоренное внедрение современных инновационных технологий, то есть успешная деятельность невозможна без инноваций. Стремительно формирующиеся все сферы государственной и общественной жизни страны требуют тесного сопровождения проводимых реформ на основе современных инновационных идей, разработок и технологий, обеспечивающих быстрый и качественный рывок страны в ряды лидеров мировой цивилизации.

Развитие экономики Узбекистана, безусловно связано с развитием отрасли туризма, выступающей социальным и приоритетно значимым направлением, развитие которого влияет на экономику, как государства, так и на экономику мирового масштаба. Более 10 процентов мирового валового продукта обеспечивается за счет индустрии туризма, а порядка 75-80 процентов формируется за счет сферы услуг. Однако несмотря столь

быстрое развития, в сфере существует множество проблем, связанных с данной

деятельностью, что свидетельствует о значительном отставании от экономически развитых стран мира.

Наша Республика имеет колоссальный ресурсный потенциал для развития сферы. О возможностях нашей страны свидетельствует, прежде всего наличие свыше 7,4 тысяч объектов материального культурного наследия

разных эпох и цивилизаций, в том числе включенные в Список объектов всемирного наследия ЮНЕСКО исторические центры Самарканда, Бухары, Хивы и Шахрисабза. Страна богата 11 национальными природными парками, государственными заповедниками, 37 театрами, 106 музеями, 187 парков отдыха и культуры, а также множество других объектов туризма.

Наличие древних достопримечательностей, мечетей, мавзолеев, медресе, а также множество нетронутых уголков природы, лечебных центров, множество ресурсов позволяют развивать многие виды туризма. Всемирно известные исторические памятники, современные города, неповторимая природа Узбекистана, уникальная национальная кухня, а также непревзойденное гостеприимство нашего народа притягивают любителей путешествий. Благодаря чему в стране возможен прорыв в получении валютных поступлений от туристической деятельности и пополнения бюджетов страны. Другими словами, индустрия туризма производит туристический продукт, который востребован как на внешнем, так и на внутреннем рынке. Главной задачей индустрии туризма является создание качественного и востребованного туристического продукта.

Материалы и методы. В процессе написания статьи использованы учебные пособия, нормативные акты Республики Узбекистан, статистические данные Государственного комитета Республики Узбекистан, а также осуществлён метод общего анализа.

Основная часть. Вопросы, связанные с инновационной деятельностью и её развитием, рассматривались в работах отечественных и зарубежных ученых таких как: Й. Шумпетер, Ю.А. Чичерина, Я.Ю. Грибова, Ф. Валента, Л.Водачек, О. Водачкова, М. Хучека, Г. Менш и др. Инновационная деятельность сосредоточена на результатах научных исследований, а также экспериментальных разработках. Термин «инновации» в современном его понимании первым стал применять Австрийский ученый Й. Шумпетер. Он подчеркивал, что инновации – это существенная смена функции производимого, состоящая в новом соединении и коммерциализации всех новых комбинаций, основанных на использовании новых материалов и компонентов, внедрении новых процессов, открытии новых рынков, а так же внедрении новых организационных форм[4].

Производить, по Шумпетеру, — значит комбинировать имеющиеся в нашей сфере вещи и силы. Производить нечто иное или иначе — значит создавать другие комбинации из этих вещей и сил. Центральное место в его теории занимает предприниматель - новатор как создатель новых продуктов, новых рынков, новых технологий. Согласно Й. Шумпетеру, инновация является главным источником прибыли: «...прибыль, по существу, является результатом выполнения новых комбинаций», «...без развития нет прибыли, без прибыли нет развития» [5].

Близкое к изложенному определение дают Л. Водачек и О. Водачкова [6]. По их мнению, инновация - это «целевое изменение в функционировании предприятия как системы, которое может выражаться в количественном и качественном преобразовании в какой-либо области деятельности предприятия». Аналогичен взгляд М. Хучека [7], который трактует инновации как: «... изменения в технике, организации, экономике, а также в социальной жизни предприятия». П.Н. Завлин, А.А.Ипатов и А.С.Кулагин [8] под инновацией (нововведением) подразумевают объект, внедренный в производство в результате проведенного научного исследования или сделанного открытия, качественно отличный от предшествующего аналога. Инновация характеризуется более высоким технологическим уровнем, новыми потребительскими качествами товара или услугами по сравнению с предыдущим продуктом. Изучив труды ученых (Й.Шумпера, Ф.Валенты, М. Хучека П.Н. Завлина, А.А.Ипатова, Л. Водачек, О. Водачкова А.С. Кулагина, О.В.Сморудова) мы пришли к выводу, что на основе проведенных исследований ученые рассматривали инновации как преобразование системы с использованием новых материалов, нового оборудования, технологий, внедрение новых процессов в сфере производственной деятельности, то есть создание нового потребительского товара, качество которого было намного выше приводящих. Но, со стороны ученых не была раскрыта суть инноваций сферы услуг (туристической деятельности), по нашему мнению, инновационно развитая сфера деятельности должна заниматься не только производством и поставкой товаров, но и оказанием качественных услуг.

Сегодня развитие туристической отрасли рассматривается как одно из важнейших направлений. На основе мирового опыта в стране было рассмотрено и принято множество нормативных актов. К примеру, в январе текущего года были приняты важные для сферы туризма нормативные акты. Указ Президента Республики Узбекистан «О дополнительных мерах по ускоренному развитию туризма в Республике Узбекистан» [1], а также Постановление Президента Республики Узбекистан «О мерах по ускоренному развитию туристской отрасли [2]». В данных нормативных актах определены основные стратегические направления развития сферы туризма. В частности, Указом Президента Республики Узбекистан утверждена Концепция развития сферы туризма в

период до 2025 года [3] с ежегодным принятием плана конкретных мероприятий по реализации Концепции.

Исходя из принятых вышесказанных нормативных актов, ныне основными направлениями государственной политики в сфере туризма являются:

- развитие данной сферы как стратегической отрасли экономики страны;

- обеспечение прав граждан на отдых, свободу передвижения и иных прав при совершении путешествий;

- рациональное использование и сохранение туристских ресурсов;

- совершенствование нормативно-правовой базы;

- создание необходимых условий для развития внутреннего туризма, включая организацию туризма и экскурсии детей, молодежи, престарелых, а также лиц с инвалидностью и малообеспеченных слоев населения в рамках развития социального туризма;

- привлечение инвестиций и создание благоприятных условий для инвестирования в сферу туризма;

- развитие государственно-частного партнерства в данной сфере;

- создание равных возможностей на рынке туристских услуг для субъектов предпринимательства;

- стимулирование посредством установления налоговых и таможенных льгот субъектам сферы туризма;

- организация и развитие научных исследований;

- подготовка, переподготовка и повышение квалификации кадров;

- развитие международного сотрудничества;

- повышение имиджа Республики Узбекистан как страны, привлекательной для туризма;

- оказание субъектам сферы туризма государственной поддержки в продвижении ими национального туристского продукта на туристских рынках;

- стимулирование внедрения передовых инновационных и информационно-коммуникационных технологий;

- стимулирование развития туристских зон и туристских кластеров.

Сегодня инновации — это эффективное средство конкурентной борьбы, которая ведет к созданию новых потребностей, к притоку инвестиций, к созданию новых рабочих мест, к снижению себестоимости продукции, к повышению имиджа страны, к открытию новых рынков как внутренних, так и внешних. В последнее время часто приходится слышать о пользе инновационного развития, как экономики, так и в сфере туризма, в частности.

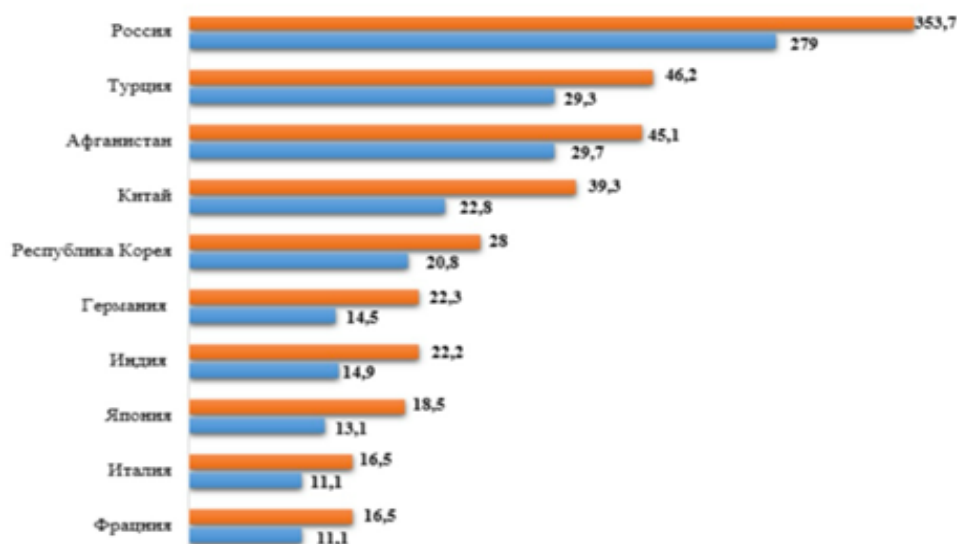


Рис. 1. Страны дальнего зарубежья в СНГ, С самым высоким количеством туристов (тыс.чел) в течении месяцев 2019 и 2018 гг [9]

По Статистическим данным Государственного комитета Республики в начале 2017 года 1 миллион 125 тысяч туристов посетили Узбекистан. К концу года эти показатели выросли до 2 миллионов 520 тысяч туристов. Отмечается, что по сравнению 2016 годом количество туристов, побывавших в Узбекистане 2017 году, увеличилось на 24,3 процентов. Общее число туристов, въехавших в республику в 2018 году, составило 5,35 миллиона человек (в 1,96 раза больше, чем в 2017 году), в том числе, 4,6 млн. человек – граждане стран Центральной Азии, 406 тыс. человек – из стран СНГ и 326,5 тыс. человек – из дальнего зарубежья. В течение 9 месяцев 2019 года количество иностранных туристов составило 4,9 млн. человек. Данный показатель по сравнению с аналогичным периодом прошлого года на 26 процентов выше. (3,9 млн человек за 9 месяцев 2018 года).



Рис. 2. Количество туристов в разрезе месяцев 2018-2019 гг. (тыс.чел)

Ниже рассмотрим диаграмму количества туристов посетивших Узбекистан в разрезе месяцев 2018-2019 гг, по сравнению с схожим периодом предыдущего года значительно выросло количество выезжающих туристов в

январе и феврале. Т.е. в январе количество выезжающих туристов по сравнению с аналогичным периодом 2018 года выросло на 64 процента (с 266,2 тыс. до 437,2 тыс.), в феврале – на 48 процентов (с 264,9 тыс. до 393, тыс.).

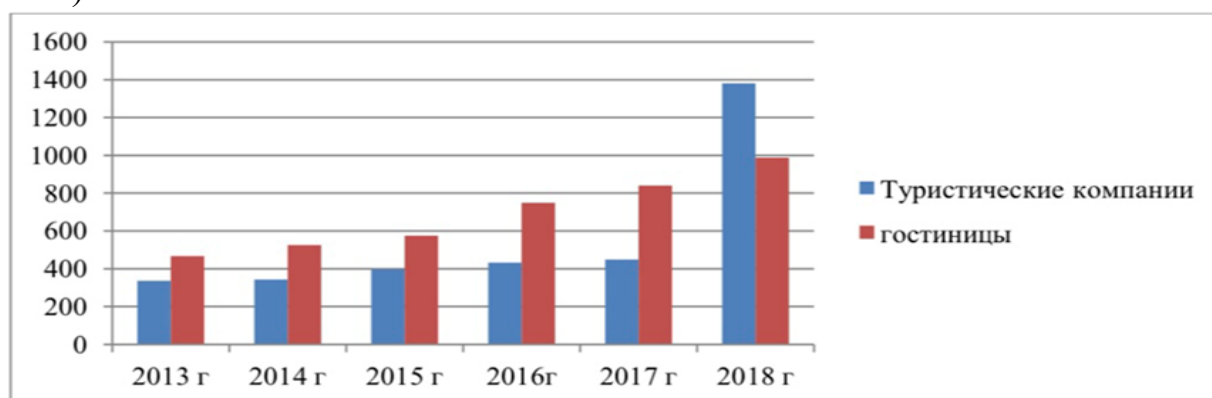


Рис.3. Количество предприятий, осуществляющих туристическую деятельность

По состоянию 1 октября 2019 года в стране, успешно функционируют 1381 туркомпаний. Статистика экспорта туристских услуг с начала 2017 года составила более 694 млн долларов США, данные показатели к концу 2017 года

выросли 1 557 миллион долларов.[9] В 2018 году выросло до 1 млрд 4 млн долларов. Экспорт туристских услуг 2019 года составил 854,5 млн долларов. По сравнению с аналогичным периодом прошлого года (666,8 млн. долларов) экспорт туристских услуг увеличился на 28 процентов [9].

Как показывает статистика в сфере туризма осуществлена огромная работа. Но, несмотря на это, ныне остаются множество не решенных проблем, существование которых является преградами развития деятельности. К их числу можно отнести:

- отсутствие эффективно работающего финансово-кредитного механизма поддержки;
- отсутствие финансовых механизмов инновационно-инвестиционной системы поддержки;
- отсутствие упрощённой системы кредитования (высокая процентная ставка);
- ограничения льготного налогообложения;
- отсутствие финансового института, поддержки и развития туризма.

Решение этих проблем на основе развития государственного регулирования и поддержки деятельности сферы туризма позволит наиболее

эффективно использовать имеющийся туристский потенциал страны. Другими словами, индустрия туризма производит туристический продукт, который востребован как на внешнем, так и на внутреннем рынке.

Исходя из вышесказанного, мы считаем необходимым в стратегическом плане устранить факторы, которые являются преградами, для формирования финансовых ресурсов в целях обеспечения туристических предприятий быть конкурентоспособными.

Заключение и предложения. Подводя итоги, можно сделать выводы, что существующие проблемы, препятствуют инновационному развитию сферы туристической деятельности, что сказывается на получении дополнительных средств в доходы бюджета страны.

Создание маркетинговой компании занимающийся маркетинговыми исследованиями сферы туризма приведет к решению вышесказанных проблем, то есть появится возможность позволяющая удовлетворить потребности туристов, обеспечить пополнение бюджетов всех уровней, привлечь иностранную валюту в регион, решить социально-экономические проблемы, повысить уровень занятости населения.

По нашему мнению основная деятельность маркетинговой компании должна заключаться в проведении следующих мероприятий:

- опросе туристов (выявление пожеланий к качеству оказанных услуг, цене, потребностей);
- выявление проблем с которыми сталкиваются туристы при прибытии в страну;
- предпочтения и интересы туристов в стране;
- определение важнейших тенденций в сфере туризма в стране;
- опрос и анкетирование субъектов деятельности сферы туризма;
- выявление проблем с которыми сталкиваются субъекты деятельности сферы туризма;
- решение проблем с которыми сталкиваются субъекты занимающиеся туристической деятельностью;
- созданием интернет-маркетинга (исследование рынка через опрос туристов в виде он-лайн режима, реализацией турпродуктов);
- проведением мастер классов по подготовке квалифицированных кадров, по ведению успешной работы тур фирмам;
- изучение, рассмотрение классификации спроса на новые виды услуг или товаров.

Данные мероприятия должны выполняться совместно. Опрос потенциальных туристов на направляющих рынках за рубежом, анализ предложений конкурентов, выявление направляющих рынков сопряжен в первых случаях с большими финансовыми затратами, в последнем – с недоступностью информации, поэтому данные функции должны выполняться за счет бюджетных средств и с участием представителей органов власти.

Маркетинговая деятельность должна осуществляться на уровнях региональных и центральных органов управления туризмом, турбизнеса и общественных организаций, которые должны действовать на основе норм,

установленных государственными органами республики. Деятельность всех структур должна согласовываться Агентством по туризму «Узбектуризм» Республики Узбекистан.

И в заключение можно сказать, сфера туризма является важнейшей частью экономики всей страны. Реализация предложенной формы государственно-частного партнерства, будет способствовать развитию организаций сферы туризма, активизации внедрения новых конкурентоспособных турпродуктов, повышению эффективности их деятельности, созданию дополнительных рабочих мест, стимулированию образования новых организаций, увеличению налоговых поступлений, росту благосостояния населения.

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КОНВЕРГЕНЦИЯ СОВРЕМЕННЫХ И МЕЖДУНАРОДНЫХ ПРИНЦИПОВ В РАЗВИТИИ ТУРИЗМА И ОБЕСПЕЧЕНИИ ЭКОНОМИЧЕСКОЙ БЕЗОПАСНОСТИ УЗБЕКИСТАНА

Аннотация: Современная динамика мирового туризма и экономических процессов требует постоянного обновления подходов к развитию и обеспечению безопасности в данной сфере. В данной статье рассматривается конвергенция современных и международных принципов в контексте туризма и экономической безопасности, а также их взаимосвязь и влияние на развитие туристической отрасли.

Ключевые слова: туризм, экономическая безопасность, конвергенция принципов, устойчивое развитие, культурное разнообразие, конкурентоспособность, социальная ответственность, глобализация, международные правовые инструменты.

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CONVERGENCE OF MODERN AND INTERNATIONAL PRINCIPLES IN THE DEVELOPMENT OF TOURISM AND ENSURING ECONOMIC SECURITY OF UZBEKISTAN

Abstract: The current dynamics of global tourism and economic processes require constant updating of approaches to development and security in this area. This article examines the convergence of modern and international principles in the context of tourism and economic security, as well as their relationship and impact on the development of the tourism industry.

Keywords: tourism, economic security, convergence of principles, sustainable development, cultural diversity, competitiveness, social responsibility, globalization, international legal instruments.

Введение. Современный эпоха характеризуется глобализацией и интеграцией, что влияет на все сферы жизни, включая туризм и экономическую безопасность. Конвергенция современных и международных принципов становится все более актуальной в контексте обеспечения устойчивого развития туристической индустрии и экономики в целом.

В мире, охваченном волнами глобализации и ускоренных изменений, туризм и экономическая безопасность выступают важными составляющими глобальной динамики. Развитие туристической индустрии, будучи тесно связанным с экономическими процессами, становится неотъемлемой частью стратегий развития многих стран. Однако, на пути к устойчивому росту и процветанию, сталкивающихся с вызовами современного мира, стоит задача обеспечения не только экономической, но и общественной и экологической безопасности.

В этом контексте, концепция конвергенции современных и международных принципов становится ключевым фокусом исследований [2], где под конвергенцией понимается слияние и взаимодействие различных принципов и подходов с целью создания более устойчивой и эффективной системы развития. В частности, в контексте туризма и экономической безопасности, конвергенция принципов представляет собой интеграцию современных подходов к управлению туристической индустрией с международными стандартами обеспечения экономической стабильности [3].

В данной статье автор проводит анализ конвергенции современных и международных принципов в развитии туризма и обеспечении экономической безопасности Узбекистана, исследуя их взаимосвязь и влияние на развитие туристической отрасли [6]. Рассмотрение этой проблемы не только поможет лучше понять современные вызовы и возможности для туристического сектора, но и выделить ключевые стратегии и направления дальнейшего развития для обеспечения устойчивого и успешного будущего.

Методология и объект исследования. Методологические подходы в исследовании проблемы конвергенции современных и международных принципов в развитии туризма и обеспечении экономической безопасности включают в себя несколько основных особенностей. Так, исследование этой проблемы требует использования методов и подходов не только из области туризма и экономики, но и из социологии, политологии, экологии и других областей. Такой подход позволяет охватить разнообразные аспекты взаимодействия между туризмом и экономической безопасностью.

Для полного понимания проблемы используются как качественные методы (анализ литературы, кейс-стади, интервью), так и количественные методы (сбор и анализ статистических данных, опросы). Такой подход позволяет получить как общий обзор темы, так и точные численные данные. Для выявления особенностей и тенденций развития в различных регионах и странах применяется сравнительный анализ. Это позволяет выделить успешные практики и проблемные области в развитии туризма и обеспечении экономической безопасности.

В ходе исследования учитываются взаимосвязи и взаимодействия между различными аспектами туризма и экономической безопасности. Например, рассматривается влияние устойчивого туризма на экономическую стабильность региона или связь между развитием инфраструктуры и привлечением инвестиций. Для подтверждения гипотез и выводов используются эмпирические данные, такие как статистические показатели, результаты опросов и анализ конкретных случаев из практики, что позволяет сделать исследование более обоснованным и достоверным.

Для исследования проблемы конвергенции современных и международных принципов в развитии туризма и обеспечении экономической безопасности Узбекистана необходимо применение комплексного методологического подхода, учитывающего специфику страны и международные туристические тренды. Например, анализ данных и статистики позволяет оценить динамику посещаемости туристических объектов в различных регионах Узбекистана, а также определить наиболее популярные виды туризма. Путем сопоставления этих данных с международными стандартами можно выявить проблемные области и разработать стратегии их решения [6].

Другим важным методом является изучение национального и международного законодательства, регулирующего туристическую деятельность. На практике это означает анализ нормативных актов Узбекистана, касающихся туризма, а также соответствующих международных соглашений, которые могут влиять на развитие этой сферы [4]. Например, принятие специальных законов о туризме [1] и создание благоприятного правового окружения может привлечь больше инвестиций и способствовать развитию инфраструктуры туристического сектора.

Социологические исследования также играют важную роль в изучении потребностей и ожиданий как туристов, так и местного населения. Например, проведение опросов и фокус-групп позволяет выявить предпочтения туристов в отношении места проживания, питания, развлечений и т. д. [5] Эти данные могут быть использованы для разработки персонализированных туристических продуктов и улучшения сервиса.

Кроме того, анализ лучших практик и экспертные оценки позволяют извлечь уроки из опыта других стран и специалистов в области туризма. Например, страны с развитой туристической индустрией, такие как Турция или Таиланд, могут предоставить ценные рекомендации по развитию туризма в Узбекистане, учитывая специфику местных условий и потребностей.

Таким образом, применение различных методологических подходов позволяет получить глубокое понимание проблемы конвергенции принципов [5] в развитии туризма и обеспечении экономической

безопасности Узбекистана и разработать конкретные стратегии для ее решения, основанные на фактических данных и международном опыте.

Объектом исследования проблем конвергенции современных и международных принципов в развитии туризма и обеспечении экономической безопасности Узбекистана является сам процесс конвергенции. Это означает, что в фокусе исследования находятся явления, происходящие в контексте взаимодействия современных подходов к развитию туризма и международных принципов обеспечения экономической безопасности.

Объектом исследования проблемы конвергенции современных и международных принципов в развитии туризма и обеспечении экономической безопасности Узбекистана является сама страна Узбекистан в контексте ее туристической индустрии и экономики в целом.

В рамках исследования анализируются многочисленные аспекты, влияющие на развитие туризма в Узбекистане, такие как:

- богатое культурное наследие Узбекистана, его исторические памятники, архитектурные достопримечательности, местные традиции и обычаи, которые являются ключевыми магнитами для туристов;
 - состояние туристической инфраструктуры страны, включая отели, рестораны, транспортную доступность и другие услуги, необходимые для комфортного пребывания туристов;
 - национальное законодательство Узбекистана в сфере туризма, а также международные соглашения и стандарты, которые влияют на развитие туризма и обеспечение экономической безопасности;
- оцениваются экономические выгоды от развития туризма для Узбекистана, включая увеличение валютных поступлений, создание новых рабочих мест и стимулирование инвестиций в сектор;
- анализируются меры, принимаемые в стране для обеспечения безопасности туристов и инвестиционной среды, включая меры по борьбе с преступностью и терроризмом.

Исследование объекта также включает в себя анализ изменений в тенденциях развития туризма в Узбекистане, оценку эффективности текущих стратегий развития и выявление потенциальных проблем и вызовов, которые могут возникнуть в процессе конвергенции современных и международных принципов в развитии туризма и обеспечении экономической безопасности.

Объектом исследования является Узбекистан в контексте его туристической индустрии и экономики в целом. Исследование анализирует множество аспектов, таких как туристические достопримечательности и культурное наследие страны, состояние туристической инфраструктуры, законодательство и регулирование в сфере туризма, экономические выгоды от развития туризма, а также меры безопасности.

Основной целью исследования является оценка текущего состояния туристической индустрии Узбекистана и выявление ключевых факторов, влияющих на ее развитие. Важно также проанализировать изменения в тенденциях развития туризма, оценить эффективность текущих стратегий развития и выявить потенциальные проблемы и вызовы, которые могут возникнуть в процессе конвергенции современных и международных принципов в развитии туризма и обеспечении экономической безопасности.

В рамках исследования анализируются различные аспекты конвергенции, такие как интеграция устойчивого развития туризма с международными стандартами, влияние культурного наследия на обеспечение экономической безопасности, использование инноваций и цифровых технологий для содействия туристическому потоку и экономическому развитию. Также объектом исследования являются различные аспекты туристической отрасли, которые подвержены влиянию конвергенции принципов. Это включает в себя конкурентоспособность туристических компаний и регионов, привлечение инвестиций, развитие инфраструктуры и улучшение условий труда и жизни местного населения. Таким образом, объект исследования включает в себя комплексный анализ взаимосвязанных процессов и явлений, связанных с взаимодействием современных и международных принципов в развитии туризма и обеспечении экономической безопасности.

Результаты исследования и обсуждение. Результаты исследования в области конвергенции современных и международных принципов в развитии туризма и обеспечении экономической безопасности представляют собой многоаспектный обзор взаимодействия между этими двумя сферами.

Анализируя текущие тенденции, исследование выявило, что конвергенция принципов в туризме становится всё более актуальной в контексте усиления глобализации и растущих вызовов, таких как изменение климата и геополитические сдвиги. Особенно важным является интеграция устойчивого развития туризма с международными стандартами экономической безопасности, что создает благоприятные условия для развития туристической индустрии и содействует стабильности экономического роста.

На основе проведенного анализа успешных практик и препятствий, выявлено, что существует необходимость в более активном сотрудничестве между государствами, бизнесом и международными организациями для эффективного решения проблем, связанных с развитием туризма и обеспечением экономической безопасности. Кроме того, ключевым фактором успеха в этой области является обеспечение соответствия международным стандартам и правилам, а также активное

участие в международном сотрудничестве по борьбе с экономическими угрозами.

Обсуждение проблемы подчеркивает важность разработки стратегий и рекомендаций для содействия конвергенции современных и международных принципов в развитии туризма и обеспечении экономической безопасности. Такие стратегии могут включать в себя стимулирование инвестиций в туристическую инфраструктуру, поддержку инноваций и использование цифровых технологий для повышения конкурентоспособности отрасли.

В целом, исследование позволяет сделать вывод о том, что конвергенция современных и международных принципов играет ключевую роль в обеспечении устойчивого развития туризма и экономики в целом. Реализация этих принципов требует активного взаимодействия между различными заинтересованными сторонами и требует постоянного мониторинга, и адаптации к изменяющимся условиям и вызовам.

Заключение. Наше исследование выявило значимость и актуальность конвергенции современных и международных принципов в развитии туризма и обеспечении экономической безопасности. Рассмотрев текущие тенденции и вызовы, а также проанализировав успешные практики, мы пришли к выводу о необходимости более активного взаимодействия и сотрудничества всех заинтересованных сторон. Эффективная конвергенция принципов требует не только соблюдения международных стандартов, но и разработки инновационных стратегий, способствующих устойчивому развитию туризма. Важно подчеркнуть, что успешная реализация данных стратегий возможна только при условии взаимодействия государств, бизнеса и международных организаций.

Вместе с тем, наш анализ указывает на необходимость дальнейших исследований и разработки новых подходов к решению вызовов, стоящих перед сферой туризма. Это включает в себя более глубокий анализ тенденций развития, а также оценку эффективности мероприятий, направленных на конвергенцию принципов. В целом, только при условии совместных усилий и внимания к реализации согласованных стратегий мы сможем обеспечить устойчивое развитие туризма и обеспечение экономической безопасности как на местном, так и на международном уровне.

Конвергенция современных и международных принципов в развитии туризма и обеспечении экономической безопасности оказала значительное влияние на развитие туризма в Узбекистане. В последние годы страна активно работает над улучшением своего туристического сектора, привлекая внимание международных инвесторов и туристов. В этом контексте конвергенция принципов становится ключевым инструментом для достижения устойчивого развития туризма и обеспечения экономической безопасности.

Одним из основных аспектов, на который оказывает влияние конвергенция принципов, является стимулирование инвестиций в туристическую инфраструктуру. Узбекистан активно развивает туристическую индустрию, строя новые отели, рестораны, музеи и другие объекты, которые привлекают как местных, так и иностранных туристов. Международные инвесторы проявляют интерес к инвестированию в туристические проекты в стране, что способствует развитию сектора и созданию новых рабочих мест.

Кроме того, конвергенция принципов также способствует развитию устойчивого туризма в Узбекистане. Страна стремится к сбалансированному развитию туризма, учитывая экологические, социальные и экономические аспекты. Принципы устойчивого развития внедряются во все сферы туристической деятельности, что позволяет сохранить природные и культурные ресурсы страны на долгосрочной основе и предоставить туристам качественные и уникальные возможности для отдыха и путешествий.

Благодаря конвергенции современных и международных принципов в развитии туризма и обеспечении экономической безопасности, Узбекистан становится все более привлекательным туристическим направлением, что способствует росту экономики и улучшению благосостояния местного населения.

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ГЕНЕТИЧЕСКИЕ МЕХАНИЗМЫ УСТОЙЧИВОСТИ К АНТИБИОТИКАМ У ЕСТЕСТВЕННОРЕЗИСТЕНТНЫХ ШИГЕЛЛ ЗОННЕ

Резюме. В работе представлены результаты одной из важнейших проблем на современном этапе, развитие антибиотикорезистентности микроорганизма к антибактериальным препаратам, которые сегодня широко используются при их лечении. Целью работы явилось определить у шигелл Зонне Р-эписомные факторы контролирующий антибиотико - устойчивости и фенотипическое проявление. Генетические механизмы лекарственной устойчивости бактерий определяли путем скрещивания шигелл с поли-маркированным реципиентом *E.coli* W-677Ф, чувствительным ко всем использованным препаратам.

Ключевые слова. Шигелла, антибиотики, *E.coli*, чувствительность, тетрациклин.

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GENETIC MECHANISMS OF ANTIBIOTIC RESISTANCE IN NATURALLY RESISTANT SHIGELLA SONNE

Resume. The paper presents the results of one of the most important problems at the present stage, the development of antibiotic resistance of a microorganism to antibacterial drugs, which are widely used in their treatment today. The aim of the work was to determine the P-episome factor controlling antibiotic resistance and phenotypic manifestation in *Shigella Sonne*. The genetic mechanisms of drug resistance of bacteria were determined by crossing shigella with a poly-labeled *E.coli* recipient W-677F, sensitive to all drugs used.

Keywords. *Shigella*, antibiotics, *E.coli*, sensitivity, tetracycline.

Введение. Кишечные инфекции продолжают занимать одно из ведущих мест в инфекционной патологии человека [1]. Одной из важнейших проблем практической помощи на современном этапе является

развитие антибиотикорезистентности шигелл к антибактериальным препаратам, которые сегодня широко используются при их лечении [2,3].

Одним из основных факторов развития устойчивости является необоснованное использование антимикробных препаратов, которые избирательно оказывают эволюционное давление на микроорганизмы [4,5]. Рост и распространение устойчивых к антибактериальным препаратам патогенов связаны с серьезными биологическими рисками [6,7]. Активность существующих антибиотиков и их использование в определенной клинической практике указывают на негативную тенденцию. [8,].

В ранее выполненных нами исследованиях было показано, что устойчивость к антибиотикам у шигелл Зонне контролируется Р-эписомным фактором [9], в то время как резистентность к стрептомицину, искусственно сформированная у этих же штаммов, контролировалась хромосомными генами [10].

Целью работы явилось определить у шигелл Зонне Р-эписомные фактор контролирующей антибиотикоустойчивости и фенотипическое проявление.

Материалы и методы. В работе использовали 45 штаммов антибиотикорезистентных шигелл Зонне, выделенных от больных острой бактериальной дизентерией. Устойчивость к антибиотикам определяли методом серийных на простых плотных и жидких питательных средах, содержащих разные концентрации антибиотиков. Генетические механизмы лекарственной устойчивости бактерий определяли путем скрещивания шигелл с полимаркированным реципиентом *E.coli* W-677Ф, чувствительным ко всем использованным препаратам. Конъюгацию проводили по общепринятой методике. Взаимодействие эписомных и хромосомных генов, контролирующих тетрациклинорезистентность изучали путем передачи Р-фактора от *E.coli* K-12 к двум штаммам шигелл Зонне, имеющим хромосомно обусловленную тетрациклинорезистентность.

Результаты и их обсуждение. В результате опытов по определению чувствительности к антибиотикам было установлено, что из 45 штаммов шигелл Зонне 42 были устойчивы к стрептомицину, тетрациклину и ципринолу, один штамм резистентность только к стрептомицину и два к тетрациклину.

При скрещивании 45 штаммов антибиотикорезистентных шигелл Зонне с *E.coli* W-677Ф было установлено, что 13 штаммов имели хромосомно обусловленную резистентность: 11- к стрептомицину и 2 штамма к тетрациклину, 32 штамма обладали эписомной устойчивостью: 21 к стрептомицину, ципринолу и тетрациклину и 11 штаммов к тетрациклину и ципринолу.

В последующих опытах к штаммам шигелл Зонне № 30 и № 143, хромосомнообусловленную тетрациклинорезистентность, соответственно, к 125 ЕД/мл и 50 ЕД/мл, от *E.coli* K-12 был передан Р-фактор,

контролирующий устойчивость к 50 ЕД/ мл тетрациклина, 100 ЕД/мл-цефазолина, 1000 ЕД/мл ципрофлоксацина и 100 ЕД/мл стрептомицина. Наличие гена тетрациклинорезистентности у реципиентных штаммов не влияло на частоту передачи Р-эписомного фактора. В результате передача факторов резистентности штамм № 30, ранее устойчивый только к 125 ЕД/мл тетрациклина, приобрел резистентность к 500 ЕД/мл тетрациклина, 100 ЕД/мл стрептомицина, 250 ЕД/мл ципринола, 100 цефазолина и 1000 ЕД/мл ципрофлоксацина. Штамм № 143 после получения Р-эписомного фактора от *E.coli K-12* повысил резистентность к тетрациклину от 50 ЕД/мл до 250 ЕД/мл. Уровни проявления резистентности к стрептомицину, ципринолу, цефазолину и ципрофлоксацину у рекомбинантного варианта штамма № 143 были такими же, что и у донора *E.coli K-12*. Повышение тетрациклинорезистентности не сопровождалось изменениями питательных потребностей и биохимических свойств полимаркированного реципиента *E.coli W-677Ф*.

Выводы. Возрастание резистентности к тетрациклину обусловлено взаимодействием эписомных генов и хромосомных детерминант, контролирующих тетрациклиноустойчивость у шигелл Зонне. Это явление имеет определенное практическое значение, что Р-фактор контролирует, как правило низкие уровни устойчивости, которые, вероятно можно преодолеть при лечении дизентерии. Но в кишечнике человека штаммы шигелл Зонне с низкими уровнями резистентности к тетрациклину, получив от кишечных палочек Р-фактор, контролирующий также низкие уровни тетрациклиноустойчивости, могут повысить резистентность к указанному антибиотику в 4-5 раз. Такое возрастание тетрациклин устойчивости может затруднить лечение бактериальной дизентерии.

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ДЕЛОВАЯ КУЛЬТУРА СОТРУДНИКОВ КАК ФАКТОР УПРАВЛЕНИЯ ОБРАЗОВАТЕЛЬНОЙ ОРГАНИЗАЦИЕЙ

***Аннотация:** в статье мы рассматриваем роль деловой культуры в формировании этических норм и стандартов поведения сотрудников образовательной организации.*

***Ключевые слова:** этика, нормативные требования педагогической этики, теоретическая этика, нормативная этика, профессиональная квалификация, педагогическая культура, педагогический такт.*

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BUSINESS CULTURE OF EMPLOYEES AS A FACTOR IN MANAGING AN EDUCATIONAL ORGANIZATION

***Abstract:** in the article we consider the role of business culture in the formation of ethical norms and standards of behavior of employees of an educational organization.*

***Keywords:** ethics, regulatory requirements of pedagogical ethics, theoretical ethics, normative ethics, professional qualification, pedagogical culture, pedagogical tact.*

В настоящее время теоретическая этика - это наука, описывающая и объясняющая мораль как особое социальное явление. Она отвечает на вопросы что такое мораль, чем она отличается от других общественных феноменов, каково ее происхождение, как она менялась исторически,

каковы механизмы и закономерности ее функционирования, в чем заключается ее социальная роль и т.д.

Нормативная этика представляет собой систему моралистических (моральных) рассуждений, имеющих целью поддержание и сохранение в обществе фундаментальных нравственных ценностей. Она призвана формулировать ответы на вопросы о добре и зле, о правильном поведении человека в обыденных жизненных ситуациях и т.д. В связи с этим нормативная этика провозглашает и отстаивает определенную моральную позицию, выражая ее в виде нравственных идеалов, принципов, правил и норм поведения. Она обращена, прежде всего, к критически мыслящей личности, способной поставить под сомнение любые постулаты. Разумные доводы в пользу тех или иных положений нормативной этики способствуют превращению внешнего для личности социального императива (моральной нормы) во внутренний импульс (например, чувство профессионального долга, нравственную мотивацию поведения и т.д.). Выработка и обоснование нравственных императивов нормативной этики применительно к единичным или типовым ситуациям, с которыми люди сталкиваются в своей личной, профессиональной или общественной жизни, - область деятельности создателей профессиональных этических кодексов (педагогическая этика, этика сферы услуг, этика бизнеса и т.п.). Вся эта деятельность представляет собой конкретизацию и практическое применение некоторых общих этических принципов.

Следовательно, особенность нормативной этики заключается в том, что она подводит рациональное основание под фундаментальные ценности, которые служат ориентиром для повседневной практики. Современное образовательное пространство ориентировано на то, что «В стремительно меняющемся открытом мире главным профессиональным качеством, которое педагог должен постоянно демонстрировать своим ученикам, становится умение учиться. Готовность к переменам, мобильность, способность к нестандартным трудовым действиям, ответственность и самостоятельность в принятии решений – все эти характеристики деятельности успешного профессионала в полной мере относятся и к педагогу. Обретение этих ценных качеств невозможно без расширения пространства педагогического творчества.

Говоря о педагогической этике необходимо помнить о следующих основных понятиях:

Профессиональная квалификация – образование (среднеспециальное, высшее). Непрерывность профессионального развития, профессионального мастерства, активно заниматься самообразованием и самосовершенствованием, повышение квалификация(категория), совершенствование своего интеллектуального, творческого и общенаучного уровня. Ответственность за результат обучения.

Педагогическая культура (нравственная культура) – внешний облик педагога (придерживаться делового стиля в одежде), культура речи, вежливость, корректность, культура и нормы поведения в школе и в обществе за пределами учебного заведения, чувство собственного достоинства, умение управлять своим состоянием, чувство юмора. Педагог имеет право на возмущение, но выраженный способами, адекватными требованиям педагогической культуры и этики, не унижающими достоинство личности как с коллегами так и с родителями и учащимися.

Ни при каких обстоятельствах не допускается применение методов физического и морального и психического насилия к участникам образовательного процесса. С уважением относится к особенностям, ценностям и достоинством каждой национальной культуре. Уважение прав и достоинства всех людей вне зависимости от социального, должностного положения.

Культурный педагог приходит вовремя на работу, деловые встречи; не повторяет слухов, непроверенных фактов, тем более, если они могут нанести ущерб окружающим.

Педагогический такт – (от лат. *tactus* – прикосновение) – чувство меры в поведении и действиях педагога, включающее в себя: уважение достоинства ребенка, справедливость, выдержку и самообладание в отношениях с детьми, родителями, коллегами. Т.е. выбор средств педагогического взаимодействия, умение в каждом конкретном случае применять наиболее оптимальные способы воспитательного воздействия, не переходя определенную грань.

Основными элементами педагогического такта являются: требовательность и уважительность к воспитаннику; умение видеть и слышать ребенка, сопереживать ему; деловой тон общения; внимательность, чуткость педагога.

Итак, под этикой делового общения понимается свод неофициальных правил взаимодействия членов профессионального коллектива друг с другом. Этот негласный регламент необходимо соблюдать, чтобы информация передавалась максимально упорядоченно. Практика применения этических норм диктуется многими причинами. Перечислим наиболее важные из них.

Прежде всего соблюдение данных правил способствует лучшему осознанию сотрудниками целей, стоящих перед ними, а также лучшему пониманию способов достижения этих целей.

Другая причина состоит в формировании благоприятного климата в трудовом коллективе, члены которого заняты большей частью производством, а не общением друг с другом.

Наконец, соблюдая принятые этические правила, сотрудники становятся морально готовыми для выполнения своих обязанностей. От этого зависит и производительность труда.

Далее приведем ключевые принципы, на которых основывается деловая этика.

- Отсутствие недоброжелательного отношения среди членов профессионального коллектива.
- Справедливое распределение производственных ресурсов между сотрудниками.
- Зависимость развития этических вопросов внутри компании от поведения сотрудников этой компании (правило прогрессивного максимума).
- Лояльность к традициям компании.
- Равноценность оценки индивидуальных и коллективных действий в процессе трудовой деятельности.
- Использование личного опыта в решении рабочих вопросов только в случаях его оправданности.
- Отсутствие любых насильственных мер в отношении сотрудников.
- Недопустимость ограничения свободы одного сотрудника другим.
- Бесконфликтность внутри коллектива.
- Мотивирование коллег следованию правилам деловой этики.
- Недопустимость критики действий конкурентов.
- Соблюдение делового этикета не в приказном порядке, а на основе установленных традиций.
- Доверие начальства к подчиненным, способствующее повышению у персонала уровня внутренней ответственности.

Труд педагога должен быть избавлен от мелочной регламентации, освобожден

от тотального контроля» (Профессиональный стандарт педагога).

Нормативные требования педагогической этики профессиональной деятельности формируются на соответствующих положениях двух составных частей общей этики – профессиональной и педагогической.

Профессиональная этика рассматривается как кодекс поведения, обеспечивающий нравственный характер тех взаимоотношений между людьми, которые возникают в процессе их профессиональной деятельности. Ее особенностью является тесная связь с деятельностью членов конкретной учебной, производственной и т.д. группы и неразрывное единство с общей теорией морали. Педагогическая этика является самостоятельным разделом этической науки и изучает особенности педагогической морали, выясняет специфику реализации общих принципов нравственности в сфере педагогического труда, раскрывает ее функции, специфику содержания принципов, этических категорий и правил. Также педагогической этикой раскрывается нравственный характер профессиональной деятельности специалистов сферы образования, нравственные отношения в профессиональной среде,

основы педагогического этикета людей, профессионально занимающихся обучением и воспитанием.

На сегодняшний день профессиональный стандарт педагога гласит «Стандарт выдвигает требования к личностным качествам учителя, неотделимым от его профессиональных компетенций, таких как: готовность учить всех без исключения детей, вне зависимости от их склонностей, способностей, особенностей развития, ограниченных возможностей».

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ОТРОСЛЕВАЯ ХАРАКТЕРИСТИКА НАЦИОНАЛЬНЫХ ПРОЕКТОВ

Аннотация: Статья посвящена отраслевой характеристике реализуемых национальных проектов на территории Российской Федерации.

Ключевые слова: национальный проект, виды национальных проектов.

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INDUSTRY CHARACTERISTICS OF NATIONAL PROJECTS

Abstract: The article is devoted to the sectoral characteristics of the implemented national projects in the territory of the Russian Federation.

Keywords: national project, types of national projects, sectoral characteristics of national projects.

Национальные проекты России представляют собой амбициозные инициативы, направленные на модернизацию и развитие ключевых сфер экономики и социальной жизни страны. С 2018 года, когда был запущен новый этап национальных проектов, акцент сделан на таких направлениях, как здравоохранение, образование, экология, цифровая экономика, культура и жилищное строительство.

Каждый из этих проектов призван решить актуальные проблемы и повысить качество жизни граждан. Например, в сфере здравоохранения акцент делается на улучшение доступности медицинских услуг и внедрение современных технологий в диагностику и лечение. В образовании важно не только обеспечение физической инфраструктуры,

но и внедрение цифровых инструментов для повышения уровня преподавания.

Экологические проекты направлены на чистоту и безопасность окружающей среды, что становится все более важным в условиях глобальных изменений климата. Культурные инициативы способствуют сохранению и популяризации российских традиций, а также поддержке творческих кадров.

Национальные проекты также акцентируют внимание на цифровой экономике, целью которой является интеграция цифровых технологий в различные сферы жизни. Это включает развитие инфраструктуры, таких как высокоскоростной интернет, а также поддержку стартапов и инновационных компаний. В результате предполагается повысить конкурентоспособность России на мировом рынке и создать новые рабочие места в высокотехнологичных отраслях.

В жилищном строительстве акцент направлен на обеспечение доступного жилья для граждан. Программы субсидирования ипотеки и развитие жилых комплексов позволяют улучшить жилищные условия, особенно для молодёжи и многодетных семей. Это не только создаёт комфортные условия для жизни, но и стимулирует экономический рост через повышение строительной активности.

Ключевым аспектом всех национальных проектов является взаимодействие с населением. Открытые платформы для обратной связи, обмена мнениями и предложениями позволяют гражданам чувствовать себя вовлечёнными в процесс принятия решений. Это формирует доверие к власти и активизирует общественное участие, что способствует успешной реализации намеченных целей.

Таким образом, национальные проекты России представляют собой важный шаг к созданию устойчивого будущего, обеспечивая гармоничное развитие экономики и социальной сферы, а также укрепляя взаимодействие между государством и гражданами.

Важным компонентом национальных проектов является внедрение экологически чистых технологий и устойчивых решений, что соответствует мировым тенденциям в области защиты окружающей среды. Увеличение инвестиций в возобновляемые источники энергии и программы по улучшению энергоэффективности зданий способствуют снижению углеродного следа и формированию "зелёной экономики". Эти инициативы не только помогают сохранить природные ресурсы, но и создают новые рабочие места в сфере экологии и зеленого строительства.

Также стоит отметить, что образовательные реформы, входящие в состав национальных проектов, направлены на повышение качества образования и подготовку специалистов, соответствующих требованиям цифровой экономики. Создание центров компетенций и внедрение программ дополнительного образования обеспечивают молодёжи

возможности для профессионального роста и повышения квалификации. Это, в свою очередь, способствует повышению уровня жизни и адаптации к быстро меняющимся условиям на рынке труда.

Таким образом, национальные проекты России формируют комплексный подход к развитию страны, учитывая, как экономические, так и социальные аспекты. Такой подход не только отвечает на вызовы времени, но и закладывает фундамент для стабильного и прогрессивного будущего, способствуя росту доверия среди граждан и укреплению общественных институтов.

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КОМПЕТЕНТНОСТНЫЙ ПОДХОД В РАБОТЕ МУНИЦИПАЛЬНОГО УЧРЕЖДЕНИЯ

В статье отмечено, что муниципальное учреждение выступает объединяющим и координирующим фактором в процессе интеграции воспитательного воздействия всех субъектов образования с позиций компетентностного подхода.

Компетентностный подход, учреждение образовательный стандарт.

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COMPETENCE-BASED APPROACH IN THE WORK OF A MUNICIPAL INSTITUTION

The article notes that the municipal institution acts as a unifying and coordinating factor in the process of integrating the educational impact of all subjects of education from the standpoint of a competence-based approach.

Competence-based approach, educational standard institution.

На сегодня одной из важных задач в соответствии с Федеральным государственным образовательным стандартом дошкольного образования (далее ФГОС) становится привлечение родителей к участию в работе детского сада. Проблема взаимодействия детского сада с семьей всегда

была актуальной и трудной. Актуальной, потому что родители являются главными социальными заказчиками для детского сада, а трудной, потому что все родители разные, к ним, как и к детям нужен особый подход. Уровень саморазвития и самовоспитания родителя и семьи в целом как социального института не всегда позволяет на практике реализовать воспитательный потенциал по отношению к своим детям.

Компетентностный подход получил распространение относительно недавно в результате поиска новых путей по модернизации российского образования. Обращение к этому понятию связано с желанием определить изменения в образовании, необходимость в которых возникает из-за перемен, происходящих в обществе.

В настоящее время появляется множество научно-теоретических и научно-методических работ, посвященных анализу сущности этого подхода и проблемам формирования ключевых компетенции. Понятийный аппарат, который характеризует компетентностный подход в образовании, еще не до конца устоялся. Но, тем не менее, уже есть возможность для того, чтобы выделить некоторые характерные его черты.

Компетентностный подход – это комплекс общих принципов, которые необходимы для того чтобы определить цели образования, организовать образовательный процесс и оценить его результаты. Термин «компетенция» означает круг полномочий лица или учреждения, а также круг вопросов, для решения которых лицо имеет опыт и соответствующие знания. Таким образом, можно сказать, что способность действовать в ситуациях неопределенности - это компетентность.

Проблемами родительской культуры и воспитательного потенциала семьи посвящено огромное количество книг и статей. Особенно много их появилось в последние годы в связи с постановкой новых задач организации работы дошкольного учреждения с семьей.

Попытки охарактеризовать изменившуюся ситуацию с точки зрения новых форм работы с семьей, новая философия и политика этой работы сигнализируют о степени остроты проблемы, нежели о степени её решения.

В п. 3.4.2 ФГОС сказано, что педагогические работники, реализующие программу, должны обладать основными компетенциями, необходимыми для создания условий развития детей, обозначенными в п. 3.2.5 Стандарта [1].

Какими же компетенциями и для создания, каких условий?

Первое условие: обеспечение эмоционального благополучия через непосредственное общение с каждым ребенком; уважительное отношение к каждому ребенку, к его чувствам и потребностям.

Второе условие: поддержку индивидуальности и инициативы детей через создание условий для свободного выбора детьми деятельности,

участников совместной деятельности; создание условий для принятия детьми решений, выражения своих чувств и мыслей и т.д.

Третье условие: установление правил взаимодействия в разных ситуациях: создание условий для позитивных, доброжелательных отношений между детьми, имеющими различные (в том числе ограниченные) возможности здоровья; развитие коммуникативных способностей детей, позволяющих разрешать конфликтные ситуации со сверстниками (элементарно, ребёнок мог договориться); развитие умения детей работать в группе сверстников.

Четвертое условие: построение вариативного развивающего образования, ориентированного на уровень развития, проявляющийся у ребенка в совместной деятельности со взрослым и более опытными сверстниками, но не актуализирующийся в его индивидуальной деятельности, через создание условий для овладения культурными средствами деятельности; организацию видов деятельности, способствующих развитию мышления, речи, общения, воображения и детского творчества, личностного, физического и художественно-эстетического развития детей; поддержку спонтанной игры детей, ее обогащение, обеспечение игрового времени и пространства; оценку индивидуального развития детей.

Пятое условие: взаимодействие с родителями (законными представителями) по вопросам образования ребенка, непосредственного вовлечения их в образовательную деятельность.

Компетентность в рамках обсуждения обозначает уровень образованности педагогов в работе с родителями.

По мнению специалистов, общение педагогов и родителей должно базироваться на принципах открытости, взаимопонимания и доверия. Семья и детский сад в хронологическом ряду связаны формой преемственности.

Выстраивание взаимодействия детского сада и семьи на основе сотрудничества – процесс достаточно сложный. Задача педагогов состоит в том, чтобы найти такие формы взаимодействия с семьей, которые бы способствовали формированию компетентного родителя и осознанного родительства составляющих успешной социализации ребенка.

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ЛАТИНСКАЯ ФАРМАЦЕВТИЧЕСКАЯ ТЕРМИНОЛОГИЯ И ОСНОВНЫЕ ФАРМАЦЕВТИЧЕСКИЕ ПОНЯТИЯ

Аннотация: в статье даётся представление об основных понятиях, используемых в общей фармацевтической рецептуре, а также приводится система наименований лекарственных средств.

Ключевые слова: лекарственное вещество, лекарственное средство, лекарственная форма, лекарственный препарат, доза.

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LATIN PHARMACEUTICAL TERMINOLOGY AND BASIC PHARMACEUTICAL CONCEPTS

Abstract: the article gives an idea of the basic concepts used in the general pharmaceutical formulation, and also provides a system for naming medicines.

Key words: drug substance, drug form, drug, dose.

Введение. Фармацевтическая терминология – терминология, применяемая в фармации – отрасли научных знаний, посвященной изготовлению, стандартизации, исследованию, хранению и отпуску лекарственных средств, применяемых для диагностики, профилактики и лечения заболеваний. На протяжении многих столетий в медицине в названиях лекарственных средств и в написании рецептов традиционно используется латинский язык.

Основные фармацевтические понятия

1. **Лекарственное вещество** – вещество, обладающее лечебными свойствами и предназначенное для изготовления лекарственных средств. Лекарственные вещества могут быть природного (минерального, микробного, растительного, животного) происхождения и синтетическими (например: магния сульфат, антибиотик канамицин, гормон инсулин).

2. **Лекарственное средство (лекарство)** – вещество или смесь веществ природного или химического происхождения, применяемое для

диагностики, лечения или профилактики заболеваний (например: кальция глюконат, парацетамол).

3. **Лекарственная форма** – форма, придаваемая лекарственному средству для наиболее удобного практического применения.

4. **Лекарственный препарат** – дозированное лекарственное средство в определенной лекарственной форме (например: таблетки амоксициклина, мазь тетрациклиновая, раствор инсулина).

5. **Доза** – строго определенное количество лекарственного средства, выраженное в каких-то единицах (граммах, единицах действия, миллилитрах, каплях).

На практике очень часто термины «лекарственное средство», «лекарство», «лекарственный препарат», «медикамент» употребляются как синонимы.

Результаты и их обсуждение.

Наименования лекарственных средств. Каждое лекарственное средство имеет три наименования:

1. Химическое наименование, которое, из-за своей громоздкости применяется только узкими специалистами. Так, например, химическое наименование **парацетамола** имеет следующий вид: *N*-(4-гидроксифенил) - ацетамид.

2. Официально принятыми наименованиями лекарственных средств являются «Международные непатентованные наименования» (МНН) (английская аббревиатура – INN – International Nonproprietary Names) – это уникальные наименования лекарственных средств, зарегистрированные Всемирной организацией здравоохранения. Перечень МНН ведется с 1953 года и постоянно обновляется. Перечень МНН ведется на латинском, английском, французском, испанском, арабском, китайском и русском языках. Примером международного непатентованного наименования является «*парацетамол*». Международное непатентованное наименование – это «**действующее вещество**» - химическое вещество или уникальная биологическая субстанция в составе лекарственного средства, которые определяют лечебные свойства данного препарата. Действующее вещество – это то, что лечит заболевание, остальные (вспомогательные) вещества придают лекарству форму, цвет, вкус и пр. В состав лекарственного средства могут входить несколько действующих веществ, такие средства называют *комбинированными* (так, например, лекарственное средство *лемсип* содержит два действующих вещества: **парацетамол** и **фенилэфрина гидрохлорид**).

3. На упаковках лекарственных препаратов обычно имеются два наименования – второе, напечатанное внизу мелким шрифтом, является международным непатентованным наименованием, которое должно быть указано в обязательном порядке.

Наименование, отпечатанное крупным шрифтом, это так называемое торговое или фирменное наименование, которое является коммерческой собственностью фармацевтической фирмы, производящей лекарство. Например, торговое наименование *ацетилсалициловой кислоты* – *аспирин*, *фуросемида* – *лазикс*, *диклофенака* – *вольтарен*. Одно международное непатентованное наименование может иметь очень большое количество торговых наименований. Вот неполный перечень торговых наименований международного непатентованного наименования **парацетамол**: *адол*, *ацетаминофен*, *далерон*, *панадол*, *тайленол*, *доломол*, *калпол*, *медипирин*, *мексален*, *парацет*, *парацетамол-альтфарм*, *парацетамол - Дарница*, *перфалган*, *пиранол*, *проходол*, *санидол*, *стримол*, *флютабс*, *эффералган* и другие. Когда у фирмы заканчивается срок действия патента на действующее вещество (например, 12 лет в США, 25 лет в России), то другие компании могут производить данное лекарственное средство под собственными наименованиями. Такие лекарственные препараты называются дженериками.

Правила употребления заглавной и строчной букв в фармацевтических терминах. С заглавной буквы в фармацевтических названиях и в рецептах пишутся:

1. Названия лекарственных средств (*например: Raunatinum*).
2. Названия лекарственных растений (*например: Crataegus*).
3. Названия химических элементов (*например: Hydrargyrum*).
4. Слова, которые приравниваются к лекарственным средствам (*Saccharum* – сахар, *Amylum* – крахмал, *Gelatina* – желатин и некоторые другие).
5. Каждая новая рецептурная строка в рецептах.
6. С заглавной буквы в составе термина записываются следующие слова (которые в словарной форме пишутся со строчной буквы): **Acidum** acetylsalicylicum – кислота ацетилсалициловая, **Aqua** destillata – вода дистиллированная, **Liquor** Ammonii anisatus – капли нашатырноанисовые, **Solutio** Ammonii caustici – спирт нашатырный, **Vitaminum** B12 – витамин B12).

Со строчной буквы в фармацевтических названиях и в рецептах пишутся:

1. Названия лекарственных форм в середине термина (*например: Pulvis extracti Belladonnae*).
2. Прилагательные (*например: Mentha piperita*).
3. Названия *oxydum*, *peroxydum*, *hydroxydum* в названиях оксидов (*например: Zinci oxydum*).
4. Названия частей растений в середине термина (*например: Infusum radicis Althaeae*).
5. Названия анионов в названиях солей (*например: Magnesii sulfas*).

6. Слова в устойчивых рецептурных формулировках: *in vitro nigro, contra tussim, in charta cerata* и др.

В то же время необходимо запомнить, что в любых фармацевтических названиях первое слово традиционно пишется с заглавной буквы (в номенклатурах, перечнях, справочниках, на этикетках). Именно так следует записывать фармацевтические термины при выполнении упражнений и в контрольных заданиях, например: *Solutio Camphorae* – раствор камфоры; *Flores Chamomillae* – цветки ромашки.

Названия лекарственных форм. Существует несколько классификаций лекарственных форм – дозированные и недозированные, по цели действия, способу применения и пр. По консистенции выделяют четыре группы лекарственных форм: твердые лекарственные формы; мягкие лекарственные формы; жидкие лекарственные формы; газообразные лекарственные формы. Студентам необходимо запомнить в словарной форме названия следующих лекарственных форм и понимать их значение. Рассмотрим некоторые из них.

Твёрдые лекарственные формы.

Tabuletta, ae f – таблетка. Твердая дозированная лекарственная форма, получаемая прессованием смесей лекарственных и вспомогательных веществ.

Dragées (только мн. число, словарной формы не имеет) – драже. Твердая дозированная лекарственная форма, получаемая путём многократного наплавления (дражирования) лекарственных и вспомогательных веществ на сахарные гранулы.

Capsula, ae f – капсула. Дозированные порошкообразные, гранулированные, иногда жидкие лекарственные средства, заключенные в оболочку из желатина, крахмала, иного биополимера.

Granulum, i n – гранула. Однородные частицы (крупинки, зернышки) лекарственных средств округлой, цилиндрической или неправильной формы размером 0,2-0,3 мм.

Pulvis, ěris m – порошок. Твердая лекарственная форма для внутреннего и наружного применения, обладающая свойством сыпучести.

Жидкие лекарственные формы.

Solutio, ōnis f – раствор. Лекарственная форма, получаемая путем растворения твёрдого лекарственного вещества в дистиллированной воде, спирте или маслах.

Infusum, i n – настой. Жидкая лекарственная форма, представляющая собой водные извлечения из лекарственного сырья.

Decoctum, i n – отвар. То же, что настой, только из плотных частей лекарственных растений – коры, корней и т.д.

Tinctura, ae f – настойка. Жидкие, прозрачные, в разной степени окрашенные водно-спиртовые или спиртоэфирные извлечения из

растительного сырья, получаемые без нагревания и удаления экстрагента.

Мягкие лекарственные формы

Unguentum, i n – мазь. Мягкая лекарственная форма, имеющая вязкую консистенцию и предназначенные для наружного применения.

Linimentum, i n– линимент, жидкая мазь. Густые жидкости или студнеобразные массы

Suppositorium, i n - свеча, суппозиторий, свеча. Дозированные лекарственные формы, твердые при комнатной температуре и расплавляющиеся или растворяющиеся при температуре тела.

Частотные отрезки. Многие фармацевтические термины включают в свой состав часто повторяющиеся структурные отрезки, которые принято называть «частотными отрезками». Частотный отрезок – это структурный компонент фармацевтического термина, имеющий фиксированное написание и значение. Написание частотных отрезков соблюдается только в международных непатентованных наименованиях лекарственных средств, написание коммерческих (торговых) наименований никаким правилам не подчиняется. Знание частотных отрезков поможет вам орфографически правильно писать многие сложные фармацевтические термины, а также понимать общее значение некоторых из них.

На уроках латинского языка целесообразно давать студентам выучить наизусть следующие частотные отрезки:

№	Латинский	Значение	Примеры
Антибиотики, антимикробные			
1.	-ceph-	антибиотики группы цефалоспоринов	Cephaloridinum
2.	-cillin-	антибиотики группы пенициллина	Penicillinum
3.	-cyclin-	антибиотики группы тетрациклина	Tetracyclinum
4.	-mycin-, -myco	антибиотики группы стрептомицинов	Monomycinum Erythromycinum Mycoseptinum
5.	-sulfa-	антимикробные сульфаниламиды	Norsulfazolum
Общего значения			
6.	cycl-	наличие циклической структуры	Cyclobarbitolum
7.	hept(a)-	семь	Heptavitum (гептавит)
8.	hex-	шесть	Hexoestrolum (гексэстрол)

9.	-руг-	жаропонижающие	“Pyrameinum” Анапyринum

Выводы. Таким образом, мы рассмотрели основные понятия и элементы латинской фармацевтической терминологии, которая входит в обязательную программу изучения латинского языка в медицинском вузе. Без знания этих понятий и элементов невозможна грамотная работа студента-фармацевта в будущем.

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ОҚҚАНОТ ТУРЛАРИ, УЛАРНИНГ ТАРҚАЛИШИ, БИОЭКОЛОГИЯСИ ВА РИВОЖЛАНИШ ХУСУСИЯТЛАРИ

Анотация; Дунё қишлоқ хўжалиги соҳасида етиштирилаётган барча экинларнинг 800 дан ортиқ асосий турли турдаги хавфли зараркунанда ҳашаротлар зарарлайди ва уларга қарши ҳар йили жуда катта маблағ ва ишчи кучи сарфланади. Ушбу зараркунандаларни чуқур ўрганиш ва илмий асосида тадқиқ этиб улар миқдорини бошқариш бўйича олимларнинг кўп йиллик изланишлари мавжуд

Калит сўзлар; окканот тур туркум оила авлод

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TYPES OF SPIDERS, THEIR DISTRIBUTION, BIOECOLOGY AND DEVELOPMENTAL FEATURES

***Abstract;** More than 800 different species of dangerous insect pests damage all agricultural crops grown in the world's agriculture, and huge amounts of money and labor are spent on their control every year. Scientists conduct long-term research on the control of these pests through their in-depth study and scientific research.*

***Keywords:** species Akkanot, genus, family, genus Citrus.*

***Қишми;** Ҳозирда ер юзида Aleyrodidae (оққанотлар) оиласига мансуб ҳашаротлар Martin & Mound (1987) маълумотига кўра 126 оилага мансуб 1156 тур мавжудлигини қайд қилган. Кейинчалик Aleyrodidae (Hemiptera) оиласига мансуб ҳашаротларни ўрганиш жараёнида Gregory A. Evans (2007) 166 оила, 3 та кенжа оилага оид (Aleurodicinae, Aleyrodinae, Udamosellinae) 1551 тур мавжудлигини таъкидлайди ва турларни бир биридан ажратишда уларнинг морфологик жиҳати катта аҳамиятга эгаллигини кўрсатган. Оққанот оиласига қирувчи ҳашаротлар*

ривожланиши нимфалик даврида тўртинчи босқичи губакка ўтиши бири биридан фарқли деб ҳисоблайди .

Оққанотлар Homoptera туркуми *Aleyrodidae* оиласига мансуб фитофаг турларига мансуб ҳашаротлардир. Дунё бўйича кенг тарқалган ва қишлоқ хўжалиги экинларида катта зарар етказди. Булардан энг кўп тарқалган турлар иссиқхона оққаноти (*Trialeurodes vaporariorum* West.), ғўза оққаноти (*Bemisia tabaci* Genn), цитрус оққаноти (*Dialeurodes citri* A.) турлари жиддий зарар келтирмоқда. Жумладан қишлоқ хўжалигида 200 дан ортиқ сабзавот ва полиз экинларида, техник экинларнинг 30 дан ортигида, манзарали гуллар ва буталарнинг 60 дан ортиқ турларини зарарлайди.

Кейинги йилларда яна бир зараркунанда пайдо бўлдики, унинг қишлоқ хўжалиқ экинларига келтираётган зарари анча кўпайиб бормоқда. Бу оққанот ҳашаротидир. Оққанот аслини олганда иссиқ ўлкалар ҳашароти ҳисобланиб, республикамиз вилоятларида кейинги йилларда пайдо бўла бошлади. Бунга сабаб бизнинг улкамизда оққанотнинг табиий кушандаларининг камлиги ҳисобланади.

Aleyrodidae оила вакиллари тадқиқ этиш 1736 йилдан бошланиб, қишлоқ хўжалиги экинларида зарари кенгайиб борган даврга тўғри келди. Бу даврда ушбу оиланинг энг хафли турларидан бири *Aleyrodes proletella* L. тури Реомюр томонидан ўрганила бошланди. Бундан олдин бошқа олимлар ушбу оила вакиллари куялар сифатида номлай бошлаган. 1976 йилга келиб Латрейль (1796) ушбу турни Homoptera туркуми *Aleyrodes* оила вакили сифатида номлаган. Биринчи марта Фраунфель 1867 йил оққанотлар тўғрисида илмий мақола чоп эттирди, шундан сўнг Синьоре томонидан биринчи монография чоп этирилди ва унда оққанотнинг 23 тури қайд қилинган эди. Шундан сўнг Maxwell (1895) ўзининг ушбу рўйхатни янада кенгайтириб 66 тага етказди .

Оққанот турлари ва уларнинг табиий кушандаларини ўрганиш Туркменистонда ўтган асрнинг 60-йилларидан такомиллаша бошлади . Туркменистонда атиргул оққаноти- *Bulgarialeurodes cotesii* Mask. катта хавф туғдириши келтирилган. Оққанотининг фаунаси бўйича туркменистонда С.М. Мярцевой, Ж.В. Смирнов ва Р.Х. Мухиев (1998)лар шуғулланган. Шундан сўнг оққанотнинг турли ўсимликлар бўйича ривожланиши 70-йилларда бир қатор муаллифлар томонидан тадқиқ этилди . Иссиқхона оққанотининг биологияси ва унга қарши кураш чоралари бўйича ҳам қатор олимлар ўз тадқиқотларини олиб бориб шу давр учун самарали кураш чораларини ишлаб чиққан.

Ќўза оққаноти бўйича дастлабки чуқур илмий тажрибалар 1930 йиллардан авж ола бошлади ва қатор илмий соҳа мутахассислари жалб этилди Чунки бу даврда ғўза экини техник экин сифатида ўзининг қимматлилик даражаси юқори бўлиб, унинг зараркунанда турларини ўрганиш бевосита ишлаб чиқариш билан боғлиқ эди.

Шунингдек зараркунанда ва унинг паразит энтомофаглар, ўсимликларнинг ўзаро муносабатлари бўйича ҳам олимлар тадқиқотлар олиб бориб, ўсимликларни ҳимоя қилиш ва энтомология фанларига назарий ва амалий хиссаларини қўшишган. Шу билан бирга ғўза оққанотининг бир қатор паразит турларини аниқлаб уларнинг ролини тадқиқ этган Ғўза оққанотининг биоэкологик хусусиятларини турли иқлим шароитлари бўйича ўрганилган. Mound (1962), Mound et 1978; Hill (1969), Berlinger, Magal, Benzioni (1983), Arx, Baumgartner, Delucchi (1983), Bink-Moenen (1991) – жанубий Европа; Coudriet, Prabhaker, Kishaba, Meyerdirk (1986), Bellows, Perring, Arakawa, Farrar (1988), Byrne, Houck (1990) - АҚШда; Krishnamurthy (1989), Venugopalrao, Reddy (1989) - Хиндистонда; Zhiyi, Zhano, Guo-Pei (1989) - Хитойда; Sengonca(1975), Baloch, Soomro (1980) - в Турции; Habiby (1975) - Эронда; Ahmad Harwood (1973) и Qureshi (1980) - в Покистан; Costa, Russel (1975) - Бразилияда; Hill (1968), Arx, Baumgartner, Delucchi, (1984), Musuna (1986), Bagayoko (1989), Diongue (1989), Eljadd, Guron (1989) – ва бошқа мамлакатларда узок йиллардан бери тадқиқ этилиб келинмоқда.

Ғўза оққаноти ўтган асрнинг 30 йилларида зарари кучайиб борди ва бу бўйича олимларнинг диққатини ўзига жалб қилди. Айниқса пахта етиштириш билан шуғулланувчи давлатларда бу бўйича илмий тадқиқотлар жадаллашди. Жумладан Хиндистонда Марказий Америкада, Африкада, ва Туркменистонда Ҳозирда ушбу зараркунанда тарқалиш ареали Марказий Осиёда ҳам кенг тарқалиб ғўзанинг асосий кушандаларидан бири бўлмоқда

Оққанотнинг юқоридаги турлари маданий ва бегона ўсимликларнинг 150 ортиқ турлари билан озиқланиши аниқланган. Оққанотнинг *Aleyrodes proletella* тури ҳаммахўр бўлиши ва бегона ўтларда яхши ривожланиши кўрсатиб ўтилган .

Мадаминов ва бошқа олимларнинг фикрига кўра (1994; 1998) Жанубий Турманистоннинг энг хавфли зараркунандаларидан бири ҳисобланиши қайд қилиниб, бу бўйича илмий тадқиқотлар олиб борилган. Мухитдиновнинг маълумотларига кўра (1998, 2000, 2003, 2007, 2009) ғўза етиштирилаётган майдонларда ғўза ва иссиқхона оққанотлари 1980 йилнинг биринчи ярмидан қишлоқ хўжалиги экинларига зарар етказадиган майдонларига зарар келира бошлади.

Муаллиф М.Карамухаммедованинг (2016) такидлашича оққанотнинг 11 та оилага мансуб 14 тури тадқиқ этилган. Шу билан бирга муаллиф оққанотнинг маълум бир турларини экин турлари бўйича ихтисослашганлиги бўйича турлар тадқиқ этилган, цитрус оққаноти - *Dialeurodes citri* Ashmead.1885; иссиқхона оққаноти доминант тур сифати тадқиқ этилган *Trialeurodes vaporariorum* Westwood 1856, ва уларнинг ривожланишини ўрганган.

Мамлакатимиз шароитида оққанотнинг 2 та тури катта ҳавф туғдириб полиз ва сабзавот экинларини жиддий зарарлайди. Булар иссиқхона оққаноти (*Trialeurodes vaporariorum* [Westwood](#), 1856) ва ғўза оққаноти ёки тамаки оққаноти (*Bemisia tabaci* Gennadius, 1889) дир. Республикамиз вилоятларида ва Тошкент шаҳри атрофларида қиш мавсуми давомида ишлаб турган иссиқхоналар оққанотнинг (*Trialeurodes vaporariorum*) доимий кўпайиб туриш имониятини бермоқда. Кунларнинг исиши натижасида иссиқхоналардан учиб чиққан бу зараркунанда кейинчалик очик далага ўтиб, экинларда жуда тез ривожланади ва уларга катта зарар етказа бошлайди. Шу сабабдан иссиқхона атрофида сабзавот экинларидан бодринг, помидор ва баклажон етиштиришнинг имконияти бўлмай қолади. Кейинги йилларда цитрус оққанотининг яна бир тури ғўза цитрус оққаноти пайдо бўлиб, у пахтага катта зарар етказмоқда.

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БИОЦЕНОЗДА ОҚҚАНОТ ТУРЛАРИ МИҚДОРИНИНГ ТАБИИЙ БОШҚАРИЛИШИ ВА АГРОБИОЦЕНОЗДА УЛАР МИҚДОРНИ БОШҚАРИШ ДОЛЗАРБЛИГИ

Анотация; Табиатда оққанотнинг 30 дан ортиқ табиий кушандалари мавжуд бўлиб, буларнинг энг самарадор паразит турларидан E. formosa, E. portenepea, Eretmocerus spp турларидир. Шунингдек оққанотнинг энтомопатоген замбругли касаллиги сифатида Verticillium lecanii тури аниқланган, лекин ушбу касаллик етарли даражада фитофаг миқдорини камайтира олмайди.

Калит сўзлар; табиат экология омил ҳашорат

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NATURAL RELEASE OF PLANT SPECIES IN THE BIOCECENOSIS AND RELEASE OF THEIR RESOURCES IN THE AGROBIOCECENOSIS.

Abstract; There are more than 30 natural spider mites in nature, the most effective parasitic species of which are E. formosa, E. portenepea, Eretmocerus spp. The species Verticillium lecanii has also been identified as an entomopathogenic fungal disease of spider mites, but this disease cannot sufficiently reduce the number of phytophages.

Keywords; nature, environmental factor, pest

Кириш Табиатда ушбу турнинг айрим турлари табиий бошқарилш хусусиятига эга аммо уларнинг деярли барчаси кишлок хўжалиги экинларида эмас балки бегона ўтларда кузатилади. Оққанот зарарлаган айрим ўсимлик турини бошқа турдаги жонзотлар истеъмол қила олмайди, эскриментлари ўзининг захарлилик хусусиятини ҳам номоён қилади. Оққанотнинг бошқа ҳудудларга кўчиб ўтиши яъни унинг географик

тарқалган популяцияси тез кўпайишининг асосий кўрсаткичларидан бири табиий бошқарилиш омилларининг йўқлигидир. Шу билан бирга табиатда кейинчалик у ёки бу омиллар сабаб уларнинг кушандалари, касалликлари вужудга келади. Лекин бу давргача узоқ эволюцион муносабатлар шаклланишини талаб этади.

Вўза оққаноти охирги 15 йилда унинг ер юзидаги тарқалиш ареали янада ориб, бу даврда Европанинг қатор давлатлари иссиқхоналарига кириб келди, жумладан Шимолий Европа ва Сурия, Франциянинг жанубида, Исроил, Италия ва Испанияда кузатиш мумкин. Вўза оққанотининг ривожланиши учун оптимал ҳаво ҳарорати 10°C дан 27°C, 32°C гача бўлганлиги учун юқоридаги давлатлар унинг учун мақбул ҳисобланади

Оққанот турларини агробиоценозда бошқариш долзраблигига кўра унинг олимлар томонидан ўрганилиш даражасидан билим мумкин. Бунда уларнинг диққати иқтиодий ҳавфлилик даражасига қаратилган. Жумладан, ўўза оққаноти зарарлаган экиннинг 20-100% гача ҳосилини нобуд қилиш мумкин, бунда экинни умуман қуришиб қўйиши инобатга олинган ва бундай ҳолат мавжуд. Бунда зараркунанда миқдори кўп бўлмасида ўсимликда хлороз касаллигини келтириб чиқаради. Ўсимликнинг умрини қисқартириб, экинларини сифатсиз қилиб қўяди, зарарланган мевалар кичик, устки қисмида дағал доғлар пайдо бўлди, мева таъми бутунлай бузилади. Ўсимликларда 100 турга яқин вирусларни ўзида ташийди ва юқтиради булар асосан Бегомовируслар ҳисобланиб Closteroviridae ва Potyviridae оилаларига мансубдир. Оққанотининг табиий бошқарувчанлик кучлари сифатида экологик, кушандалик, антропоген омилларни кўрсатиш мумкин.

Табиатда бундай кучлар доимий равишда мавжуд аммо уларнинг барчаси ҳам ушбу тур миқдорини бошқаришда устунлик қила олмайди. Аммо айрим ҳудудларда ушбу турнинг популяция шаклланишида мўтадил бўлиб, бошқа тирик организмларга нисбатан муносабатлари суст кўринади.

Бундай жараёнлар фақатгина биоценозда ёки мажбурий озиқа манбаларида кузатилади ҳалос. Инсонлар томонидан ерларнинг ўзлаштирилиши ва турли табиат учун янги тур навларнинг катта майдонларда ўстирилиши бу каби фитофаг турлари популяциясининг шаклланишида манба бўлиб ҳизмат қилади. Бундай жараёнда ушбу тур популяция миқдорини маълум даражада бошқариш талаб этилади.

Бутунжаҳон озиқ-овқат ташкилотининг кўп йиллик маълумотлари асосида фақатгина оққанот фитофагининг ўзи ўртача фақатгина АҚШ қишлоқ хўжалиги учун 32 млрд маблағнинг ушбу турга қарши кураш ёки ушбу тур орқали йўқотлаётган экин ҳосилини кўрсатиш мумкин. Аммо бу кўрсаткич бир томондан кичик бўлиб кўринар, лекин бошқача қилиб

айтганда айрим давлатларда озиқ-овқат танқислигини келтириб чиқариши кузатилмоқда.

Турли экологик омилларнинг популяция динамикасига таъсирини популяция қалинлигига кўра гуруҳларга ажратиш бошланди: бунда катострофик ва факультатив, нореактив ва реактив, номустақил ва мустақил ва хоказолардир. Бундай тадқиқотлар бўйича Г.А. Викторов (1971-1973) популяциялар сони бошқарилиш механизмини етарлича очиб берди -

Жаҳон миқёси бўйича, барча қишлоқ хўжалик экинларида уларнинг зараркунандаларига қарши курашишда кўп йиллар давомида кимёвий усул ҳукм суриб келмоқда. Айниқса, пахта етиштирадиган давлатларда кимёвий препаратлар оммавий равишда қўлланилади. Чунки, ҳашарот ва каналар билан зарарланиш натижасида ҳар йили ғўза ҳосилнинг 20-25 % йўқотилади. Бунда айрим турдаги ҳашаротларининг пестицидларга чидамлилиги ортиб, улар популяция сонининг ортиши кузатилади.

Агроценозда табиий бошқарилиши яъни ҳашаротлар популяци сонининг ортиши ёки камайиши миграция жараёни билан боғлиқ бўлади. Бунда кўчиб ўтган ҳашарот тури ўзининг ҳаётий фаолиятини тиклаб, жойга мослашади ва улар сонининг ортиши билан бошқа турдаги экинларга кўчиб ўтиши кузатилади

Ҳашарот турларининг кўпайиши учун қулай шароитларнинг ҳосил бўлиши популяция репродуктив потенциалининг юқори бўлганлиги туфайли организмнинг тез кўпайишига сабаб бўлади. Бундай кўпайиш узоққа чўзилмай, унга биотик факторлардан йиртқичлар, паразитлар, озиқа етишмовчилиги кабилар таъсири кучайиб боради. Шу сабабли ҳашаротлар ва бошқа организмларнинг юқори репродуктив потенциал хусусияти ва модификацияланиш омилларининг қулайлиги биоценозда организмларнинг кескин кўпайишга олиб келади. Бунда эса биологик факторлар уларнинг кескин кўпайиш олдини олиб, уларни маълум бир меъёрда сақлаб туради. Қишлоқ хўжалигида зараркунандаларга нисбатан пестицидлар қўллаш ёки айрим агротехник тадбирлар таъсири туфайли ҳамда абиотик омиллар ҳолатининг қулайлиги ҳашарот турлари сонининг ортишига олиб келиб, бу бирор тур популяция сонининг ошишига олиб келади. Ҳашаротлар сонининг ўзгариб туриши борасидаги олимларнинг фикрлари ҳалигача қарама қаршидир. Бунда айрим муаллифлар агробио-ценоздаги зарарли ҳашарот турларини уларнинг табиий қушандалари таъсирида бошқарилиши мумкинлигини инкор этадилар. Бу эса қишлоқ хўжалик экинларини етиштиришда алмашлаб экишни нотўғри танлаш, битта турдаги экинларни катта ҳажмларда экиш, энтомофаглар ривожланиши учун маскан бўладиган бедазорлар камайиши кабиларга боғлиқ. Айниқса мавсумда дала четларига кам заҳарли инсектицидларни қўллаш, далани ёппасигаишлов бериш билан баробар. Бунда

Энтомофаглар заҳирасини сақлаб қолиш ва уларнинг уўпайиши учун имкон яратиш ҳисобалани

Дарҳақиқат, қишлоқ хўжалик экинларини зараркунандалардан ҳимоя қилишда кимёвий усулни самарадорлигига шак-шубҳа йўқ, чунки препарат ўз вақтида, тўғри ишлатилса, қисқа муддатда юқори самарага эришилади. Аммо, кимёвий воситалар қўллашнинг ўзига хос камчилик ва салбий томонлари ҳам мавжуд. Биринчидан, улар зараркунандаларга қарши курашда юқори самара бериши билан бир қаторда фойдали ҳашаротларга ҳам тўғридан-тўғри таъсир кўрсатиб уларни қириб юборади. Натижада, табиий кушандалар миқдори кескин камаяди ва биоҳилма-ҳилликнинг кескин камайишига олиб келган Иккинчидан, кимёвий усул инсон ва иссиққонли ҳайвонлар учун захарли бўлиб, атроф-муҳитни ортиқча ифлосланишига олиб келади. Яна бошқа бир томони, бир хил турдаги препарат сурункасига ишлатилиши натижасида зараркунандада уларга нисбатан чидамлилиқ ҳосил бўлиб, йил сайин ишлов бериш ҳажми ва такрорийлигини, пестицидлар сарфлаш меъёрини оширишга сабаб бўлади

Ўсимликларни уйғунлашган ҳимоя қилиш тизимида энтомофагларсиз 100% натижага эришиш иложи йўқ. Биргина пахтачиликда эса унинг ҳақиқий самарадорлиги 50-70% ни ташкил этиб, зараркунандани иқтисодий ҳавфли сонидан камайтириб туради. Кимёвий ҳимоя қилиш тизимининг ўзида эса бундай самарадорликка эришиб бўлмайди

Кейинги йилларда ўсимликларни биологик усулда ҳимоя қилиш усулига катта аҳамият берилиб, мамлақтимиз қишлоқ хўжалик экинларини зараркунандалардан ҳимоя қилишда биологик усулнинг улуши 86% ни ташкил этмоқда

Адабиётлар шарҳига кўра табиатда ҳашаротларнинг таабий бошқарилиш қонунияти доимо мавжуд бўлиб, улар антропоген ёки иқлим шароити туфайли ўзгариши мумкин экан. Биоценозда ҳашаротларнинг паразит-йиртқич-хўжайин муносабатлари ва уларнинг бир бирига таъсирини илмий ўрганиш муҳим аҳамият касб этади. Бунда, кушандаларни қўллаш табиатдаги биоҳилма - ҳиллик таъминласа, қишлоқ хўжалигида эса зарарли ҳашаротлар зараридан nobуд бўлаётган ҳосилни сақлаб қолиш, экологик тоза, сифатли маҳсулот етиштириш имкониятига эга бўламиз.

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ЦИТРУС ИНЛИ КУЯСИ – (PHYLLOCNISTIS CITRELLA STANTON) БИОЛОГИЯСИ ТАРҚАЛИШИ

Аннотация: Ҳозирги кунда мевачилик Ўзбекистоннинг асосий экспорт маҳсулоти бўлиб, боғбон фермерлар зиммасига мева етиштиришда унинг ҳосилдорлигини кескин кўтариш, маҳсулот сифатини яхшилаш, қуруқ мева тайёрлаш ҳажмини ошириш, аҳолини ҳамда қайта ишлаш саноатини хомашё билан тўлиқ таъминлаб, юқори сифатли маҳсулотни четга чиқариш юклатилади. Мевачиликни янада ривожлантириш учун парваришлаш агротехникасини доимо такомиллаштириб, замонавий техника ва технологияларга мослаб бориш билан бир қаторда мевали боғларда учровчи зараркунанда, касаллик ва бегона ўтлардан ҳимоя қилиш талаб этилади.

Калит сўзлар; инли куяси хашират зараркунанда лимон

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BIOLOGY DISTRIBUTION OF THE CITRUS STONE MOTH (PHYLLOCNISTIS CITRELLA STANTON)

***Abstract:** Currently, kunda mevachilik Uzbekistan exports the main products, gardeners of farmers zimmasiga harvest fruits and harvest keskin-kutarish, quality products aishshilash, Kuruk prepares fruits hajmin oshirish, residents of Hamda kaita ishlash sanatini raw materials supply goods, the quality of products is chetga chikarish Yuklatiladi. When growing fruits, constantly improving agricultural technology, modern machinery and technologies reduce precipitation, protecting garden fruits from pests, diseases and outsiders.*

Keywords; Pearl moth hashorat harmkuranda lemon

Кириш: Мева маҳсулотларини етиштиришда айниқса, етиштирилаётган лимон зараруналаларини ўз вақтида аниқлаш,

ривожланиш ва зарар келтириш даражасини аниқлаш ҳисобига самарали кураш чораларини белгилаш ниҳоятда муҳимдир.

Зероки, зараркунандаларни ривожланиб, зарар келтириши ўсимлик тўқимасида шира айланиши бошлангандан то куртак чиқариб, мевалаш, ҳосилни пишиб етилиши даври охиригача яъни бутун вегетация даври мобайнида давом этади. Республикамизда цитрус мевалар етиштириш кенгайтириш, уларнинг селекцион ишларини янада ривожлантириш, мавжуд боғларда агротехника ва меҳнатни тўғри ташкил этиш орқали улардан самарали фойдаланиш давр талабидир.

Юртдошларимиз хонадониде етиштирилаётган лимон, мандарин, апельсин сингари цитрус мевалар рўзғордан ортиб ички ва ташқи бозорларга ҳам етказиб берилмоқда. Бу жараёнда ўсимликларни турли зарарли ҳашаротлардан асраш муҳим вазифа ҳисобланади. Хусусан, цитрус ўсимликлар учун энг катта хавф цитрус инли куяси ҳашаротидир. У цитрус ўсимликларига катта зарар келтириб, айниқса, лимон ўсимлигининг хавфли кушандасидир.

Ўзбекистон Республикаси қайд этилган ички карантин зараркунанда ҳашаротларга цитрус оқканоти (*Dialeurodes citri* Ashm.), шарқ мевахўри (*Grapholitha molesta* Busck.), Колорадо қўнғизи (*Leptinotarsa decemlineata* Say.), цитрус инли куяси (*Phyllocnistis citrella* Stain.), комсток курти (*Pseudococcus comstocki* Kuw.) ва Калифорния қалқондори (*Quadraspidiotus perniciosus* C.) ҳашаротлари киради. Республикамиз шароитида цитрус уяли куяси ва цитрус оқканотлари кўпроқ зарар етказади. Ўртача зарарланган дарахт назоратга нисбатан 32,1 % кучли зарарланганлари эса 60 % гача ҳосилни йўқотар экан. Изланишлар ва айрим тадқиқотларга кўра цитрус уяли куяси билан зарарланган 1 га майдонда етиштирилган цитрус ўсимликларнинг 55 – 70 % ҳосилнинг кучли зарарланиши аниқланган. Ўзбекистонда Цитрус инли куяси Тошкент вилояти ҳудудида аниқланган. Хусусан, цитрус ўсимликлар учун учун энг катта хавф Цитрус инли куяси – (*Phyllocnistis citrella* Stainton) ҳашаротидир. У цитрус ўсимликларига катта зарар келтириб, айниқса, лимон ўсимлигининг хавфли кушандаси ҳисобланади. Шу билан бир қаторда у мандарин ва грейпфрутда ҳам яхши ривожланади, Цитрус инли куяси асосан цитрус ўсимликларида лимон, мандарин, апелсин, трифолиат, чой, хурмо, шилви, настарин, дафна, жасмин, камфара, гардения, лигуструм каби ўсимликларга катта зарар келтиради. У фақат дарахтларнинг баргларида ривожланади, шу боисдан қиш мавсумида барглари тўкадиган дарахтлар ва буталар қишда цитрус инли куясидан тозаланиб туради. Личинкалари барглари сўриб, унинг шарбати билан озиқланади, бундан барглари кучсизланади ва ўсимликлар ҳосилдорлиги пасаяди.

Зараркунандани ўз вақтида аниқлаш мақсадида ўсимликларни доимий текшириб туриш; Хўжалик кўчат етиштириб, сотишга ихтисослашган бўлса, фумигацион камераларга эга бўлиши, кўчат ва қаламчаларни жўнатишдан олдин зарарсизлантириши;

Карантин ҳолати жорий қилинган хўжаликларда ўсимлик маҳсулотларини карантин инспекциясининг рухсатсиз ташқарига олиб чиқиб кетмаслик, каби тадбирларни ўз ичига олади.

Цитрус инли куяси хашароти Осиё, Австралия, Жанубий Африка, Шарқий ва Ғарбий Африка, Марказий ва Жанубий Америка давлатларида тарқалган бўлиб, Ўзбекистонда асосан, Тошкент вилояти ҳудудида аниқланган.

Хашарот капалагининг кулранг қанотлари 4-5 мм узунликда бўлади. Олдинги жуфт қаноти иккита тўқ чизик, ўртасида эса V шаклида белгиси ва тепа учига қора доғлари бор. Қанотининг ўрта олдинги четигача узун тўқ сариқ рангда туклари бор. Попуклари орқа қанотида ҳосил бўлади. Орқа оёқларининг болдир қисмида тепага қараган қора ўсимтаси бор. У лимон баргининг остки томонига жойлашиб кеч кузга қадар зарар келтиради.

Цитрус инли куясининг ривожланиш муддатларига аниқлик киритилиб, улар ривожланишининг фенологик календарлари тузилади, об-ҳаво шароитидан келиб чиққан ҳолда уларнинг ривожланиши, тарқалиши ва зарар келтириш даражаларини аниқланади. Цитрус инли куясининг иқтисодий зарар келтириш чегараларини ҳисобга олган ҳолда кураш чоралари такомиллаштирилади. Иссиқхоналардаги лимон ўсимлигини цитрус инли куясидан ҳимоя қилиш воситаларига бўлган эҳтиёжни режалаштириш меъёрлари ишлаб чиқилади.

Цитрус инли куяси нуфузининг мониторинг тизимини қўлланилиши ўсимликларни ҳимоя қилиш ташкилотларининг хизматчиларига кураш усулларини ва муддатларни белгиловчи илмий асос бўлиб хизмат қилади. У экинларни ўз вақтида ҳимоялашга ва унга ишлов бериш сонини камайтиришга имкон яратади. Бу маълумотлар асосида ўн кунлик, ойлик хариталар ва йиғма жадваллар тузилади ва улар цитрус инли куяси ривожланиши ва тарқалишини назорат қилиш имконини беради.

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ЦИТРУС ИНЛИ КУЯСИ (PHYLLOCNISTIS CITRELLA STAIN.) ГА ҚАРШИ ИШЛАБ ЧИҚИЛГАН КАРАНТИН ТАДБИРЛАР

Аннотация; Кейинги йилларда республикамызда мева собзавотчиликни ривожлантиришга алоҳимда эътибор берилиб қатор вазифалар белгилаб берилди. Иссиқхоналарда мева собзавот экинларини етиштириш айниқса лимончиликни ривожлантиришга алоҳида эътибор берилмоқда. Мева маҳсулотларини етиштиришда айниқса, етиштирилаётган лимон зарарунандаларини ўз вақтида аниқлаш, ривожланиш ва зарар келтириш даражасини аниқлаш ҳисобига самарали кураш чораларини белгилаш ниҳоятда муҳимдир.

Калит сўзлар; Зараркунанда дарахт лимон куя инли тутқич

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QUARANTINE MEASURES HAVE BEEN DEVELOPED AGAINST THE CITRUS CODLING MOTH (PHYLLOCNISTIS CITRELLA STAIN.).

Abstract; In subsequent years, special attention was paid to the development of fruit and vegetable growing in our republic and a number of tasks were set. Particular attention is paid to the cultivation of fruit and vegetable crops in greenhouses, especially the cultivation of lemon. When growing fruit products, it is extremely important to identify lemon pests in time, determine the level of development and infestation, and determine effective control measures.

Keywords; Tree pest – lemon

Кириш; Цитрус инли куяси (*Phyllocnistis citrella* Stain.) ни ривожланиш динамикасини ўрганиш. Илмий асосланган кураш тизимларини ишлаб чиқиш. Уйғунлашган кураш ва карантин тадбирлари муддатларини белгилаб ўз вақтида олиб бориш. Қарши кураш муддатларини аниқлаб, карантин тадбирларини ва курашни ўз вақтида қўллаш юқори иқтисодий самара беради.

Зараркунанда кўплаб тарқалган мамлакатлардан уруғ ва экиш учун мўлжалланган кўчатларни Ўзбекистонга келтириш ман этилади.

Куялар тарқалган ҳудудлардан кўчатларни келтириш чегараланади. Цитрус ғовак ясар куяси тарқалган мамлакатлардаги дарахтзорлар керакли кимёвий препаратлар билан ишлов берилади.

Келтирилган цитрус кўчатлари зарарсизлантирилади ва интродукцион карантин кўчатзорига жойлаштирилади. Зарарланган барглар юлиб ташланади ва куйдирилади. Ёруғлик туткичлар ёрдамида капалаклар тутилади. Селекция ва илмий-тадқиқот ишларини олиб бориш учун олинган материаллар, интродукцион карантин кўчатзорларда қайта текширилиб, зараркунанда борлиги аниқланганда, улар йиғиб олиниб, зарарсизлантирилади ёки куйдирилади.

Цитрус уяли куяси пайдо бўлган хўжаликларда, аҳоли яшаш жойларида, туманларда карантин ҳолати эълон қилинади. Карантин ҳолати ўсимликлар карантини давлат инспекциясининг тақдимномасига асосланиб, маҳаллий ҳокимият томонидан тасдиқланади. Шу билан бирга зараркунанданинг пайдо бўлиш марказини аниқлаш ва уларни йўқотиш чоралари бўйича иш режалари тасдиқланади.

Карантин ҳолати тадбиқ этилган туман, хўжалик, аҳоли яшаш жойларидан цитрус ўсимликлари, шунингдек уяли куя ривожланувчи иссиқхона кўчатларини ташқарига олиб чиқиш ман этилади. Қишда дарахт кўчатларини, баргларини тўккандан кейин фумигация камерасида бром метил ёрдамида ишлов берилгандан сунг карантин эълон қилинган ҳудуддан олиб чиқиб кетишга рухсат берилади.

Карантин ҳолати тадбиқ этилган хўжаликлар, аҳоли яшаш жойлари, туманлардан ўсимликлар ва кесилган гулларни бошқа туман, вилоятларга олиб чиқишга фақат ўсимликлар карантини давлат инспекциясининг “Карантин сертификати” олингандагина рухсат этилади. Янги барпо этилаётган боғларга карантин инспекцияси билан келишилган ҳолда цитрус инли куяси билан зарарланмаган кўчатлар экилади.

Мева тугунларини шаклланиб ва тутиб қолиши учун ушбу ҳароратни ушлаш мақсадга мувофиқдир. Лимон ўз-ўзидан ва четдан чангланадиган ўсимлик бўлганлиги сабабли асалариларда фойдаланиш тугунчаларнинг кўпроқ ҳосил бўлишига ёрдам беради. Апрель охири май бошларида суткалик ўртача ҳарорат 22°C бўлганида меваларнинг шаклланиш босқичи бошланади ва июннинг биринчи ўн кунлигида ҳаво ҳарорати 25,4°C бўлганида тугайди.

Мева тугиши ва уларнинг ривожланиши учун биринчи ўн кунликда ҳаво 20-25°C гача қизиши ва нисбий намлик 70-80% бўлиши зарур. Бундай шароитда лимон ўсимлиги анча яхши гуллаб мўл ҳосил тугайди. Ҳаво қуруқлиги ва ҳароратнинг кескин ошиши тугунларнинг кўплаб тўкилиб кетишига олиб келиши мумкин. Май-июнда ойларида лимон меваси тез ривожланади, кейин ўсиши бир оз секинлашади. Шу билан бирга, октябр

ойигача пўсти сарғайгунча йириклашаверади. Ноябрь-декабрь бошларида мева пишиб, ноябрда лимон ўсимлиги тиним даврига киради. Ушбу даврда иссиқхона ва ҳандакда ҳарорат ўртача +8°C дан ошмаслиги керак.

Цитрус уяли куяси қайд этилган ҳар қандай ҳолатда ўсимликлар карантини давлат инспекциясининг жойлардаги бўлимларига зудлик билан хабар қилиш лозим. Цитрус уяли куясига қарши зарарсизлантирилган ҳудуд уч йил мобайнида қайта аниқланмаса зарарланган ҳудуддан карантин олиб ташланади. Цитрус уяли куясига қарши карантин тадбирлар, уни утказишга умумий раҳбарлик ўсимликлар карантини давлат инспекцияси ва унинг жойлардаги бўлимлари томонидан амалга оширилади. Ўрнатилган тадбирларнинг бажарилиши устидан назорат ўсимликлар карантин давлат инспекцияси томонидан амалга оширилади. Ўрнатилган тизимдаги тадбирларни ўз вақтида бажаришга жойлардаги корхона, муассаса, фермер хўжалик раҳбарлари, шу қаторда маҳаллий фуқаролар ҳам жавобгар бўлиб, улар қуйидагиларга мажбурдирлар:

а) цитрус уяли куясига қарши ўрнатилган карантин тадбирларини амалга ошириш учун хўжаликларнинг воситалари ва кучидан фойдаланиш:

б) цитрус уяли куясини ўз вақтида аниқлаш мақсадида ўсимликларни доимий текшириб туриш;

в) цитрус уяли куясини тарқалишини олдии олиш, уларни йўқ қилиш борасида ўрнатилган карантин тадбирларига қатъий риоя қилиш;

г) хўжалик кўчат етиштириб, уни бошқа хўжаликларга сотишга ихтисослашган бўлса, фумигация камераларга эга бўлиши, етиштирилган кўчатлар ва қаламчаларни жўнатишдан олдии зарарсизлантириши;

д) карантин ҳолати жорий қилинган хўжаликлардан ўсимлик маҳсулотларини карантин инспекциясининг рухсатисиз ташқарига олиб чиқиб кетмаслик;

е) жўнатилаётган кўчат ва маҳсулотларни тегишли тартибда рўйхатдан ўтказиш.

Цитрус уяли куясига қарши кимёвий инсектицидлар синаб кўрилди. Энг самарали инсектоцид сифатида вертимек (абалон, пилармектин) қайд этилди – 0,5 л/га. У тўқима ичига сингиш хусусиятига эга бўлгани учун бу ҳашаротга қарши ҳозирча энг самарали бўлиб қолаяпти

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РЕЗУЛЬТАТЫ ИЗУЧЕНИЯ СОСТОЯНИЯ АЙДАР-АРНАСАЙСКОЙ СИСТЕМЫ ОЗЕР

Аннотация. В данной статье приведена информация о результатах обследований, проведенных в акватории Айдар-Арнасайской системы озер (восточная часть озера Тузкан). В результате были изучены динамика изменения площади ААСО, основные источники питания (притоки), объем, расход и минерализация воды, имеющиеся гидротехнические сооружения и оснащение их приборами водоучета, а также приведена краткая информация об экологической обстановке Айдар-Арнасайской системы озер.

Ключевые слова. Айдар-Арнасайская система озер, ААСО, Чардарьинское водохранилище (Казахстан), Арнасайское водохранилище (Узбекистан), коллекторно-дренажная сеть, уровень, расход, минерализация воды, засоление, водоучет.

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RESULTS OF THE STUDY OF THE STATE OF THE AIDAR-ARNASAY SYSTEM OF LAKES

Abstract. *This article provides information on the results of surveys conducted in the water area of the Aydar-Arnasay lake system (eastern part of Lake Tuzkan). As a result, the dynamics of changes in the area of the Aydar-Arnasay lake system, the main sources of supply (tributaries), the volume, flow and mineralization of water, the existing hydraulic structures and their equipment with water meters were studied, and brief information on the environmental situation of the Aydar-Arnasay lake system was provided.*

Keywords. *Aidar-Arnasay lake system, AALS, Chardara reservoir (Kazakhstan), Arnasay reservoir (Uzbekistan), collector-drainage network, level, flow rate, water mineralization, salinization, water metering.*

Введение. Айдар-Арнасайская система озер (ААСО) является одним из крупнейших бессточных водных объектов на территории Республики Узбекистан, имеющая важное народнохозяйственное и экологическое значение.

Айдар-Арнасайская система озер находится на территории Джизакской и Навоийской областей Узбекистана и включает в себя Айдаркуль, Тузкан и Восточно-Арнасайские озёра. ААСО образовалась в катастрофически многоводном 1969 году, вследствие сброса 21 км³ воды в естественное понижение рельефа местности из Чардарьинского водохранилища на реке Сырдарья. Это была вынужденная мера, целью которой являлось предотвращение больших разрушений с непредсказуемыми последствиями на территории Казахстана в нижнем течении р. Сырдарья (рис. 1).

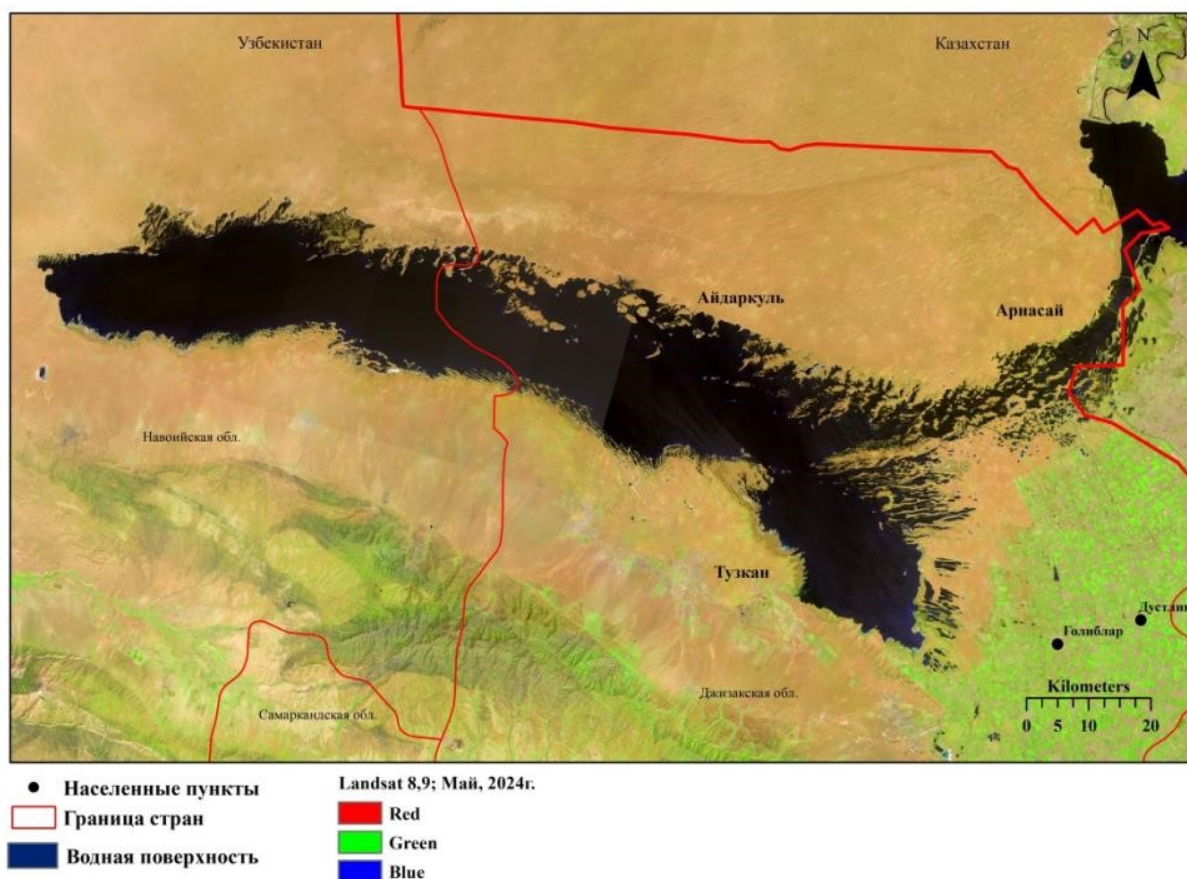
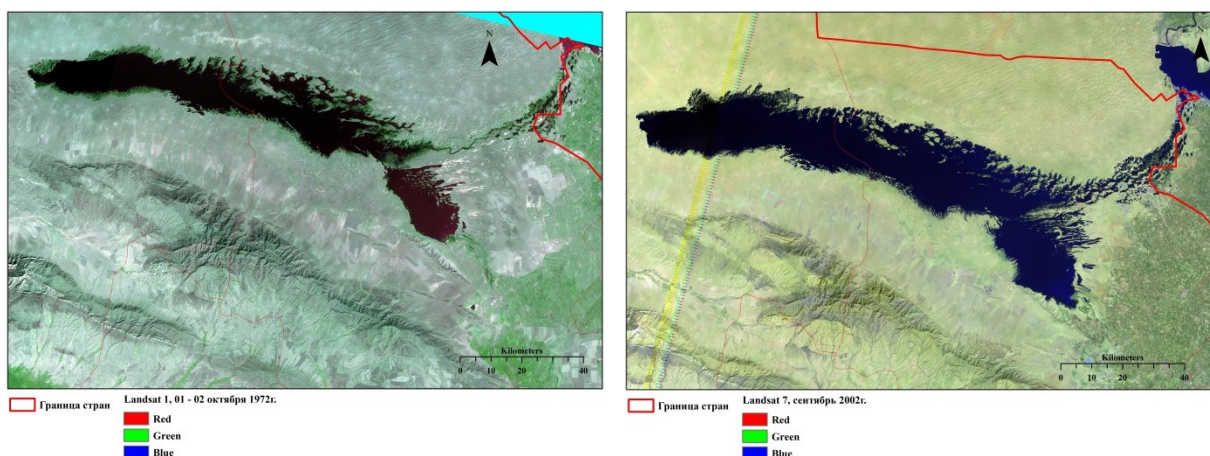


Рис. 1. Айдар-Арнасайская система озер

В последующем сбросы воды в больших объёмах осуществлялись в многоводные годы, а также в зимний период вследствие изменения условий регулирования Токтогульского водохранилища (Кыргызстан). За период 1993 - 2005 гг. из Чардаринского водохранилища было сброшено 38,9 км³ воды (средней сброс составил порядка 3 км³ в год). Площадь водоёма увеличилась на 363,0 тыс. га (в 1,8 раза). Объём ААСО увеличился с 16,7 км³ в 1993 г. до 42,15 км³ (более чем в 2,5 раза) в 2006 г., что было самым максимальным (пиковым) объёмом. Ниже на рис.2 представлены архивные спутниковые снимки Landsat 1 и 7 в период за 1972 г. и 2002 г., снимки наглядно представляют изменения увеличения площади ААСО.



Октябрь 1972 г.

Сентябрь 2002 г.

Рис. 2. ААСО за 1972 г. и 2002 г. по данным спутниковой съемки Landsat 1, 7

В последние годы ситуация с поступлением пресной воды в систему озёр изменилась. Так с 2005 г. по 2023 г. из Чардаринского водохранилища в Арнасайское водохранилище было сброшено порядка 11183 млн. м³, или в среднем 559 млн. м³ в год. За тот же рассматриваемый период из Арнасайского водохранилища в озёрную систему было сброшено порядка 8507,2 млн. м³, или в среднем 425,36 млн. м³ в год. При этом, за рассматриваемый период, в течение восьми лет в систему озёр практически не было поступления пресной воды и поддержание уровня воды осуществлялось за счёт поступления минерализованного коллекторно-дренажного стока с оросительных массивов Узбекистана.

В связи с этим и учитывая климатический фактор испарения, который при площади водной поверхности 3020,17 км² и интенсивности испарения 1250 мм составляет порядка 3,77 млрд м³/год (среднем годовой приток за 20-летний период в составил 2,691 млрд м³/год), объём воды в системе озёр из года в год сокращается. При этом, ввиду недостаточного объёма пресной воды, повышается минеральный состав воды до недопустимых к использованию норм для орошения и рыбного хозяйства.

В условиях Голодной степи основными источниками питания коллекторного стока являются расходы дрен, фильтрационные потери с полей, поверхностные сбросы вод с полей орошения. Следует отметить, что расход дренажного стока связан с режимом орошения на массивах сельскохозяйственных культур.

В последние годы при подаче необходимых объемов воды для промывки полей от засоления в зимний период наблюдается тенденция повышения значений минерализации на всех крупных коллекторах, средних и малых дренах.

Вопрос пополнения системы озёр водой, в том числе разбавления пресной речной водой остаётся актуальным. Согласно ранее приведённой информации, за многолетний период наблюдений, разница между

притоком и испарением с поверхности ААСО составляет порядка 1,08 км³. Этот вопрос необходимо рассматривать совместно узбекской и казахстанской сторонами.

Как положительный пример можно привести результаты договорённости сторон, когда весной 2024 г. был осуществлён сброс воды из Чардарьинского водохранилища. По данным казахстанской стороны объем сброшенной воды в ААОС составил около 1 км³. В тоже время на очередном заседании Межгосударственной координационной водохозяйственной комиссии Центральной Азии была достигнута договоренность о подаче из Узбекистана в Казахстан 922 млн. м³ воды.

В данном случае следует отметить, что целесообразно изучить возможность внедрения практики переброски воды из Чардарьинского водохранилища за счёт стока внутренних рек Узбекистана, поступающего в реку Сырдарья. Так, по имеющимся данным был произведён расчёт стока реки Чирчик в период 1 квартала 2023 и 2024 годов. Согласно расчётам, в устьевой части реки Чирчик общий объём стока за рассматриваемый период (январь-март) составил соответственно 632,8 и 729,8 млн.м³. Таким образом, можно будет решить вопрос пополнения ААСО пресной водой, в объёме, необходимым для поддержания стабильного уровня озёрной системы.

По существующим архивным спутниковым данным проведен мониторинг водной поверхности системы озер за 10 лет (2014-2024 гг.).

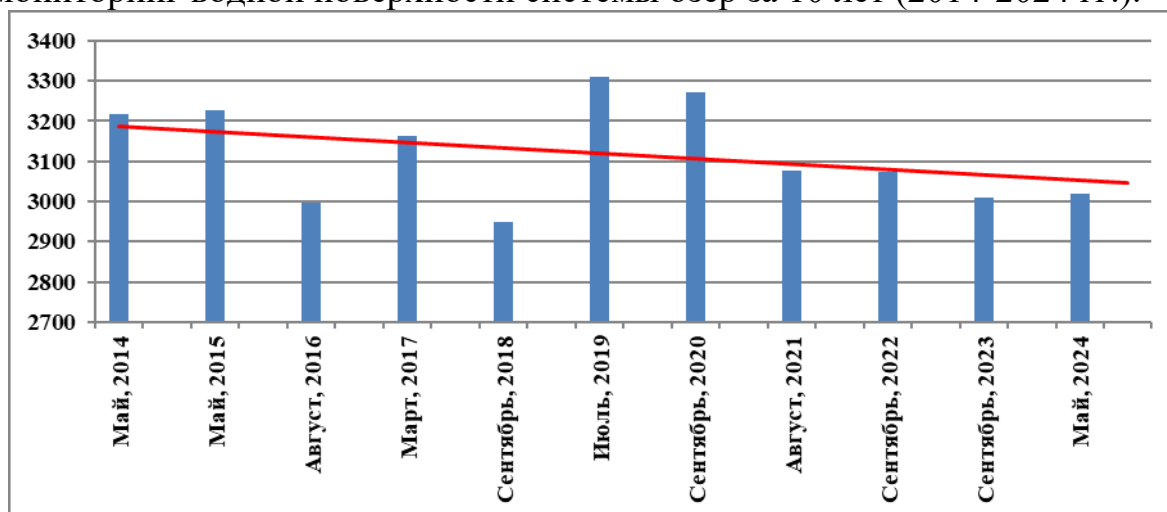


График 1. Динамика изменения площади озёрной системы в 2014-2024 гг.

При анализе полученных площадей выявлено, что максимальная общая площадь озер была в июле 2019 г. и составляла 3309,82 км². Минимальная площадь водной поверхности ААСО наблюдалась в сентябре 2018 г. и составляла 2949,56 км².

На май 2024 года площадь водной поверхности ААСО составляет 3020,17 км². Следует отметить, что площадь озёрной системы даже в десятилетний срок изменяется в больших пределах, это порядка 360 км² (max/min). Если сравнить площади 90-х годов с 2024 годом, получается

сокращение на 610 км². Такая ситуация является отрицательным фактором в деятельности сельскохозяйственного производства и экологической устойчивости.

Сокращение водной поверхности ААСО связано с дисбалансом между поступлением воды и испарением.

По состоянию на 2024 г., объем воды сократился до 34 км³, а уровень воды в озёрах снизился более 2 м, в результате чего прибрежные участки отступили на 15–50 м. Образовавшийся на осушенной поверхности слой солей, при ветреной погоде является источником соле-пыле переноса. Так же на данной поверхности, ввиду засоленности, произрастание какой-либо растительности невозможно.



Рис. 3. Осушенная поверхность участка дна озера

За более чем 50-летний период (1969-2024 гг.) ААСО приобрела статус не только экологической системы, но и объекта рекреационного и социально-экономического значения. Сформировался своеобразный ландшафт с богатым биологическим разнообразием. Помимо этого, ААСО приобрело также важное природно-формирующее значение, как для Узбекистана, так и Центральной Азии в целом. Являясь значительным по площади водоемом, ААСО на сотни километров оказывает влияние на климат, создавая благоприятный микроклимат.

В течение последних лет вокруг ААСО в результате проведения лесомелиоративных мероприятий и возможности обводнения созданы леса, пастбища, тростниковые заросли. Флора высших водных растений водоема состоит из 17 видов, относящихся к 7 семействам и 8 родам. Из общего числа видов 5 являются широко распространенными. Вокруг водоема произрастают туранга, тамарикс, черный и белый саксаул, солянки и др.

Сокращение объемов воды и площади водной поверхности уже сейчас оказывает негативное влияние на состояние растительного и животного мира.

Основным промысловым видом пользования ААСО является рыбная ловля. Например, в 2014 году вылов рыбы составил 4196 тонн рыбы, отлавливались такие виды рыб, как плотва, сазан, судак, жерех, карась и др. Согласно данным, полученных от МЧЖ «Арнасай» в 2022 году улов составил 389,9 тонн, а в 2023 году, несмотря на рост – 926,25 тонн, т.е. всего 20% от достижений прошлых лет.

ААСО расположена на перекрёстке двух миграционных маршрутов перелётных птиц - афро-евразийского и центрально-азиатского, и играет чрезвычайно важную роль в качестве места скопления перелётных и зимующих водоплавающих птиц. В период миграций и зимовок количество видов птиц на водоеме возрастает до 209 видов, образуя огромные скопления водоплавающих птиц, общая численность которых оценивалась в более чем 96 тысяч особей.

ААСО является крупнейшим в Узбекистане местом обитания более 100 видов водоплавающих и околоводных птиц. Среди них 11 видов, включенных в Международную Красную Книгу IUCN: кудрявый пеликан (*Pelecanus crispus*), малый баклан (*Phalacrocorax pygmaeus*), краснозобая казарка (*Rufibrenta ruficollis*), пискулька (*Anser erythropus*), белоглазый нырок (*Aythya nyroca*), степной лунь (*Circus macrourus*), могильник (*Aquila heliaca*), орлан-долгохвост (*Haliaeetus leucoryphus*), орлан-белохвост (*Haliaeetus albicilla*), черный гриф (*Aegypius monachus*), кречетка (*Chettusia gregaria*). 23 вида, встречающихся на этом водоеме, включены в Красную книгу Республики Узбекистан.

Учитывая международную значимость этих водоёмов, они были внесены в перечень Международных водно-болотных угодий Рамсарской конвенции (сертификат от 20.10.2008 г. №1841) и таким образом имеют статус территории международного значения. Кроме этого, три озера ААСО включены в международный список участков, важных для сохранения птиц и биоразнообразия в целом (ключевые орнитологические территории площадью 63 тыс. га): «Северный Айдаркуль» (IBA № UZ029), «Озеро Тузкан» (IBA UZ №035) и «Система озёр Арнасай» (IBA № UZ030).

ААСО имеет большое значение, как место обитания охотничьих видов животных: кабан, барсук, ондатра, водоплавающие (утки, гуси, лысухи) и околоводные птицы (кулики). Здесь проводится любительский лов рыбы. Ежегодно на водоеме в сезон охоты добывается десятки тысяч водоплавающих птиц. Водоем используется в рекреационных целях. Водоем является местом отдыха населения. Охотничьи угодья ААСО привлекают иностранных охотников и туристов.

В целом, ААСО представляет собой уникальный природный объект, обладающий значительной экологической, экономической и социально-культурной ценностью. Сохранение этой системы критически важно для поддержания биологического разнообразия, регулирования водного

режима и фильтрации воды. Озера играют ключевую роль в развитии рыболовства, сельского хозяйства и экотуризма, обеспечивая доход и занятость для местного населения. Кроме того, они имеют культурное и историческое значение, способствуют улучшению здоровья и благополучия людей, а также помогают в борьбе с глобальными климатическими изменениями. Таким образом, сохранение Айдар-Арнасайской системы озер необходимо для устойчивого развития региона и поддержания экологического баланса.



Рис. 4. Прибрежная зона ААСО

Основными источниками питания ААСО являются коллекторы Акбулак, Клы, Пограничный и ЦГК. На момент исследований наибольший средний расход воды составил в коллекторе ЦГК – $72 \text{ м}^3/\text{с}$, далее Клы – $18 \text{ м}^3/\text{с}$, Пограничный – $5,5 \text{ м}^3/\text{с}$ и Акбулак с устьевым расходом $2,26 \text{ м}^3/\text{с}$ (График 2).

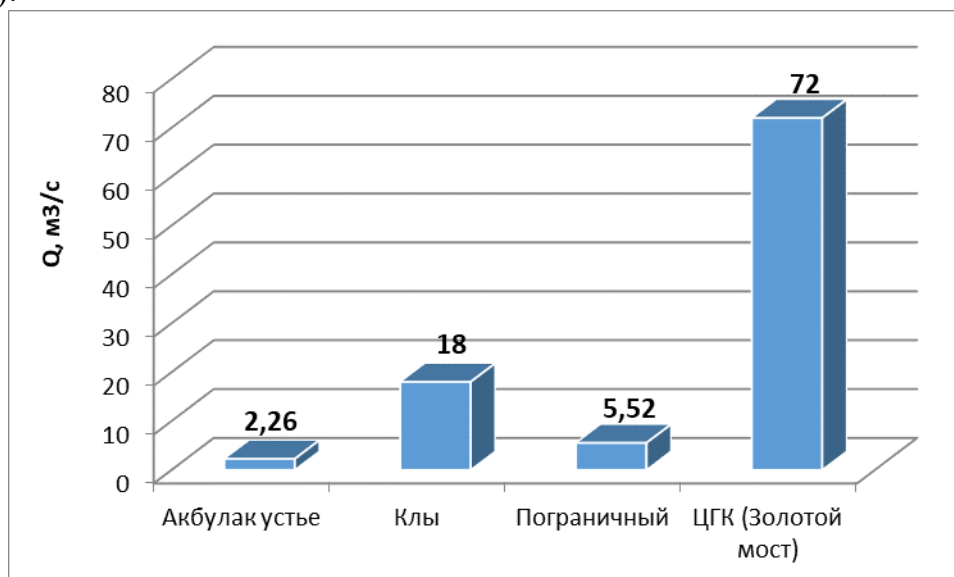


График 2. Средний расход поступающих вод в ААОС

Основным источником воды для рыбных прудов является коллектор Акбулак. На момент измерений средний расход основного русла составил $5,5 \text{ м}^3/\text{с}$. Однако, по длине коллектора производится забор воды для наполнения частных рыбных прудов. Расходы воды отводов составляют в

среднем 1,5-2,0 м³/с. В устьевой части коллектор принимает стоки от мелких прудов и впадает в озеро Тузкан. Расход воды в коллекторе в точке сброса в озеро не превышает 0,5 м³/с.

По средним расходам воды был рассчитан объем, поступивший в ААСО за апрель месяц (График 3). Общий объем воды, поступивший из четырех рассмотренных коллекторов за апрель, составил 253,5 млн м³. Как видно из графика, основной сток приходится на ЦГК – 186,6 млн м³ (73,6 %), далее Клы – 46,7 млн м³ (18,5 %), Пограничный – 14,3 млн м³ (5,6 %) и Акбулак – 5,9 млн м³ (2,3 %).



График 3. Расчётные объёмы поступающих вод в ААОС

Система учета воды на обследованной территории неудовлетворительная. Практически все коллекторы, впадающие в ААСО, имеют гидрометрические створы, однако ни один из них не оснащен должными приборами измерения уровней воды. На некоторых створах имеются гидрометрические мостики, на некоторых гидрометрические рейки. В связи с этим необходимо провести градуировку створов всех коллекторов с дальнейшим установлением на них измерительных приборов. Целесообразным является установка современных приборов учета воды, таких как «Smart water», для дальнейшего мониторинга расхода воды, поступающего коллекторами в ААСО.

Согласно полученных данных минеральный состав воды коллекторно-дренажного стока варьирует в пределах 2,8-4,8 гр/л (маломинерализованная). В реке Клы минерализация воды, ближе к устью достигает до 4,2 гр/л. При замерах непосредственно из озёр установлено, что чем дальше от береговой линии минеральный состав увеличивается. Так, в озере Тузкан, при удалении на 200 метров минерализация увеличивается до 9,4 гр/л (среднеминерализованная), в озере Арнасай на удалении 500 метров от места слияния ЦГК минерализация увеличивается до 5,2 гр/л. Полученные данные свидетельствуют о том, что озёрные

системы, при отсутствии разбавления пресной водой будут в дальнейшем подвергаться более сильному засолению.

По результатам измерений, можно отметить, что уровень минерализации за 10 лет вырос с 5,1 г/л до 8,6 г/л. На отдельных участках оз. Тузкан наблюдается минерализация до 9,5 г/л.

В целом, наблюдается повышение минерализации вод ААСО. Это в основном связано с естественным процессом, где объём испарения превышает объём поступления вод в систему, а также не достаточного поступления речного стока для разбавления вод ААСО.

Основные выводы и рекомендации

- Площадь водной поверхности ААСО сократилась с 3218,11 км² в 2012 г. до 3020,17 км² в 2024 г. за счет снижения поступления воды с КДС и пресной воды (средний приток КДС – 2554 км³/год, средний приток с Арнасайского водохранилища – 0,294 км³/год. С учётом испарения, среднегодовой дефицит воды- 0,850 км³/год). По состоянию на 2024 г., объём воды сократился до 34 км³, а уровень воды в озёрах снизился более 2 м, в результате чего прибрежные участки отступили на 15–50 м.

- Уровень минерализации вод ААСО за 10 лет вырос с 5,1 г/л до 8,6 г/л. На отдельных участках оз. Тузкан наблюдается минерализация до 9,5 г/л. Это связано с тем, где объём испарения превышает объём поступления вод в систему. Минеральный состав воды коллекторно-дренажного стока, поступающего в ААСО, варьирует в пределах 2,8-4,8 г/л (маломинерализована). При отсутствии поступления речного стока озёрные системы будут в дальнейшем подвергаться более сильному засолению.

- Наблюдается снижение поступления воды в ААСО за счёт забора воды на рыбные пруды. Например, только по коллектору Акбулак (створ «Гидрометрический мостик») при расходе 5,5 м³/сек до устья доходит 0,5 м³/сек. При этом, согласно расчётам за апрель месяц 2024 года до ААСО не дошло порядка 13 млн м³ воды.

- Система учета воды на обследованной территории неудовлетворительная. Практически все коллекторы, впадающие в ААСО, имеют гидрометрические створы, однако ни один из них не оснащен должными приборами измерения уровней воды. Кроме этого, для объективной оценки баланса коллекторно-дренажных вод, поступающих в ААСО целесообразно пересмотреть расположение контрольных створов наблюдения/

- Работы по благоустройству территорий для повышения его туристического потенциала, предусмотренные правительственными решениями не выполнены в полной мере.

- Создание защитных лесов, переведенных в категорию земель лесного фонда, прилегающих к озерной системе, предусмотренные

правительственными решениями по маршруту следования, не наблюдалось.

- Несмотря на наличие нормативно-правовой базы, эффективная система управления за использованием и охраной ААСО не налажена. Особое значение приобретает налаживание эффективной системы мониторинга за состоянием ААСО. Требуется надлежащая реализация мониторинга экологического состояния водоемов с использованием стационарной сети наблюдений, комплексных экспедиционных исследований с применением современного оборудования и методов наблюдений включая дистанционные методы и спутниковые данные.

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РОЛЬ КЛИМАТИЧЕСКИХ ФАКТОРОВ В ДЕГРАДАЦИИ ПАСТБИЩ ПУСТЫНИ КИЗИЛКУМ

Аннотация: В данной статье, раскрывается роль климатических факторов на пастбищах пустыни Кызылкум, которая считается одной из крупнейших пустынь Центральной Азии, и значение климата в процессе деградации пустынной территории.

Ключевые слова: деградация, пустыня, аридных ландшафт, изменение климата, деградация.

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THE ROLE OF CLIMATIC FACTORS IN THE DEGRADATION OF PASTURES OF THE KIZILKUM DESERT

Abstract: This article reveals the role of climatic factors in the pastures of the Kyzylkum desert, which is considered one of the largest deserts in Central Asia, and the importance of climate in the process of degradation of the desert area.

Keywords: degradation, desert, arid landscape, climate change, degradation.

Введение: В формировании и составе современных аридных ландшафтов Кызылкумского региона, исключительно важное значение имеют особенности континентального климата Средней Азии. Для

особенностей формирования аридных ландшафтов, характерны резкое проявление континентальности климата, длительный засушливый период, очень жаркое лето, необычайно холодная зима, небольшое количество атмосферных осадков, высокий радиационный баланс, длительное пребывание на солнце, чрезвычайно большое количество возможных испарений. Возникновению и формированию таких особенностей, характерных для, засушливого климата Кызылкумского региона, способствует, во-первых, его расположение на стыке умеренных и субтропических пустынных климатических зон и чрезвычайно богатые термические ресурсы, во-вторых, характер атмосферной циркуляции и повторяющийся характер воздушных масс, открытость, засушливость и частая повторяемость дней низкой облачности, в-третьих, зависит от таких факторов, как расположение Кызылкумов в центре континентальной Туранской низменности, внутри крупнейшего Евразийского континента и вдали от океанов.

Основная часть: В Центральной Азии, в том числе в пустыне Кызылкум, формирование и состав аридных климатических условий и их особенности, стали резко проявляться, после отступления континентального ледникового покрова, произошедшего в антропогенный период. Во время континентального ледникового периода, климат здесь, был несколько влажным и прохладным. Согласно палеогеографической схеме И.П.Герасимова (1937), в Средней Азии и пустыне Кызылкум, в ледниковый период, возникли плювиальные климатические условия. В этот период, влажность была достаточной, атмосферных осадков выпадало больше, чем в современных континентальных климатических условиях, а плювиальные отложения, были широко распространены по долинам Амударьи, Сырдарьи, Зарафшана и Приаральской низменности. Изменение климата в Средней Азии, началось после ледникового периода, и этот процесс привел к постепенному засыханию древних экосистем. В результате этого, в структуре геосистем произошли динамические изменения: исходные степные ландшафты сменились полупустынными, а полупустынные — пустынными [1; 2].

Процесс аридизации климата Средней Азии, неразрывно связан с альпийской складчатостью и новыми тектоническими движениями. Поскольку, в результате альпийской складчатости в южных и восточных районах Средней Азии, возникли крупные горные системы, в результате новых тектонических движений морской климат, долгое время господствовавший на Туранской низменности, отступил, и на его месте наступил резкий континентальный режим. Так, плювиальный период с влажным и прохладным климатом, чередуется с засушливым континентальным климатом. Вот почему Д.В.Наливкин (1908) изучал палеогеографию кайнозойской эры Средней Азии, и отмечал, что степь сменилась еще более сухими полупустынями [4;6].

В формировании климата Кызылкума, большую роль играют умеренные широтные воздушные массы, приходящие с запада и северо-запада, Сибирский антициклон, идущий с северо-востока, и сухие тропические воздушные массы, приходящие с юга. Кызылкум отличается от других регионов Узбекистана, такими особенностями, как большая продолжительность периода солнечных лучей, чрезвычайно низкого коэффициента влажности. Благодаря прямому углу падения солнечных лучей, здесь количество солнечных дней на севере пустыни составляет 2800 часов в год, а на юге превышает 2900 часов. Продолжительность периода солнечных дней, зависит от количества безоблачных дней и погоды в течение всего лета. Наиболее часто светлые дни проходят в июле и августе. Количество светлых дней, увеличивается со 130 до 170 дней с севера на юг. Длительное пребывание на солнце, малое количество пасмурных дней и расположение региона в южных широтах, также обуславливают большое количество солнечной радиации. Следовательно, общее годовое количество Солнечной радиации, здесь составляет 140-150 ккал/см² [3; 7].

В пустыне Кызылкум, большую часть года господствуют умеренные широтные воздушные массы. Трансформация этого типа воздушных масс, в пустынном регионе приводит к образованию местного тропического воздуха с высокой температурой и очень низкой влажностью. Местный тропический воздух, в сочетании с сухими тропическими воздушными массами, приходящим с юга в теплые и жаркие месяцы года, еще больше усиливает континентальность климата. Такая ситуация, в свою очередь, оказывает непосредственное влияние на формирование и развитие в Кызылкумском регионе аридных геосистем, таких как песчаные, глинистые, каменистые, солончаковые и takyрные, имеющие различный литологический состав [5; 6].

Континентальность климата пустыни Кызылкум, определяется показателями температуры воздуха и осадков. Во всех его частях, погода летом очень жаркая, сухая и открытая. Средняя температура июля на севере 25-28°C. Самая высокая температура поднималась до 46-48° С. Летний сезон длится от четырех до 4,5-5 месяцев. Начало лета – конец апреля на юге и первая половина мая на севере. Конец лета и переход к осени, наступает во второй и третьей декаде сентября.

Недавние исследования, изменений элементов климата в Кызылкуме, показывают, что изменение климата тесно связано с повышением температуры воздуха, что приводит к изменению вегетационного периода пустынных растений. Ожидается, что изменения температуры воздуха в Кызылкуме, будут происходить во все времена года. Например, в Навоийской области температура весной повышается на 0,5-2,0°C, летом на 1,5-2,5°C, осенью на 0,5-2,0°C, зимой на 1,5-3,5°C [3]. В результате такого изменения (потепления) климата, умеренная

климатическая область может сдвинуться на 150-200 км к северу и на 150-200 м в высотную область.

Согласно прогнозу изменения климата, повышение температуры в 2015-2030 годах, с одной стороны, повысит продуктивность пастбищных растений, а с другой – оптимизирует погодные условия. В.Е.Чуб (2002) прогнозирует, что изменение климата повысит продуктивность пастбищ в некоторых районах и снизит ее в некоторых областях. Снижение продуктивности происходит в северном и западном районах Кызылкума. В некоторых регионах, ожидается повышение продуктивности пастбищ. В качестве примера, можно привести юго-западные районы гор Газли и Нурата на юго-западе Кызылкума. Таким образом, изменение агроклиматических условий, точнее, повышение температуры, не оказывает одинакового влияния на пастбища по сезонам и регионам [3].

Зима в пустыне Кызылкум довольно холодная и продолжительная. Причиной этого, является влияние Сибирского антициклона, приходящего в зимние месяцы с северо-востока, и арктических холодных воздушных масс, иногда проникающих с севера. Средняя температура января колеблется от -4, -10°C на севере до -1,-2°C на юге. С приходом арктических воздушных масс, температура резко падает до -30, -35⁰ С, морозная погода держится несколько дней. Начало зимы в северной части пустыни, приходится на конец октября или первую декаду ноября, а ее конец — на середину марта. Зимний период длится 4-5 месяцев на севере и 3 месяца на юге. Поэтому вегетационная зима составляет около 0% на севере и до 16% на юге. Пустынный регион, очень богат термальными ресурсами. В течение года, в Северных Кызылумах, безморозные дни составляют 153-210, в Южных Кызылумах 210-230 дней. Также, годовая сумма температур в дни, когда среднесуточная температура выше +10°C, составляет 4340° в Северных Кызылумах и 4850° в Южных Кызылумах [4].

Кызылкум – один из самых засушливых регионов Республики Узбекистан и Туранской низменности. Атмосферных осадков в течение года выпадает очень мало, а также они распределяются неравномерно. Наименьшее количество осадков выпадает в северо-западной и западной частях региона, годовое количество осадков здесь составляет 75-100 мм. К юго-востоку и востоку количество осадков увеличивается, достигая 138 мм в Джангельди, 120-140 мм в районе впадины Аякагытма, 200 мм в горах. Часть осадков выпадает в виде снега. Но толщина снежного покрова не превышает 15-20 см и долго не сохраняется. По данным Э.Н.Балашова, О.М.Житомирской и О.А.Семеновой (1960), сохранность снежного покрова не превышает 20 дней.

Осадки в Кызылкумском регионе, распределяются неравномерно по сезонам. 48% годовых осадков, выпадает весной, 30% зимой, 19% осенью и 3% летом.

К северу от Средней Азии, расположена континентальная область высокого давления, или ось Воейкова. Поэтому, в пустынях Туранской низменности, включая Кызылкумы, преобладают северные и северо-восточные ветры. Зимой дуют преимущественно северо-восточные ветры, их среднемесячная скорость составляет 4-6,5 м/сек. Ветры этого направления, также преобладают весной, но в это время их скорость составляют около 4-6 м/сек. Сильные ветры, играют большую роль в формировании различных форм рельефа песчаных пустынь. Сильные ветры, наблюдаются преимущественно в весенние месяцы. В Кызылкумском регионе их повторяемость неодинакова. Повторяемость сильных ветров в течение года составляет 11 дней в Тамды и 48 дней в Колкудуке.

Коэффициент испарения, также играет важную роль в формировании и развитии аридных ландшафтов Кызылкума. Известно, что в засушливых регионах, особенно в пустыне Кызылкумы, количество возможного испарения в 12-15 раз превышает количество осадков, то есть, если годовое количество осадков составляет в среднем 80-120 мм, количество возможного испарения составляет 1000-1200 мм. По данным Л.А.Молчанова (1955), в юго-восточной части Кызылкума, этот показатель превышает 1500 мм. При этом влага, накопленная в почве за зимние и весенние месяцы, быстро расходуется, как только начинаются жаркие дни. И растения, получают возможность использовать за определенное время, только часть атмосферных осадков. Поэтому, ландшафтообразующая растительность пустыни Кызылкум, сильно страдает от длительного засушливого периода. Засушливый сезон здесь длится 4-5 месяцев. Поэтому, возникновение засушливых условий, тесно связано с крайним дефицитом влаги и обилием тепла. Длительные жаркие дни с высокой температурой, создают палящие условия в летние и осенние месяцы, позволяя ландшафтообразующим растениям пустыни формироваться, развиваться и претерпевать сезонные динамические изменения в типичных засушливых условиях. Здесь, мы сочли необходимым упомянуть мнение Е.П.Коровина (1961). По его словам, длительные жаркие дни летом и осенью, приближают жизнь пустынных растений к конечной точке и повышают их устойчивость к холоду.

Выводы: Таким образом, анализ климатических условий и элементов климата Кызылкума показывает, что они изменяются в пространстве и времени в широтном и меридиональном направлениях, активно участвуют в формировании и развитии аридных ландшафтов, создают зональные и региональные различия. Это отражено в климатическом, агроклиматическом, природно-географическом, ландшафтно-экологическом, биоэкологическом районировании Кызылкумского региона. Например, Э.М. Мурзаев (1953, 1958) в схеме физико-географического районирования Средней Азии, включил Кызылкумскую

область, в северную и южную пустынную зоны и разделил ее на две области — Северные Кызылкумы и Южные Кызылкумы. Е.П. Коровин (1961), на карте климатического районирования Средней Азии и Казахстана разделил Кызылкумскую область на две климатические фации — Туранский фациальный климат пустыни и Казахстанскую фацию пустынного климата. Л.Н. Бабушкин (1964), разделил Кызылкумский район на такие термические зоны, как умеренно жаркий, жаркий и очень жаркий, учитывая, что температура воздуха увеличивается с севера на юг и в этом направлении увеличивается количество термических ресурсов. С.Н. Коновалова (1972) разделила пустыню Кызылкум, на три агроклиматических района сельскохозяйственного назначения. Это северный, центральный и южный агроклиматические районы.

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ЭКОЛОГИЯ И СИНТАКСОНОМИЯ ГАЛОФИТНЫХ РАСТИТЕЛЬНЫХ СООБЩЕСТВ ЮЖНОГО ПРИАРАЛЬЯ

Аннотация

Статья посвящена экологии и синтаксономии галофитных растительных сообществ Южного Приаралья. Синтаксономия галофитных растительных сообществ представляет собой сложную и многогранную систему классификации, изучающую растения, приспособленные к жизни в условиях высокого соленого содержания в почвах или воде.

Ключевые слова: синтаксономия, галофит, система, вид, сообщество, почва, воды.

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ECOLOGY AND SYNTAXONOMY OF HALOPHYTIC PLANT COMMUNITIES OF THE SOUTHERN ARAL SEA REGION

Abstract

The article is devoted to the ecology and syntaxonomy of halophytic plant communities of the Southern Aral Sea region. Syntaxonomy of halophytic plant communities is a complex and multifaceted classification system that studies plants adapted to life in conditions of high salinity in soils or water.

Key words: syntaxonomy, halophyte, system, species, community, soil, water.

Экология и синтаксономия галофитных растительных сообществ Южного Приаралья представляют собой актуальные и важные аспекты исследований в области ботаники и экологии.

Синтаксономия галофитных растительных сообществ представляет собой сложную и многогранную систему классификации, изучающую растения, приспособленные к жизни в условиях высокого соленого

содержания в почвах или воде. Эти растения, называемые галофитами, обладают уникальными адаптациями, позволяющими им процветать в экстремальных условиях, где большинство других растений не выжили бы.

Основой синтаксономии галофитных растительных сообществ является определение и описание различных когребентов и ассоциаций, которые эти растения формируют в природных средах. Эти сообщества играют важную роль в экосистемах, помогая стабилизировать почву, предотвращать эрозию и поддерживать биологическое разнообразие, предоставляя среду обитания для множества организмов.

Примером галофитного растительного сообщества может служить солончаковые луга, характеризующиеся преобладанием таких видов, как солянка (*Salsola*), кермек (*Limonium*), и солодка (*Glycyrrhiza*). Эти виды формируют плотные заросли на прибрежных участках или в местах с высокой концентрацией соли в почвах, часто сопровождаемые специфическими микроорганизмами, играющими важную роль в круговороте веществ.

Синтаксономическое исследование галофитных сообществ способствует пониманию процессов адаптации растений к экстремальным условиям, а также значимости этих сообществ для ухода за землей и сохранения биоразнообразия. Эти знания могут иметь практическое применение в сельском хозяйстве, восстановлении нарушенных земель и управлении природными ресурсами, особенно в регионах с высокой соленостью почв.

Галофиты — это растения, способные выживать и развиваться в условиях повышенной солености почвы, что делает их ключевыми компонентами аридных и засушливых регионов, таких как Южное Приаралье. Исследования в этом направлении затрагивают понимание механизмов адаптации растений к экстремальным условиям, что, в свою очередь, имеет значительное значение для устойчивого развития аграрных систем, рекультивации земель и сохранения биологического разнообразия. Растительные сообщества галофитов Южного Приаралья характеризуются уникальными видовыми составами, структурой и функциями, которые формируются под воздействием специфических эдафических и климатических условий региона. Эти сообщества включают как доминантные, так и сопутствующие виды, каждый из которых играет определённую роль в общей экосистеме.

В Южном Приаралье обнаружено несколько синтаксонов, которые характеризуются определёнными флористическими и эколого-ценотическими признаками. Например, ассоциации видов рода *Suaeda* и *Salsola* занимают важное место в этих экосистемах, демонстрируя широкий спектр адаптивных стратегий и экологическую пластичность.

Детальное исследование флористического состава галофитных сообществ показывает высокую степень эндемизма и редкости многих видов, что подчеркивает важность этих экосистем для сохранения

регионального и глобального биологического разнообразия. В условиях изменяющегося климата и антропогенного воздействия, такие исследования приобретают особую значимость, так как они помогают разрабатывать стратегии адаптации и восстановления деградированных земель.

Климатические условия Южного Приаралья, характеризующиеся высокой температурой и низким уровнем осадков, оказывают значительное влияние на формирование и динамику галофитных сообществ. Эти условия требуют высоких адаптивных возможностей от входящих в состав сообществ растений. Механизмы осмотической регуляции, накопление солей в клетках, морфологические и физиологические адаптации — все эти процессы обеспечивают выживание и продуктивность галофитов в экстремальных условиях.

Таким образом, синтаксономия галофитных растительных сообществ не только обогащает научные знания о растительном мире, но и позволяет находить практические решения для устойчивого управления природными экосистемами, что особенно важно в условиях глобальных изменений климата и растущего антропогенного давления на природные ресурсы. Разработка мер по сохранению галофитных растительных сообществ Южного Приаралья имеют огромное значение для поддержания экосистемного равновесия и устойчивого использования природных ресурсов. Это требует комплексного подхода, объединяющего научные знания, экологическое планирование и практическое управление.

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ОБОСНОВАНИЕ ТЕХНОЛОГИИ КАЧЕСТВЕННОГО ЦЕМЕНТИРОВАНИЯ СКВАЖИН

Аннотация

Типы процессов цементирования в скважинах, манжеты, хвостохранилища, одно- и двухэтапные процессы цементирования, установка и последовательность оборудования при одноэтапной цементации, концепции и качество двухступенчатой цементации. Приведена информация о методике. Приведены факторы, влияющие на качество цементной смеси, расчет работ по цементированию, плотность тампонной смеси, механические свойства, контакт цементной смеси со стеной и добавленные в нее химические реагенты, информация по специальному метчику цемента.

Ключевые слова: цементирование, цементная смесь, стенка скважины, суспензия, обсадные трубы, обратное цементирование, вязкость, промывочные жидкости, пластовое давление.

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SUBSTANTIATION OF THE TECHNOLOGY OF HIGH- QUALITY WELL CEMENTING

ABSTRACT

Types of cementing processes in wells, collars, tailings, one- and two-stage cementing processes, installation and sequence of equipment in one-

stage cementation, concepts and quality of two-stage cementation. Information about the technique is provided. The factors influencing the quality of the cement mixture, the calculation of cementing work, the density of the plug mixture, mechanical properties, the contact of the cement mixture with the wall and chemical reagents added to it, information on a special cement tap are given.

Keywords: cementation, cement mixture, well wall, suspension, casing pipes, reverse cementation, viscosity, flushing fluids, reservoir pressure.

Цементацией скважин заданной глубины называют процесс заполнения суспензией вязкого материала, конденсирующегося в покое и переходящего в твердое состояние, превращающееся в непроницаемую породу.

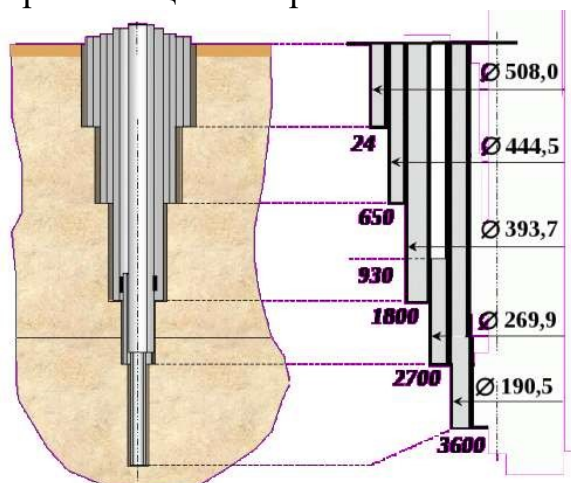
Цементирование (тампонирование) – одна из важнейших операций, от успеха которой зависит дальнейшая нормальная работа скважины.

Процесс цементирования осуществляется в несколько этапов и включает 5 основных операций.

К ним относятся приготовление тампонажного раствора, закачка тампонажного раствора в скважину, закачка смеси в пространство на обсадную колонну, остановка интервала затвердевания тампонажной смеси и проверка качества затвердевания готового цемента.

Сам процесс также может осуществляться различными способами, отличающимися особенностями подачи цементной смеси в пространство обсадной колонны и используемой техникой.

При цементировании скважин в основном используются методы прямого и обратного цементирования, на практике в основном широко используется метод обратного цементирования.



1 – рисунок. Строительство цементированного скважины.

Тампонажная смесь помещается в саму колонну крепления, затем она проходит по длине к башмаку, из которого выливается в пространство за трубами, а затем заполняет его снизу.

Этот процесс называется прямым цементированием, что аналогично процессу промывки скважины для добычи нефти.

Обратное цементирование - цементная смесь отделяется от моющих и нагнетательных растворов буферной жидкостью. Тампонажная смесь подается непосредственно в пространство за системой крепления, после чего она заполняет пространство сверху. Выбор оборудования осуществляется в соответствии с определенным методом и технологией.

В нефтедобывающей отрасли процесс цементирования применяется для реализации следующих задач:

- а) блокирует переход насыщенных растворов и газов из одного пласта в другой при бурении скважин;
- б) принимает достаточную осевую нагрузку, и к колодцу крепится прочный мост;
- в) образует разделенный экран то есть не допускается накопление воды в продуктивных слоях;
- г) удерживает обсадные трубы на установленном месте;
- д) обеспечивает защиту обсадных труб от негативного воздействия растворов и газов в слое, ускоряющем процесс коррозии;
- е) устраняет поглощение буровых растворов;

Для закрепления неустойчивых горных пород в стенке ствола скважины используются несколько методов цементирования:

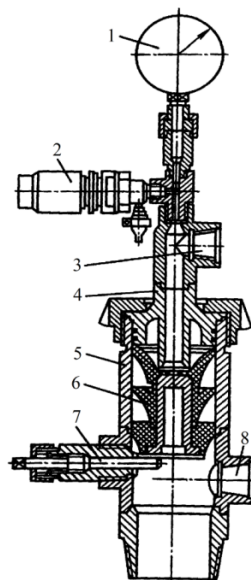
1. Манжетное цементирование.
2. Хвостовиковое цементирование.
3. Одноступенчатое цементирование.
4. Двухступенчатое цементирование.

Цементировочная головка – армирующий состав технологически оснащен для опускания арматурных труб в скважину и обеспечения качественного выполнения процессов цементирования. Виды и размеры оборудования зависят от условий применения и диаметра укрепляющего соединения, а их типовые размеры составляют более 250 видов.

Арматурные соединения снабжены цементировочной головкой и служат для образования герметичного соединения тампонажных агрегатов с системой нагнетания. В зависимости от конструктивного строения цементировочной головки применяют разные способы цементирования. На различных предприятиях нефтегазовой отрасли цементировочная головка специально проектируется и подготавливается для качественного выполнения рабочего процесса.

В настоящее время серийно выпускаются головки типа ГСК, ГУС по ТУ-39-1021-85, а головки ГСУ по ТУ39-921-84. Укрепительные соединения оснащаются цементировочной головкой и служат для создания

герметичного соединения ее цементируемых агрегатов с системой привода под давлением.



1.1 - рис. Головки цементирования типа ГСУ.

1-манометр; 2-предохранительный клапан; 3, 8-верхний и Нижний входы; 4-крышка; 5-корпус; 6-верхняя пробка; 7-стопорный винт.

В типе ГСУ цементирующая головка (Рис.1.1) приводится в сочетании с затвором высокого давления. При установке головки над скважином заранее устанавливается верхняя разделительная пробка. Таким образом, вам не нужно будет снимать подголовник после того, как вы закончите перекачивать тампонажный раствор. В этом случае при использовании головок типа ГСК производится вскрытие. В последнем будут установлены головки диаметром 377 и 426 мм при давлении 6,4 и 5,0 МПа.

К свойствам цементной смеси относятся: плотность, нагнетаемость, загустение и время крепления, устойчивость, подача воды через непроницаемую преграду под влиянием повышения давления, скорость, добровольное образование каналов в загустевшей смеси, предрасположенность к разделению, прочность и проницаемость цементного камня, при затвердевании стойкость к изменениям объема и образованию трещин

Перегоняемость - цементная смесь, загнанная в нужный интервал скважины, до определенного времени легко перемещается. Движение оценивают с помощью прибора, созданного АзНИИ, в прибор помещают раствор объемом 120 см^3 , диаметр верхней части которого составляет 36 мм, а нижней-64 мм (рис.11.2). Состояние подвижности смесей определяют с помощью стального инструмента в форме усеченного конуса. Его объем 120 см^3 , верхнее основание 136 мм, нижнее основание

164 мм. Этот инструмент устанавливается на зеркало, ось шкалы совпадает с осью инструмента на одну ось.

Контроль скорости схватывания цементной смеси – В период схватывания цементной смеси начинает возрастать прочность и появляются трудности при забивке. Когда время цементирование глубоких скважин ограничивается 1,5-2 часами, для этого требуются насосные агрегаты очень большой мощности. Хотя подвижность цементной смеси является удовлетворительной даже при очень высоких давлениях и температурах, времени для завершения процесса цементирование может не хватить. За это время цементная смесь переходит в стадию твердения. При низкой положительной температуре процесс загустения цементной смеси идет медленно, но это влияет на качество слоя. Подвижность, загустевание и время выдержки цементной смеси регулируют изменением содержания воды.

Увеличение количества воды усиливает процесс гидратации цемента, увеличивает пористость и проницаемость, вызывает заполнение каналов цементной смеси водой. Поэтому процесс регулирования текучести, выдержки и сроков загустевания цементного камня осуществляется путем обработки смеси специальным химическим веществом. Для повышения текучести цементной смеси (при повышенных температурах) применяют гипан, лигносульфонат, кальций, винную кислоту и ее соли, масло, солянку и другие виды ПАВ.

Загущение и время выдержки смеси регулируют добавлением высокомолекулярных веществ (различных марок КМЦ, сернокислого газа, гипана, полифенола, оксила), виноградной косточки, борной кислоты и ее соли и других ПАВ. Для ускорения времени выдержки при низкой температуре добавляют хлорид натрия, кальций, алюминий, карбонат натрия, калий, глинистые смеси.

Цементные смеси низкой плотности применяют для цементирование на большие расстояния, трещиноватых и слабых пород, а также во избежание усадки. Одним из основных способов снижения плотности является уменьшение относительно нее воды. В цементную смесь добавляется порошок. Это бентонит, кремниевый бентонит с очень мелкой дисперсностью мела, добавляемый в портландцемент при температуре 60⁰-70⁰ С, ускоряет процесс загустения. Цементную смесь плотностью 2000 кг/м³ применяют для цементирование горизонтов с повышенным аномальным давлением в пласте ($K_a=1,7-1,8$). Такие смеси изготавливаются из утяжеленного цемента, обработанного поверхностно-активными веществами. Это уменьшает количество воды и повышает нагнетаемость. Для цементирование трещин добавляют волокнистые и гранулированные твердые материалы.

Комплекс факторов, влияющих на качество цементирование – качество сплошного разделения проницаемых пластов, вскрываемых в

скважине, характеризуется невозможностью просачивания пластовых вод в разнесенные проницаемые горизонты, существующие в промежутке между цементируемым кольцом.

Качество цементирования зависит от качества выбранного цементного раствора, от степени правильности выбора свойств цементного камня и его состава.

Еще одним этапом цементирования скважины является полное вымывание цементного раствора из скважины. Для этого в процессе цементирования образуется турбулентный режим в кольцевой переборке, хорошая централизация обсадных колонны скважины, подвижность в процессе цементирования, образование потока раствора в расширенных переборках колонны скважины, предотвращение смещения цементного раствора с буровым раствором, в стенках скважин имеются проницаемые пластовые переборки устранение фильтрационных оболочек и закрытия моющего раствора на поверхности обсадных труб. Начальная скорость сжатия между кольцами будет выше критической. При расположении обсадных колонны внутри скважины со стрелой скважины раствор полностью вытесняется.

Если ось соединения труб совмещена со скважиной, то площадь поперечного сечения выходящей из скважины тампонадной смеси перемещается через кольцевой зазор с большой поверхностью, то есть в сторону малого гидравлического сопротивление. В результате по окончании цементирования определенный объем промывочного раствора не выдавливается в суженные интервалы скважины. Скважина оборудуется централизаторами для обеспечения централизации обсадных колонн перед спуском колонн.

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КВАЛИМЕТРИК-МОНИТОРИНГ ВА ТАЪЛИМ-ТАРБИЯ ЖАРАЁНИНИ МОДЕРНИЗАЦИЯ ҚИЛИШ

Аннотация: Жамиятимиз ҳар бир аъзоси ҳаётига ва иқтисодиётга компьютер техникаси ва ахборот технологияларини оммавий жорий этилиши учун шароит яратишни, жаҳон бозорида мамлакатимиз иқтисодиётининг рақобатбардошлигини таъминлайди. Шунинг асосида таълим-тарбия тизимини назорат қилиш ва баҳолашда квалитетрик-мониторингнинг ўрни, ҳамда унинг таълим-тарбия жараёнидаги миқдорий ўзгаришларни динамикаси, фаолият натижаларини яхлитлаш, тарбияловчи ҳамда тарбияланувчиларни сифат ва самарадорлигини таҳлил қилиш каби таълим-тарбия соҳасининг умумий фаолиятини таъхис қилишдаги аҳамияти очиб берилган ҳамда ундан олинган натижалар келтирилиб берилган.

Калим сўзлар: Квалитетрик мониторинг, сифат, тарбия, маънавият, ахлоқ даражаси.

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QUALIMETRIC MONITORING AND MODERNIZATION OF THE EDUCATION AND UPBRINGING PROCESS

Annotation: Ensuring the mass implementation of computer technology and information technologies in the lives of every member of our society and in the economy will create conditions for increasing the competitiveness of our country's economy in the global market. On this basis, the role of quality monitoring in the control and assessment of the education and upbringing system is examined, as well as the dynamics of quantitative changes in the educational and upbringing processes, the generalization of activity results, and the analysis of the quality and effectiveness of both educators and students. The importance of diagnosing the overall activities in the field of education and upbringing is also emphasized, along with the presentation of the results obtained.

Keywords: Qualimetric monitoring, quality, education, spirituality, moral level.

КИРИШ.Таълим сифатини назорат қилиш қуйидаги вазифаларни бажаради: назорат қилиш (талабаларнинг билим, кўникма ва ақлий ривожланишини, шунингдек, ўқув ишларининг тўғри бажарилишини текшириш); ўқитиш (билим ва кўникмаларни тизимлаштириш); диагностика (хатолар сони ва табиати, талабаларнинг билим ва кўникмаларидаги заиф томонлари ҳақида маълумот); пронозлаш (ўқув жараёни ҳақида илғор ахборотларни шакллантириш (экстраполяция)); ривожлантириш (талабаларнинг билиш фаоллигини рағбатлантириш ва ижодий қобилиятларини ривожлантириш); йўналтириш (мақсадга эришиш даражаси); тарбиялаш (таълим олишга масъуллиқ билан муносабат, интизом, аниқлик, ҳалоллик).

Ҳозирги кунда фанлар сифатини миқдорий тавсифлашга қаратилган бутун илмий йўналиш фаол ривожланмоқда, яъни квалиметрия. Квалиметрия (лотинча “қуаилс (квали)” – “сифат” ва қадимги юнонча “метрио (метро)” – “ўлчаш”) – ҳар қандай объектлар (предметлар, ҳодисалар, жараёнлар) сифатини мажмуавий ва баъзи ҳолларда тизимли миқдорий баҳолашни ривожлантириш методологияси ва муаммоларини ўрганадиган илмий билимлар соҳасидир.

Мамлакатимизда педагогик мониторинг тажрибасини ошиб бориши таълим соҳасидаги муаммоларни аниқлаш, таълим-тарбия жараёнидаги миқдорий ўсиш динамикаси, фаолият натижаларини яхлитлаш, таълим берувчи ва таълим олувчилар самарадорлигини таҳлил қилиш каби умумий фаолиятни назорат қилиш ҳамда бошқарувнинг инновацион тизимини йўлга қўйиш тенденцияларига имконият очиб бормоқда. Ўзбекистон Республикасининг “Таълим тўғрисида”ги қонунда “Таълим тизимида мониторинг-таълимнинг ҳолатини, таълим натижаларининг ўзгариш суръатларини, таълим фаолиятини амалга ошириш учун яратилган шарт-шароитларни ўрганиш ва кузатишни, шунингдек таълим олувчиларнинг контингенти тўғрисидаги маълумотларни ва бошқарув қарорлари қабул қилинишини таҳлил этишни ўз ичига олади” дея белгилаб қўйилган. 2017-2021 йилларда беш муҳим йўналиш бўйича ривожлантиришга мўлжалланган Ҳаракатлар стратегиясининг 4.4-бандида ҳам «... таълим ва ўқитиш сифатини баҳолашнинг халқаро стандартларини жорий этиш асосида таълим муассасалари фаолиятининг сифати ҳамда самарадорлигини ошириш; илмий-тадқиқот ва инновация фаолиятини рағбатлантириш, илмий ва инновация ютуқларини амалиётга жорий этишнинг самарали механизмларини яратиш...» вазифалари таълим ва фан соҳаларини ривожлантиришнинг устувор вазифалари сифатида белгиланган эди. Мавжуд вазифаларни ижросини таъминлаш ва таҳлил қилишда мониторинг ва квалиметриқ ёндашувларсиз натижадорликни аниқ ва ҳаққонийлик асносида баҳолаб бўлмайди. Лекин, бугунги кунда таълим-тарбия соҳасида баҳолаш ва ўлчаш муаммолари кам ривожланган бўлиб, бу эса

педагогика соҳасида квалитетрик мониторинг бўйича тадқиқот ишларини кучайтириш заруратини кўрсатади.

Шу мақсадда, маънавий-ахлоқий тарбия ишларини сифат жиҳатдан баҳолашни “квалитетрик-мониторинг” ёндашуви асосида ташкил этиш масаласи—доимий анъанавий баҳолаш тури сифатида қўллаб келинган сифатий баҳолашни миқдор кўрсаткичлари билан белгилаш ва тарбиявий ишлар сифатини миқдорий ўлчаш методикасини ишлаб чиқиш орқали баҳолашни тақозо этади.

ТАДҚИҚОТ МАТЕРИАЛЛАРИ ВА МЕТОДОЛОГИЯСИ.

Квалитетрик мониторинг олиб боришдан мақсад таълим-тарбия сифатини баҳолаш тизимига хизмат қилиш ва тарбия сифатига таъсир этувчи омилларни аниқ-лашдан иборат. Педагогик ҳамкорликни квалитетриялашдан асосий мақсад ҳам - тарбиявий мақсадларга эришганлик даражаларини аниқлаш ва таҳлилий баҳолашдан иборатдир. Яъни, маънавий тарбиянинг узлуксизлик ва узвийлик тамойилларига мослигини квалитетрик методлар орқали аниқлаш асосида мақсад ва фаолият бирлигини назорат қилиш имконияти очилади. Бу экспериментал тадқиқот сифатида бир қанча шунга доир илмий изланишларни ўрганиш ва таҳлил қилиш вазифасини юклайди. Шу мақсадда биз ҳам республикамызда ва хорижда мазкур масалага доир бажарилган ишларни ўрганиб, таҳлил қилиб чиқдик.

Жаонда мазкур масалага доир бажарилган ишларни ўрганган машхур квалитетлог В.С. Черепанов квалитетрик мониторинг концепциясини қуйидаги асосий қоидаларини белгилаб берган:

1. Ҳар қандай таълим ташкилотида таълим сифатининг квалитетрик мониторинги кенг қамровли бўлиши ҳамда умумий ва касбий таълим сифатининг барча тизимни ташкил этувчи омилларини ҳисобга олиши керак.

Яъни:

- таълимнинг мақсади ва мазмуни;
- талаба ва таълим муассасасининг моделлари,
- таълим технологиялари;
- педагогик назорат ва психодиагностика;
- педагогик прогнозлаш ва таълим стандартлари ва бошқалар.

2. Интеграциялашган квалитетрик тизимни яратишнинг ягона мақсади-таълим сифатини назорат қилишдир. Бу эса нафақат ўқувчи шахсини шакллантириш (ўқувчи, талаба, бакалавр, магистр) балки, уларни маънавий жиҳатдан барқарор, юксак даражада умумий маданиятга эга, махсус (касбий) билим, кўник-маларга, тадқиқотчилик қобилиятга шунингдек, инсонпарвар шахс мақомига эга профессионал мутахассисни тайёрлаш назоратини йўлга қўйишдир.

3. Таълим олувчиларнинг малакаси билимлар мажмуи билан белгиланади, шунинг учун ҳам уларнинг умумий таълим соҳасидаги

кўникмалари, шунингдек, аниқ келажакдаги касбий соҳа бўйича махсус билим, кўникма ва малакаларни ўзлаштириш даражасини баҳолаб бориш зарур.

4.Таълим сифатини комплекс квалиметрик мониторинг тизими кўп мезонли баҳолаш ва диагностикалаш имкониятлари билан озиқланади.

Педагогиканинг қайси соҳаси бўлишидан қатъий назар яъни, у тарбиявий фаолиятини, тадқиқотчиликка йўналтирилган фаолият бўладими, педагогларнинг касбий компетентлиги билан боғлиқ ҳолат бўладими, агарда улар қандай самара бераётганлиги доимий мониторинг қилинмаса ва оқилона баҳолаб борилмаса бунда тизим ўз мақсадига эриша олмайди. Шунинг учун ҳам, мониторинг ва квалиметрия тушунчалари моҳиятига кўра бир хил мақсад асосида бирлашади ва бир-бирини тўлдиради.

ТАДҚИҚОТ НАТИЖАЛАРИ. Ҳозирги пайтда таълим жараёнини мониторинг қилишнинг электрон тизими ривожланиб бормоқда. Педагогик квалиметриялаш ишларини мониторинг қилиш орқали яхлитлаш энг мақбул йўл бўлиб, айниқса тарбиявий ишлар ва ўқувчиларнинг тарбияланганлик даражасини квалиметриялаш кўп мезонли ўлчов бўлганлиги сабабли таълим муассасаси назоратида ҳамкорлик асосида олиб борилаётган тарбиявий ишлар механизмларининг социомониторинги, ўқувчиларнинг тарбияланганлик даражаларини синфлар кесимида ички мониторингини юритиш ва баҳолаш орқали квалиметрик мониторингни ташкил этиш мумкин.

Куйида квалиметрик мониторинг олиб боришнинг айрим муаммоларини ажратиб кўрсатиш керак:

- тарбия ишларининг мавжуд шакл ва услублари самарадорлигини аниқлаш;
- тарбиялашнинг замонавий технологик воситалари ва унинг талабларига мослигини баҳолаш;
- психологик, социологик, педагогик йўналишдаги мониторинг хизматларини жорий қилиш зарур;
- фаолият самарадорлигини ҳар томонлама баҳолаш ва таълим тизимларини ўз-ўзини ривожлантириш мониторингини ишлаб чиқиш.

Мамлакатимизда квалиметрик мониторинг бўйича тадқиқот ишлари олиб бориш ҳозирча олимларимиз назаридан биров четда. Таълим жараёнини квалиметрик мониторингини олиб бориш амалиёти бўйича деярли технологик имкониятларига эга бўлдиқ ва ўзимизда синаб кўрдик. Демак, биз бугунги кунда мазкур платформа орқали ота-она сифатида фарзандимизни ўзлаштириш даражасини синф ўқувчиларига нисбатан ўсиш динамикасини ҳамда ҳар бир фан кесимида эгаллаб турган рейтингини кузатиш ва шу орқали

фарзандимизнинг мактабдаги салоҳияти ҳақида маълумотга эга бўлиш имкониятига эга бўлди

ХУЛОСА. Ҳар қандай фаолиятнинг сифатли ташкил этилиши унинг натижадорлигини мақсадга мувофиқлик параметрларига мос келиши билан аҳамиятлидир. Демак, ҳамкорлик кучларини бирлаштириш асносидаги мақсад + фаолият мазмуни (моҳияти) + натижа ва самарадорлик бу – умумий маънавий тарбияга сафарбар этилган кучларнинг узилмас занжиридир. Тарбия жараёнига квалитетрик ёндашув бу – маънавий-ахлоқий ишлар сифати ва самарадорлигини аниқлаш ҳамда такомиллаштиришнинг муҳим босқичидир. Таълимда квалитетрик мониторинг – таълим ташкилоти тузилмасининг мақсад ва фаолияти бирлиги, таълим берувчиларнинг малака талаби даражаларига мослиги, таълим олувчининг билимдонлик (тарбияланганлик) даражаларини аниқлаш ва самарадорлигини оширишдан иборатдир. Янада умумлаштирадиган бўлсак, педагогикада мониторинг ўтказиш ва квалитетризациядан мақсад бу - педагогик жараёнларнинг натижадорлик кўрсаткичларини белгилаш, таҳлил қилиш, унинг миқдорий ўзгаришлари, ўсиш суръати ҳақида якуний маълумотга эга бўлиш шунингдек, самарадорликни сифатий ҳамда миқдорий баҳолашни йўлга қўйишдир.

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БИОЛОГИЧЕСКИЕ ОСОБЕННОСТИ АМАРАНТА МЕТЕЛЬЧАТОГО (AMARANTHUS CRUENTUS L.)

Аннотация

В статье рассматриваются особенности биологии амаранта метельчатого (Amaranthus cruentus L.). Амарант метельчатый выделяется своей исключительной приспособляемостью к разнообразным климатическим и почвенным условиям. Это растение способно успешно расти и развиваться как в засушливых, так и в влажных областях, проявляя значительную гибкость к различным факторам окружающей среды. Благодаря глубокой корневой системе, амарант метельчатый демонстрирует высокую устойчивость к засухе, эффективно добывая воду из нижних слоев грунта.

Ключевые слова: засуха, грунт, флора, эффект, сфера, листья, корневая система.

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BIOLOGICAL FEATURES OF AMARANTHUS CRUENTUS L.

Abstract

The article discusses the biological features of Amaranthus paniculata (Amaranthus cruentus L.). Amaranthus paniculata stands out for its exceptional adaptability to a variety of climatic and soil conditions. This plant is able to successfully grow and develop in both dry and humid areas, showing significant flexibility to various environmental factors. Due to its deep root system, Amaranthus paniculata demonstrates high resistance to drought, effectively extracting water from the lower layers of the soil.

Key words: drought, soil, flora, effect, sphere, leaves, root system.

Амарант метельчатый (*Amaranthus paniculatus*) — это однолетнее растение семейства амарантовых, которое по праву может считаться одним

из самых интересных и уникальных представителей флоры. Его биологические особенности заслуживают отдельного внимания, поскольку они определяют выдающиеся адаптационные способности и широкую сферу применения.

Одной из ключевых особенностей амаранта метельчатого является его необычайная устойчивость к различным климатическим и почвенным условиям. Это растение способно расти и развиваться как в сухих, так и в влажных регионах, демонстрируя высокую пластичность по отношению к различным факторам окружающей среды. Амарант метельчатый отличается высокой засухоустойчивостью благодаря глубокой корневой системе, которая позволяет ему эффективно добывать воду из нижних слоев почвы.

Листья амаранта метельчатого обладают выраженными анатомическими адаптациями, которые способствуют снижению транспирации. Они покрыты густым восковым налетом, а устьица могут закрываться в периоды интенсивной жары и засухи, что минимизирует потерю влаги. Эти особенности делают амарант метельчатый одним из лидеров среди культур, способных выживать в экстремальных условиях.

Еще одной важной особенностью является его высокая продуктивность. Это растение способно формировать значительное количество биомассы, что делает его перспективным объектом для использования в кормопроизводстве и биотехнологии. Амарант метельчатый активно изучается как потенциальный источник сырья для производства биотоплива, поскольку его биомасса отличается высоким содержанием целлюлозы и прочих ценных компонентов.

Семена амаранта метельчатого обладают высоким содержанием белка, липидов и углеводов, что делает их ценным пищевым продуктом. Они богаты лизином, метионином и другими незаменимыми аминокислотами, что делает амарант перспективным объектом для использования в диетологии и функциональном питании. Более того, амарант считается безглютеновой культурой, что делает его подходящим для людей с целиакией и другими непереносимостями.

Цветение амаранта метельчатого также представляет значительный интерес. Растение образует крупные, яркие соцветия-метелки, которые могут достигать в длину до 60 см и более. Эти соцветия являются не только декоративными, но и функциональными, так как привлекают массу опылителей, что способствует повышению продуктивности.

Амарант метельчатый (*Amaranthus paniculatus*) является ценным лекарственным растением, которое активно используется в народной медицине различных культур. Его применение обусловлено богатым химическим составом и множеством полезных свойств, которые оказывают положительное воздействие на организм человека.

Одним из главных достоинств амаранта метельчатого является высокое содержание белка и аминокислот, таких как лизин, метионин и триптофан. Благодаря этому растение способствует укреплению иммунной системы, улучшению обмена веществ и общему оздоровлению организма. Листья и семена амаранта также содержат витамины А, В, С и Е, которые являются мощными антиоксидантами, защищающими клетки от разрушения свободными радикалами.

В народной медицине амарант метельчатый часто используется для лечения различных заболеваний. Его противовоспалительные и регенеративные свойства делают растение эффективным средством при лечении кожных заболеваний, таких как экзема и псориаз. Настои и отвары из амаранта применяют для заживления ран и ожогов, а масло из семян обладает ранозаживляющими и антибактериальными свойствами.

Кроме того, амарант метельчатый благоприятно влияет на сердечно-сосудистую систему. Полифенолы и флавоноиды, содержащиеся в этом растении, помогают снижать уровень холестерина в крови, укрепляют стенки сосудов и предотвращают развитие атеросклероза. Регулярное употребление продуктов на основе амаранта способствует нормализации артериального давления и улучшению состояния сердечной мышцы.

Также амарант метельчатый известен своими иммуномодулирующими свойствами. Он способствует повышению устойчивости организма к инфекциям и вирусам, что особенно важно в период сезонных заболеваний. А содержащиеся в растении сапонины оказывают отхаркивающее действие и помогают при лечении болезней дыхательных путей.

Использование амаранта в качестве лекарственного средства отличается своей доступностью и простотой. Растение можно употреблять в пищу в виде каши, добавлять в салаты и супы, а также готовить настои и отвары для наружного применения. Однако перед началом использования амаранта метельчатого для лечения различных заболеваний рекомендуется проконсультироваться с врачом, чтобы избежать возможных противопоказаний и побочных эффектов.

Амарант также широко используется в кулинарии. Его зерна – источник ценных белков, жиров, углеводов, минералов и витаминов. Благодаря высокому содержанию лизина и метионина, амарантовые зерна превосходят по своим питательным свойствам многие злаковые культуры. Из зерен амаранта готовят муку, которую добавляют в выпечку, каши, супы и другие блюда. Листья амаранта также являются съедобными и используются в салатах, супах и других кулинарных изделиях.

В заключение, амарант метельчатый является исключительно перспективной культурой с множеством уникальных биологических особенностей. Его устойчивость к экстремальным условиям, высокая продуктивность, ценное химическое содержание и декоративность делают

его объектом интенсивных исследований и эффективного использования в различных отраслях сельского и хозяйственного производства. Растение амарант является не только привлекательным декоративным элементом садового участка, но и ценным продуктом питания и лекарственным средством, активно используемым в различных сферах жизни.

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РАЗВИТИЕ КАДРОВОГО ПОТЕНЦИАЛА И ПРОФЕССИОНАЛЬНАЯ ПОДГОТОВКА ПРЕПОДАВАТЕЛЕЙ

Аннотация: как профессиональное развитие и поддержка преподавателей влияют на качество образовательного процесса.

Ключевые слова: профессиональная компетентность, управление процессом, самообразование, принципом системности, личностно-ориентированный подход.

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DEVELOPMENT OF HUMAN RESOURCES AND PROFESSIONAL TRAINING OF TEACHERS

Abstract: how professional development and support of teachers affect the quality of the educational process.

Keywords: professional competence, process management, self-education, the principle of consistency, personality-oriented approach.

Управление процессом профессионального развития педагога может быть эффективным только тогда, когда все его элементы упорядочены и соответствуют современным требованиям.

Исходя из современных требований, предъявляемых к педагогу, школа определяет основные пути развития его профессиональной компетентности: система повышения квалификации; аттестация

педагогических работников на соответствие занимаемой должности и квалификационную категорию; самообразование педагогов; активное участие в работе методических объединений, педсоветов, семинаров, конференций, мастер-классов; владение современными образовательными технологиями, методическими приемами, педагогическими средствами и их постоянное совершенствование; овладение информационно-коммуникационными технологиями; участие в различных конкурсах, исследовательских работах, экспертных комиссиях.

Под профессиональной компетентностью понимается совокупность профессиональных и личностных качеств, необходимых для успешной педагогической деятельности. Поэтому понятие профессиональной компетентности педагога выражает единство его теоретической и практической готовности к осуществлению педагогической деятельности и характеризует его профессионализм.

Профессионально компетентным можно назвать учителя, который на достаточно высоком уровне осуществляет педагогическую деятельность, педагогическое общение, достигает стабильно высоких результатов в обучении и воспитании учащихся, работает творчески, восприимчив к педагогическим инновациям, способный адаптироваться в меняющейся педагогической среде.

От профессионального уровня педагога напрямую зависит социально-экономическое и духовное развитие общества. Изменения, происходящие в современной системе образования, делают необходимостью повышение квалификации и профессионализма учителя, т. е. его профессиональной компетентности.

Рассмотрим основные подходы, которые способствуют эффективному управлению профессиональным развитием педагогов.

Подход 1 – системный подход профессионального развития педагога является основой реализации программы ФГОС. Он предполагает акцент на процесс принятия управленческих решений на каждом уровне организации. Все системы, отделы и звенья в образовательной организации связаны между собой коммуникационными каналами, которые позволяют избежать единоначалия в принятии управленческих решений и делать их более эффективными. Основная задача руководителя организации в рамках данного подхода – обеспечить открытость, адаптивность и профессионального развития педагога в соответствии с принципом системности.

Подход 2 – процессный (функциональный) Управление профессиональным развитием педагогов – это система взаимосвязанных между собой функций, а каждая функция представляет собой серию из определенных действий. Их последовательное выполнение обеспечивает успех деятельности образовательной организации. То есть управление представляет собой иерархическую структуру процессов, обеспечивающих

функционирование профессионального развития педагога. Функции управления, в рамках этой концепции, следующие: – планирование; – организация; – мотивация; – делегирование; – координация; – коммуникация; – принятие управленческих решений; – формирование кадров; – оценка и контроль. Функциональный подход определяет основы управления профессиональным развитием педагогов и способы их реализации. Подход 3 – интегративный. Его основу составляют знания, умения, навыки и компетенции руководителя, а также кадрового состава. Открытый стиль педагогической коммуникации, партнерское общение между членами коллектива, родителями и обучающимися создает положительный микроклимат в образовательном учреждении и позволяет совершенствовать процесс профессионального развития педагога. Для эффективной организации коммуникаций в работе с учащимися и родителями, педагогические работники и руководители образовательного учреждения проходят курсы повышения квалификации и переподготовки.

Подход 4 – личностно-ориентированный. Руководитель использует его как в организации образовательного процесса, так и в системе управления профессиональным развитием педагогов. 1) Личностно-ориентированный подход в системе организации профессионального развития педагога. До введения ФГОС образование в большей степени было ориентировано на формирование у детей определенных знаний, умений и навыков. Новые стандарты направлены на преодоление учебно-дисциплинарного подхода.

Выделяют три стиля руководства – либеральный (отсутствие инициативы со стороны руководителя), авторитарный (руководитель – абсолютный лидер) и демократический (управление при взаимодействии с коллегами). Руководитель образовательной организации должен уметь использовать каждый из них в соответствии с ситуацией.

Подход 5 – деятельностный. Рассматривает управление профессиональным развитием педагога как вид деятельности, включающий следующие компоненты: – объект и субъект; – мотивация; – целеполагание; – действия, способы и средства достижения цели; – контроль и оценка результатов.

Подход 6 – ситуационный подход. Основным принципом управления профессиональным развитием педагога, согласно данному подходу, является ситуация. То есть управленческие решения руководителя должны опираться на конкретные обстоятельства. Ситуационный подход в управлении профессиональным развитием педагога предполагает: 1) анализ образовательной деятельности и определение дефектов ее реализации; 2) оценка результатов деятельности; 3) прогнозирование профессионального развития педагога; 4) прогнозирование осуществляется на основании конкретных ситуаций с помощью методов педагогической диагностики. 20

Подход 7 – управление по результатам. Управление по результатам предполагает систему, при которой для каждого сотрудника или группы определены показатели результативности. Руководитель и подчиненные ставят цели и задачи деятельности и согласовывают их. Это помогает более осмысленно и целенаправленно подходить сотруднику к собственной деятельности, находить наиболее эффективные способы реализации поставленных целей. Фазы профессионального развития по Климову Е. А. [2]

Фаза оптации результатом, которой является профессиональное самоопределение, выраженное в плане ближайших шагов на профессиональном пути (выбор формы профессионального обучения, учебного заведения). Фаза адепта характеризуется освоением профессии, получением образования в той или иной области. В связи с вступлением системы образования в Болонское соглашение вводится 2-х ступенчатая подготовка к профессии: бакалавриат и магистратура. На данной фазе происходят очень существенные изменения самосознания, направленности личности. Фаза адаптации (привыкания) связана с первыми шагами в профессиональной деятельности. Она связана с освоением профессиональных норм и требований, технологии деятельности.

Для педагога эта фаза связана с работой в постоянно возникающих нестандартных ситуациях, что требует творческого подхода к делу. Фаза интернала характеризуется тем, что педагог успешно справляется с профессиональными обязанностями, т. е. им освоены умения, входящие в состав функциональной грамотности. Фаза мастера предполагает, что наряду с характеристиками предыдущей фазы, педагог выделяется или какими-то специальными качествами, умениями или универсализмом, широкой ориентировкой в профессиональной области, наличием собственного стиля профессиональной деятельности, стабильные положительные результаты.

Фаза авторитета связана с тем, что педагог становится известным в своем профессиональном кадров образовательных организаций района и создание условий для формирования индивидуального образовательного маршрута педагогических работников в межкурсовый период. Организация своевременного прохождения аттестации педагогических работников образовательных организаций и оказание методического сопровождения педагогическим и руководящим работникам в межаттестационный период.

Организация и проведение профессиональных конкурсов. Формирование банка передового педагогического и управленческого опыта работы, его диссеминация в образовательной системе района. Изучение опыта работы образовательных организаций и педагогических кадров, поддержка и развитие творческого потенциала педагогов района, создание условий для его распространения. Поддержка и сопровождение

молодых специалистов через реализацию районного социального проекта «Школа молодого учителя».

Организация и проведение олимпиад и творческих конкурсов для учащихся, осуществление мониторинга уровня предметных достижений учащихся, создание банка данных об учащихся с академической одаренностью и творческим потенциалом. Методическое сопровождение деятельности районных методических объединений. Формирование эффективной системы непрерывного профессионального развития педагогов предполагает переход на персонифицированную модель повышения квалификации, модернизацию работы методических служб, интеграцию систем повышения квалификации и аттестации педагогов. Оптимальное применение проанализированных подходов и управленческих решений приведет к успешности профессионального развития педагога.

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РАЗВИТИЕ ОЗДОРОВИТЕЛЬНОГО ТУРИЗМА В УЗБЕКИСТАНЕ

***Аннотация:** Оздоровительный туризм занимает важное место в туристической индустрии Узбекистана. В статье рассматривается текущее состояние оздоровительного туризма в Узбекистане, тенденции его развития, природные ресурсы и влияние государственной политики. Анализируются существующие проблемы и пути их решения, а также перспективы развития.*

***Ключевые слова:** оздоровительный туризм, Узбекистан, экотуризм, здравоохранение, инвестиции.*

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DEVELOPMENT OF HEALTH TOURISM IN UZBEKISTAN

***Abstract:** Wellness tourism occupies an important place in the tourism industry of Uzbekistan. The article examines the current state of health tourism in Uzbekistan, trends in its development, natural resources and the impact of government policy. The existing problems and ways to solve them, as well as development prospects, are analyzed.*

***Keywords:** health tourism, Uzbekistan, ecotourism, healthcare, investments.*

Введение

Оздоровительный туризм становится всё более популярным на глобальном уровне, играя значительную роль как в экономическом, так и в культурном развитии, а также в улучшении здоровья и благосостояния людей. Природные ресурсы, традиционные методы лечения и культурное наследие Узбекистана представляют собой большой потенциал для оздоровительного туризма. Минеральные воды, горячие источники, климатические условия и древние медицинские традиции делают страну привлекательным направлением для оздоровительного туризма.

Развитие туристической инфраструктуры, увеличение числа учреждений, предоставляющих оздоровительные услуги, и внедрение услуг, соответствующих международным стандартам, создают возможность для Узбекистана занять важное место в этой сфере. Более того, оздоровительный туризм, помимо экономической выгоды, может

способствовать увеличению туристического потенциала, развитию культурного обмена и созданию новых рабочих мест для местного населения.

В статье анализируются имеющиеся возможности, проблемы и решения для развития оздоровительного туризма в Узбекистане. Рассматривается, как можно реализовать инновационные подходы в этой сфере, используя ресурсы и опыт страны. Также изучаются пути и стратегии развития оздоровительного туризма в Узбекистане с помощью международного опыта и успешных моделей.

С помощью стратегического планирования и эффективного управления оздоровительным туризмом, Узбекистан может занять прочное место на глобальной туристической карте. Определив имеющиеся возможности, проблемы и перспективные направления развития, можно сделать страну ещё более успешной в этой сфере.

Основная часть

Исторические данные об оздоровительном туризме в Узбекистане связаны с развитием природных и культурных ресурсов страны, её древними традициями и опытом. Ниже представлена краткая информация о историческом развитии оздоровительного туризма в Узбекистане.

Древние медицинские традиции

Территория Узбекистана с древних времён была известна своими медицинскими и оздоровительными практиками. В письменных источниках, относящихся к III-II векам до нашей эры, упоминается о существовании древних медицинских традиций и методов лечения в этом регионе. В средние века города, такие как Самарканд и Бухара, расположенные на Великом Шёлковом пути, были известны своими медицинскими знаниями и лечебными ресурсами.

Оздоровление в исламский период

В исламский период медицинские центры на территории Узбекистана развивались. Известные медики, такие как Абу Али ибн Сина (Авиценна), в своём труде "Канон врачебной науки" давали рекомендации по сохранению здоровья и лечению. В медицинских центрах исламского периода использовались минеральные воды, источники и другие природные лечебные ресурсы.

Развитие в советский период

С 20-х годов XX века в советское время в Узбекистане были проведены масштабные мероприятия в области оздоровительного туризма. В этот период климатические условия и минеральные воды Центральной Азии были научно исследованы и развиты для оздоровления. В Бухаре и Джизакской области активно использовались термальные источники и минеральные воды для туристических целей. Строительство санаториев и домов отдыха способствовало развитию оздоровительного туризма.

Период независимости

После обретения независимости Узбекистаном начался процесс восстановления и развития оздоровительного туризма. С 1990-х годов в стране начала создаваться необходимая инфраструктура для оздоровительного и курортного туризма, начали строиться новые санатории и курорты. В этот период были реализованы новые проекты по использованию природных ресурсов Узбекистана, включая минеральные воды и термальные источники. Развивается международное сотрудничество и привлечение инвестиций.

Современное развитие

В настоящее время в Узбекистане реализуются несколько инициатив по развитию оздоровительного туризма. Разрабатываются национальные стратегии оздоровительного туризма, открываются новые современные санатории и курорты, а туристическая инфраструктура адаптируется к международным стандартам. Интеграция новых технологий и услуг укрепляет позицию Узбекистана на рынке оздоровительного туризма.

Исторический опыт Узбекистана в области оздоровительного туризма, древние медицинские традиции и развитие в советский период показывают страну как перспективное и привлекательное место для оздоровительного туризма. Этот исторический контекст имеет важное значение для определения основных возможностей и стратегий развития оздоровительного туризма.

Природные ресурсы и климатические факторы

Природные ресурсы и климат Узбекистана играют важную роль в развитии оздоровительного туризма. Географическое расположение страны, её природные богатства и климатические условия создают большие возможности для оздоровительного туризма. Ниже рассматриваются природные ресурсы и климатические факторы Узбекистана.

Природные ресурсы

Минеральные воды

В Узбекистане широко распространены различные виды минеральных вод, которые используются для лечения и оздоровления:

- **Бухарская область:** В этой области имеется много минеральных источников. Минеральные источники "Сувок" и термальные источники "Гидждувон" к югу от Бухары используются для оздоровления и лечения на протяжении длительного времени.
- **Джизакская область:** Источники "Самарканд" и "Янгиобод" в Джизаке известны своими минеральными водами и терапевтическими свойствами.

Термальные источники

В Узбекистане имеется множество термальных источников, богатых теплом и минеральными веществами, которые помогают лечению различных заболеваний:

- **Чуст:** Термальные источники в Ферганской области известны своими лечебными свойствами.
- **Бухара и Джизак:** Термальные источники в этих областях обладают очень благоприятными климатическими условиями, и для них предоставляются терапевтические и оздоровительные услуги.

Древние солёные озёра

В Узбекистане также есть древние солёные озёра с терапевтическими свойствами. Например:

- **Аральское море:** В средние века многие путешественники использовали солёные воды этого моря. Несмотря на то что часть Аральского моря сейчас уменьшилась, в его окрестностях можно предоставлять оздоровительные услуги.

Климатические факторы

Влажный климат (полупустынный климат)

Во многих частях Узбекистана преобладает влажный и полупустынный климат. Этот тип климата предоставляет солнечные дни и мягкие зимы, что создаёт идеальные условия:

- **Летом:** Сухое и жаркое лето создаёт идеальные условия для некоторых видов оздоровительных услуг.
- **Зимой:** Мягкие зимы предоставляют удобное время для использования термальных источников.

Лечебные климатические условия

В некоторых регионах Узбекистана существуют лечебные климатические условия:

- **Ташкент:** Климат Ташкента относительно мягкий и стабильный, предоставляя удобные условия для оздоровительного туризма.
- **Ферганская долина:** Тёплый и сухой климат этого региона в сочетании с термальными источниками и минеральными водами создаёт благоприятные условия для оздоровления и отдыха.

Природные ресурсы Узбекистана, такие как минеральные воды, термальные источники и древние солёные озёра, обладают большим потенциалом для развития оздоровительного туризма. Кроме того, влажный и полупустынный климат, лечебные климатические условия способствуют созданию удобных условий для оздоровительного туризма. Эти природные и климатические факторы составляют основополагающие элементы оздоровительного туризма и создают перспективные возможности для развития этой сферы в Узбекистане.

Проблемы развития оздоровительного туризма

Анализ проблем, связанных с развитием оздоровительного туризма в Узбекистане, выявляет существующие ограничения и необходимость разработки мер по их устранению. Ниже представлены основные проблемы:

Проблемы оздоровительного туризма в Узбекистане

Проблемы оздоровительного туризма в Узбекистане

Отсутствие инфраструктуры

- **Нехватка новых объектов:** Инфраструктура оздоровительного туризма в Узбекистане еще не полностью развита. Количество новых санаториев, курортов, wellness-центров и мест для отдыха ограничено, и существующие объекты часто не соответствуют международным стандартам.

- **Транспорт и связь:** Транспортная система и инфраструктура, обеспечивающие доступ к туристическим объектам, недостаточно развиты. Многие курорты и санатории имеют проблемы с транспортным сообщением, что снижает удобство для туристов.

Несоответствие международным стандартам

- **Качество услуг:** Многие оздоровительные центры и санатории не соответствуют международным стандартам. Также недостаточно внимания уделяется стандартам обслуживания и санитарии.

- **Недостаток квалифицированных специалистов:** В сфере оздоровления не хватает квалифицированных специалистов, включая медицинских работников и wellness-экспертов. Это негативно влияет на качество услуг.

Организационные и правовые проблемы

- **Регуляторное законодательство:** Отсутствие четкого и унифицированного законодательства и регламентов в области оздоровительного туризма. Это может приводить к проблемам и несоответствиям в развитии отрасли.

- **Сертификация и лицензирование:** Процесс сертификации и лицензирования оздоровительных услуг обладает неопределенностью и сложностью. Проблемы с сертификацией и правовыми аспектами усложняют обеспечение качества услуг.

Проблемы маркетинга и продвижения

- **Неизвестность оздоровительного туризма в Узбекистане:** Узбекистан не имеет международного признания в области оздоровительного туризма. Недостаток развитого маркетинга и брендинга затрудняет привлечение международных туристов.

- **Информация и реклама:** Недостаток полной и точной информации о оздоровительных услугах и слабые маркетинговые стратегии создают недостаточный интерес у туристов.

Экологические проблемы

- **Чрезмерное использование природных ресурсов:** Некоторые оздоровительные центры и санатории могут чрезмерно использовать природные ресурсы, что может вызвать экологические проблемы. Например, чрезмерное извлечение и использование минеральных вод может нарушать природную среду.

- **Защита окружающей среды:** Отсутствие мер по охране окружающей среды и обеспечению восстановления природных ресурсов. Неправильное управление природными ресурсами может привести к экологическим проблемам.

Социальные проблемы

- **Отношения между местным населением и туризмом:** Отношения между местным населением и туризмом часто бывают неурегулированными, что может приводить к конфликтам между жителями и туристами. Необходимы программы, помогающие местному населению правильно использовать туризм и получать от него выгоду.

- **Рабочие места и образование:** Недостаток профессионального образования и квалифицированных рабочих мест в сфере туризма, а также нехватка специалистов, необходимых для работы в оздоровительном туризме.

Развитие оздоровительного туризма в Узбекистане сталкивается с множеством проблем. Нехватка инфраструктуры, несоответствие международным стандартам, организационные и правовые проблемы, слабые маркетинговые и рекламные усилия, экологические и социальные проблемы могут тормозить устойчивое развитие этой отрасли. Решение этих проблем может позволить Узбекистану стать успешным в области оздоровительного туризма на глобальном уровне.

Перспективы развития оздоровительного туризма в Узбекистане **Использование природных ресурсов**

- **Минеральные воды:** Минеральные ресурсы Узбекистана обладают большим потенциалом в оздоровительном туризме. Минеральные источники, особенно в Бухарской и Джизакской областях, предлагают международно признанные возможности для оздоровления и лечения. Эффективное использование этих ресурсов и внедрение новых технологий позволит предложить передовые услуги в туризме.

- **Термальные источники:** Термальные источники широко используются в оздоровительном туризме. Модернизация термальных источников и строительство новых курортов, а также обновление существующих, может повысить качество предоставляемых услуг.

Оптимизация климатических условий

- **Летние и зимние курорты:** Климат Узбекистана, с жарким летом и мягкой зимой, позволяет осуществлять туристическую

деятельность круглый год. Развитие зимних и летних курортов и их предложение в качестве туристических продуктов может снизить сезонность туризма.

- **Адаптация к климатическим условиям:** Оздоровительные и wellness-центры должны строиться и управляться с учетом местных климатических условий.

Развитие инфраструктуры

- **Транспорт и связь:** Улучшение инфраструктуры оздоровительного туризма, развитие транспортной системы и облегчение доступа к объектам помогут ускорить развитие отрасли. Необходимы новые дороги, транспортные услуги и автобусные линии.

- **Современные санатории и wellness-центры:** Строительство современных оздоровительных центров, предоставление высококачественных услуг и создание санаториев и курортов, соответствующих международным стандартам.

Международное сотрудничество и инвестиции

- **Международное сотрудничество:** Изучение международного опыта в области оздоровительного туризма и сотрудничество, внедрение инновационных решений, а также привлечение инвестиций из Европы, Азии и других регионов способствуют развитию отрасли.

- **Внешние инвестиции:** Привлечение международных инвестиций в сферу оздоровительного туризма, а также импорт новых технологий и методов могут значительно способствовать развитию отрасли.

Маркетинг и продвижение

- **Брендинг и маркетинговые стратегии:** Представление Узбекистана как глобального бренда в области оздоровительного туризма, разработка новых маркетинговых стратегий и изучение международного туристического рынка повысит конкурентоспособность страны.

- **Онлайн и оффлайн реклама:** Проведение широких рекламных кампаний, онлайн-маркетинг и активное присутствие в социальных сетях помогут привлечь туристов и предоставить им необходимую информацию.

Местное население и социальные проекты

- **Вовлечение местного сообщества:** Активное вовлечение местного населения в развитие оздоровительного туризма, создание новых рабочих мест и вклад в местную экономику помогут обеспечить социальную стабильность.

- **Образование и повышение квалификации:** Разработка программ профессионального образования и повышения квалификации в сфере туризма, подготовка новых кадров и обучение квалифицированных специалистов для улучшения качества услуг.

Заключение

Перспективы развития оздоровительного туризма в Узбекистане очень широки. Эффективное использование природных ресурсов, оптимизация климатических условий, развитие инфраструктуры, международное сотрудничество и инвестиции, маркетинг и продвижение, а также внимание к местному населению и социальным проектам помогут Узбекистану занять значимое место в сфере оздоровительного туризма. Разработка и внедрение необходимых стратегий позволят стране добиться глобального успеха в данной области.

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ИСПОЛЬЗОВАНИЕ ИНФОРМАЦИИ ИЗ РЕЕСТРА ЛИЦЕНЗИЙ В КАЧЕСТВЕ МЕХАНИЗМА ДЛЯ ОЦЕНКИ СООТВЕТСТВИЯ УЧАСТНИКА В ПРОЦЕССЕ ГОСУДАРСТВЕННЫХ ЗАКУПОК ТРЕБОВАНИЯМ ЗАКОНОДАТЕЛЬСТВА

Аннотация

Цель. *Определить теоретические основы проведения закупок для нужд органов государственной власти и местного самоуправления в рамках, которых предусмотрены единые требования по соблюдению установленных в соответствии с законодательством Российской Федерации требований к участникам закупок при поставке товаров, выполнению работ и оказанию услуг, которые являются объектом закупки.*

Процедура и методы. *Проведенное исследование базируется на информации из открытых источников информационной системы в сфере закупок, публикуемой в целях отбора поставщика (подрядчика, исполнителя), предполагающих установление требования к участникам, претендующим на заключение контрактов о наличии у данных лиц специальных разрешений (лицензий) на выполнение работ и услуг [1]. Комплектование и наполняемость данными статьи проводилось с использованием методов эмпирического познания – наблюдение, сравнение, описание; методы теоретического познания – аксиоматический метод, метод экспертных оценок.*

Результаты. *Результатом применения на практике положений закона, обеспечивающих соответствие участника закупки требованиям, пункта 1 части 1 статьи 31 Закона о контрактной системе, служит получение подрядчика (исполнителя) способного обеспечить качественное исполнение государственных и муниципальных контрактов, а также исключение возможности участия в закупках лиц, не обладающих специальной правомочностью для исполнения контрактов. Однако, единого подхода к установлению таких требований и документов, и вызывает трудности в организации процедур государственных закупок для заказчиков и дополнительные расходы у участников. Применение цифровых реестровых платформ требует создания единообразных норм для указания необходимой информации в заявке на участие в закупке.*

Теоретическая и/или практическая значимость. Проведенное исследование вносит вклад в понимание применения на практике положений законодательства о контрактной системе с учетом позиции регулятора и контролирующих органов в сфере закупок при применении на практике положений, обеспечивающих реализацию мероприятий, направленных на качественный отбор претендентов на исполнение контрактов, обладающих необходимыми разрешениями (лицензиями).

Ключевые слова: обязательные требования, лицензирование, торги для государственных и муниципальных нужд, условия, предъявляемые к участникам.

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USING INFORMATION FROM THE LICENSE REGISTER AS A MECHANISM FOR ASSESSING THE COMPLIANCE OF A PARTICIPANT IN THE PUBLIC PROCUREMENT PROCESS WITH LEGAL REQUIREMENTS

Annotation

Goal. To determine the theoretical foundations of procurement for the needs of public authorities and local governments within the framework of which there are general requirements for compliance with the requirements established in accordance with the legislation of the Russian Federation for procurement participants in the supply of goods, performance of works and provision of services procurement target.

Procedure and methods. The research conducted is based on information from open sources of the information system in the field of procurement, contract application Published for the purpose of selecting suppliers (contractors, contractors), which includes the establishment of requirements for participants on the availability of special permits (licenses) for the performance of works and services [1]. The article was formed and filled with data using methods of empirical cognition – observation, comparison, description; The methods of theoretical knowledge are the axiomatic method, the method of expert assessments.

Results. The result of the application in practice of the provisions of the law ensuring the compliance of the procurement participant with the requirements of paragraph 1 of part 1 of Article 31 of the Law on the contract system is to obtain a contractor(contrctor)who can ensure the high-quality execution of state and municipal contracts, as well as to exclude the possibility of participating in the procurement of persons who do not have special powers

to enforce the contract. However, a unified approach to establishing such requirements and documents confirming the participant's compliance has not been formed at the moment, which leads to difficulties in preparing procurement procedures for customers and additional costs on the part of participants. The transition to digital registry platforms requires the application of a uniform approach to establishing the required information to be included in the application for participation in the purchase.

Theoretical and/or practical significance. *The conducted research contributes to the meaning of the practical application of the provisions of the legislation on the contract system, taking into account the position of the regulator and regulatory authorities in the field of procurement, when applying in practice the provisions ensuring the implementation of measures aimed at the qualitative selection of applicants for the execution of contracts with the necessary permits (licenses).*

Keywords: *mandatory requirements, licensing, bidding for municipal and state needs, requirements for participants.*

Введение

Регламентирование процедур закупок, имеет ключевое значение при дальнейшем развитии обеспечения государственных и муниципальных нужд. Чтобы обеспечить прозрачность, конкурентную борьбу и эффективное использование бюджетных средств, Закон о контрактной системе предусматривает установление определенных требований для участников закупок.

Одной из ключевых целей закона 44-ФЗ является создание равных условий для всех участников государственных и муниципальных закупок. Законодательством о контрактной системе предусмотрены ряд требований, направленных на обеспечение результативности осуществляемых закупок и недопущению к участию лиц, не обладающих специальной правомочностью для осуществления работ или услуг²⁴.

Обеспечение качественного исполнения государственных и муниципальных контрактов, а также исключение возможности участия недобросовестных поставщиков и подрядчиков реализовано через установление требований к участникам рынка о их соответствии специальным нормам, регулирующим отдельными законодательными положениями.

Единые требования относятся к широким руководящим принципам или критериям, применимым к конкретной ситуации или виду деятельности. Эти требования часто устанавливают базовый стандарт, который необходимо соблюдать для достижения желаемого результата или достижения конкретных целей. Они могут охватывать различные аспекты,

²⁴ Федеральный закон от 05.04.2013 № 44-ФЗ «О контрактной системе в сфере закупок товаров, работ, услуг для обеспечения государственных и муниципальных нужд»

такие как качество, безопасность, соответствие нормативным актам и многое другое. Единые требования помогают обеспечить согласованность, надежность и соблюдение на создание равных условий с целью обеспечения конкуренции.

Эти требования имеют важное значение для защиты интересов государства и муниципалитетов, а также обеспечения выполнения контрактов на должном уровне. Предоставление достоверной информации о соответствии участников позволяет заказчикам принимать обоснованные решения при выборе поставщиков и подрядчиков, а также снижает риски и проблемы в процессе выполнения контрактных обязательств.

Передача данных из реестра лицензий является инструментом, который применяется для оценки соответствия участников закупки критериям, предусмотренным в законодательстве. Это представляет собой один из способов проверки соответствия участников закупки правовым и профессиональным требованиям, и обладает значительной значимостью в контексте обеспечения законности и прозрачности процедур закупок.

В дальнейшей статье мы более детально рассмотрим вопросы, связанные с процедурой предоставления документов и информации, а также последствиями нарушения требований закона.

Теоретический подход к установлению требований

Нормы сопутствующего закона и смежных законов, подзаконных актов, непосредственно связанных с осуществлением закупок, казалось бы, должны сформировать четкое понимание требований к участникам закупки. Но, тут заказчик сталкивается с проблемой установления таких требований в связи с отсутствием четкого понимания в каком виде требование должно отразиться в извещении о закупке в связи с разными подходами регулирующих и контролирующих органов.

Норма касательно требований к извещению о проведении закупки определена пунктом 12 части 1 статьи 42 Закона о контрактной системе. Среди прочих условий, предусмотрены обязательные требования к участникам, согласно нормам части 1 статьи 31 Закона 44-ФЗ, а также требования к представлению документов для подтверждения такого соответствия (к примеру, лицензия, СРО и пр.), в соответствии с законодательством Российской Федерации).

Подтверждающий соответствие участника требованиям, установленным заказчиком на основании положений подпункта «н» пункта 1 части 1 статьи 43 Закона о контрактной системе документ, должен быть приложен в составе заявки участника. Следовательно, в случае если законодательством определены условия осуществления деятельности на основании специальных разрешительных документов, регулирующих лицензирование отдельных видов деятельности, заказчик в извещении должен установить такое требование и указать на необходимость представления в составе заявки документа,

подтверждающего соответствие установленному извещением требованию. Казалось бы, что может быть проще, ведь все четко описано и определено. А вот тут и возникает основной вопрос, как и в каком виде устанавливается такое требование, и какой документ должен представить участник закупки в составе своей заявки и предусмотрено ли его предоставления по нормам закона?

Начать разбираться в этом вопросе следует с определения понятия и сущности лицензии, а также профильного закона, регулирующего лицензируемую деятельность. Лицензия - это официальное разрешение, предоставляемое правительственным или регулирующим органом, которое позволяет лицу или организации совершать определенные действия или заниматься определенной деятельностью. Лицензия устанавливает правовой статус и обязательства для держателя лицензии.

Лицензирование применяется в различных областях, таких как медицина, финансы, транспорт и технологии. Для получения лицензии обычно требуется выполнение определенных условий, таких как обучение, прохождение экзаменов, оплата сборов или предоставление определенных документов и сертификатов. Зачастую лицензия имеет определенный срок действия и может быть продлена или обновлена по истечении этого срока.

Лицензия является важным инструментом контроля и регулирования в различных сферах деятельности. Она обеспечивает защиту прав и интересов потребителей, поддерживает конкуренцию, обеспечивает соблюдение норм и стандартов, а также способствует качественному и безопасному предоставлению товаров и услуг. Держатели лицензий обычно подлежат надзору и проверкам со стороны соответствующих органов, чтобы гарантировать соблюдение правил и условий, связанных с лицензированной деятельностью.

Так, согласно положениям законодательства, регулирующего выдачу лицензий на конкретные сферы деятельности, организация или предприниматель обладает возможностью осуществлять свою деятельность, закрепленную лицензией²⁵. Кроме того, запись в реестре лицензий является подтверждением права осуществления определенного вида деятельности, согласно указанной информации в пункте 2 статьи 3 Закона о лицензировании. Получается, что согласно данной норме, если есть запись в реестре это и является надлежащим подтверждением соответствия участника установленным заказчиком требованиям.

Однако, в том же законе (ч. 5.1 ст.14 и ч. 8 ст. 21) предусмотрено право получения соискателем выписки из реестра лицензий. В свою очередь, при реализации этого права, лицензирующий орган должен направить ее лицу оформившему такой запрос. Готовая выписка выдается получателю, осуществившему запрос, как цифровой документ,

²⁵ Федеральный закон от 04.05.2011 N 99-ФЗ «О лицензировании отдельных видов деятельности»

удостоверенный электронной подписью. В частности, пункт 22 положений Постановления Правительства Российской Федерации от 29.12.2020 № 2343 «Об утверждении Правил формирования и ведения реестра лицензий и типовой формы выписки из реестра лицензий» и нормами части 8 указанного закона, в случае необходимости, заинтересованное лицо может запросить точные данные о соответствующей лицензии путем электронного документа, содержащего информацию о подписании такого документа усиленной квалифицированной электронной подписью, в виде выписки из реестра лицензий, или в виде копии акта лицензирующего органа о принятом решении, или в виде справки об отсутствии лицензии из запрашиваемой информации, в случае отсутствия в реестре лицензий информации о лицензиях или, в ситуации, если нельзя четко выявить лицензиата²⁶.

Важно отметить, что для потенциальных заявителей на лицензии, получение информации из этого реестра не считается платной услугой. Законодательством запрещено взимание платы за процесс лицензирования, включая предоставление документов из реестра лицензий²⁷. Таким образом, участник закупки при реализации своих интересов для участия в торгах, может оформить запрос на доступ к реестру лицензий, без необходимости дополнительных финансовых расходов.

Что делать заказчику при подготовке документов для объявления закупки и есть ли у участника закупки обязанность предоставить определенный документ в составе заявки о своем соответствии, с учетом положения о запрете, декларированном в шестой частью статьи 31 закона о гос. закупках, на нарушение законодательства о контрактной системе. Будет ли установление требования в извещении, о необходимости в составе заявки подтвердить свое соответствие, приложив требуемый документ, законным и должен ли участник приложить его в составе заявки или будет достаточно указать реестровый номер такой лицензии, а может заказчик должен самостоятельно проверить наличие у участника, подавшего заявку в реестре, если последний не указал и не приложил никакой информации, подтверждающей его соответствие?

С 1 января 2021 года в сфере лицензирования реализована реестровая модель, в соответствии с которой подтверждением наличия лицензии является не бумажный документ, а соответствующая обладающая юридической значимостью запись в реестре лицензий, ведение которого осуществляет лицензирующий орган.

Вопросы применения на практике положений законодательства о контрактной системе всегда зависели и будут зависеть от двух неизменных, это позиция регуляторов и позиция контрольных органов.

²⁶ Постановление Правительства Российской Федерации от 29.12.2020 № 2343 «Об утверждении Правил формирования и ведения реестра лицензий и типовой формы выписки из реестра лицензий»

²⁷ Федеральный закон от 04.05.2011 N 99-ФЗ «О лицензировании отдельных видов деятельности»

Законодательные и контролирующие органы могут иметь различные подходы в трактовании положений закона о контрактной системе. Некоторые органы могут строго придерживаться буквального толкования положений закона, фокусируясь на его букве и буквальном смысле. Другие могут применять более гибкий и широкий подход в трактовании положений закона. Они могут рассматривать не только букву закона, но и его намерение, цели и принципы.

К большому сожалению специалистов по закупкам, эти позиции, в ряде случаев, не совпадают. Существуют различные подходы к интерпретации неоднозначных или противоречивых положений закона. Данный факт приводит в замешательство не только заказчиков, но и участников закупок уже на протяжении многих лет.

Разные позиции регулятора и проверяющих четко прослеживаются по осуществляемым закупкам, на которые предусмотрено установление требований наличия соответствующих лицензии, сертификата или аналогичных документов. Заказчик должен определить такие условия, задекларированные законодательством Российской Федерации, для участников конкурентной процедуры, а также установить условия, касающиеся выполнения указанных норм в части предоставления соответствующих документов, подтверждающих соответствие участника закупки установленным требованиям.

Нормативные подходы к проверке правоспособности участников закупок

Если это предусмотрено законом, заниматься определенными видами деятельности разрешено только на основании специального разрешения (лицензии)²⁸.

В последнее время возникла проблема уточнения требований заказчиками. До недавнего времени, каждый заказчик знал какой документ требовать в извещении, а каждый участник знал и понимал, что, подтверждающий соответствие участника документ должен быть приложен в составе документов заявки, подаваемой для участия в процедуре закупки в виде его копии.

Но ситуация поменялась в связи с принятыми поправками в НПА о градостроительной сфере, о лицензировании отдельных видов деятельности. До принятия новых особенностей регулирования, документом, доказывающим соответствие участника, была копия лицензии, если объект закупки подлежал лицензированию или копия свидетельства для производства работ, воздействующих на безопасность объектов капитального строительства.

²⁸ Гражданский кодекс Российской Федерации (часть первая)» от 30.11.1994 № 51-ФЗ

Департамент, ответственный за реализацию бюджетной политики в области контрактной системы в структуре Министерства финансов Российской Федерации акцентировал свое внимание на том факте, что документы, подтверждающие соответствие участника закупки требованиям, установленным в соответствии с законодательством Российской Федерации, могут оказаться, законодательством не предусмотрены [6]. Таким образом, подтверждающие документы, указанные в уведомлении о закупке, представляются участниками-заявителями только при соблюдении установленных положений соответствующего законодательством Российской Федерации в отношении этих документов.

В свою очередь, реестр лицензий — это официальный перечень, в котором фиксируются данные о выданных лицензиях на определенные виды деятельности. Регистрация лицензий в реестре имеет несколько целей. Во-первых, это обеспечивает прозрачность и открытость информации о лицензированных деятельности, что помогает предотвратить нелегальное или нелицензируемое осуществление определенных видов деятельности. Во-вторых, реестр лицензий позволяет контролировать соблюдение условий, правил и требований, установленных для лицензированной деятельности. Это важно для обеспечения безопасности, качества услуг и защиты интересов граждан и бизнеса. Заинтересованные лица, такие как предприниматели, потребители или государственные органы, могут обратиться к реестру лицензий для получения информации о лицензированных субъектах, проверки действительности лицензии.

Ведомство отметило, что количество записей, которые зарегистрированы и находятся в доступе в реестре, служит достаточным подтверждением того факта, что участники процедур закупок надлежащим образом соблюдают требования, продиктованные действующими законодательством Российской Федерации. Тем не менее, в российском законодательстве отсутствует перечень документов, которые явно подтверждают соответствие участников закупок требованиям, установленным с учетом российского законодательства²⁹.

Эту же позицию разделяет и Минэкономразвития России, согласно которой подтверждением наличия лицензии не может служить, документ в форме выписки из соответствующего реестра лицензий, в соответствии со статьей 21 Закона № 99-ФЗ.

Сведения, полученные в форме выписки из соответствующего реестра лицензий носит исключительно информационный характер, и после того, как они будут составлены, в реестр лицензий могут внести изменения. Министерство пришло к выводу, что единственным

²⁹ Письмо Минфина России от 25.03.2022 № 24-06-06/24120

источником подтверждения наличия лицензий является реестр лицензий. Для проверки наличия лицензий рекомендуется проверить наличие соответствующих лицензий непосредственно в реестре лицензий на веб-сайте агентства по администрированию лицензий. С точки зрения подтверждения того, что участники соответствуют требованиям, установленным заказчиком, участникам достаточно предоставить данные лицензии (регистрационный номер и дату предоставления) для участия в закупке³⁰.

Но номер реестровой записи не является документом, а является информацией, если угодно сведениями о внесении данных в реестр.

Как реализуются требования о наличии лицензии в практике применения положений законодательства

Вопрос о требовании заказчика в части предоставления копии лицензии уже решен и подтвержден практикой антимонопольной службы, указанное положение Технического задания ограничивают участников закупки и не соответствуют нормам законодательства о контрактной системе, поскольку возможность предоставления участникам закупок информации из реестра не предусмотрена [15]. Требование о предоставлении копии действующей лицензии в составе заявки, с учетом внесенных изменений в Закон о лицензировании, является незаконным. Такое деяние заказчика положениям, оговоренным в статье 42, части 2, пункта 3 Закона о контрактной системе не соответствуют, произведены с признаками несоблюдения норм антимонопольного законодательства и ответственностью, предполагаемой положениями части 1.4 статьи 7.30 Кодекса об административных правонарушениях Российской Федерации³¹.

Вместе с тем, антимонопольная служба считает, что, формой подтверждения особой правомочности субъекта торгов в отношении объекта закупки представляет собой выписка из регистрации лицензии или копия акта лицензирующего органа, для работ, связанных с лицензионной деятельностью, к закупке должны быть предъявлены соответствующие требования, включая требования, установленные к 2 части заявки на получение лицензии на выполнение работ, подпадающей под действие лицензирования [21]. Так, по мнению службы, учитывая нормы части 8 статьи 21 Закона о лицензировании, информация о конкретной лицензии предоставляемая заявителю может иметь разные варианты. Может быть представлена в виде электронного документа, подписанного квалифицированной электронной подписью, в виде выписки из реестра лицензий, в виде копии решения, принятого лицензирующим органом. Если информация о лицензии отсутствует в реестре, невозможно

³⁰ Письмо Минэкономразвития от 25.08.2023 № ОГ-Д24-7294 "О рассмотрении обращений от 26 июля 2023 г. № 9431-ОГ, от 26 июля 2023 г. № 9461-ОГ"

³¹ Кодекс Российской Федерации об административных правонарушениях от 30.12.2001 № 195-ФЗ

однозначно идентифицировать владельца может выдаваться в форме, при которой сертификат выдается без необходимой информации. Следовательно, для подтверждения о наличии соответствующего разрешения юридическое лицо или индивидуальный предприниматель могут предоставить один из указанных документов, поименованных частью 8 статьи 21 упомянутого выше закона. [10].

Вывод сделанный исходя из позиции отраженной в письме, находит свое отражение и в решениях Федеральной антимонопольной службы Российской Федерации, по результатам рассмотрения которых, комиссия сделала вывод о нарушении требований законодательства, выразившегося в неустановлении возможности представления выписки из реестра лицензий либо копии акта лицензирующего органа о принятом решении³² и признании правомерным установление в извещении требования о подтверждении наличия лицензии путем направления выписки из реестра лицензий либо копии акта лицензирующего органа о принятом решении³³.

В одном из последних писем контролирующий орган указал, на тот факт, что для участия в торгах, в целях подтверждения лицензии, в составе заявки, участник закупки, прикладывает документ, включающий информацию о статусе лицензии, который содержится в таком документе. Следовательно, на основе данного документа можно сделать вывод о том, является ли лицензия действующей или нет, либо приостановлена частично.

Участник закупки признается соответствующим требованиям, установленным в части 1 статьи 31 Закона о контрактной системе, при наличии соответствующей записи в реестре лицензий. Нормы части 8 статьи 31 Закона о контрактной системе обязывают заказчика провести такую проверку³⁴. Однако, настоящее время, по сведениям ФАС России, служба, совместно с Минэкономразвития ведется комплексная работа по подготовке совместного письма по вопросу подтверждения наличия лицензии у участников закупки.

Заключение

В итоге следует сделать вывод, что ответственность за выбор и установление требований лежит на организации, осуществляющей закупку и на комиссии ответственной за проведение закупки. С учетом норм восьмой части статьи 31 законодательства о контрактной системе, непосредственно комиссия обязана установить соответствие либо не соответствие участников путем проверки соответствующей записи в реестре лицензий требованиям, установленным в законе. При принятии

³² Решение Федеральной антимонопольной службы Российской Федерации от 18.04.2023 по делу № 28/06/105-821/2023

³³ Решение Московского областного УФАС России по делу № 050/06/105-35744/2023

³⁴ Письмо ФАС России от 09.01.2024 № МПШ/211/24 «По вопросу подтверждения участниками закупок наличия лицензии в соответствии с Федеральным законом от 04.05.2011 № 99-ФЗ «О лицензировании отдельных видов деятельности»

решения о допуске или отклонении заявок комиссия должна руководствоваться извещением о конкурентной процедуре и законодательством. Также, следует не забывать, что отклонение по основаниям, не предусмотренным законом о контрактной системе, является недопустимым и может иметь административные последствия.

Что касается доступа к информации, содержащейся в реестрах лицензий, то он обеспечивается лицензирующим органом, который размещает такие сведения в информационно-телекоммуникационной сети «Интернет», в том числе в форме открытых данных. Реестровая модель становится удобным инструментом для лицензиатов и заинтересованных лиц, включая комиссию заказчика при определении победителя на торгах. Однако, в законодательном и контролирующем процессе необходимо наладить диалог и взаимодействие между законодателями и контролирующими органами. Законодатели могут учитывать предложения и рекомендации контролирующих органов при разработке изменений в существующие НПА, а контролирующие органы придерживаться согласованной позиции при рассмотрении жалоб на закупки, что упростит работу как заказчиков, так и участников процесса закупок.

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ОБУЧЕНИЕ КОММУНИКАТИВНЫМ СТРАТЕГИЯМ В ВИРТУАЛЬНОЙ СРЕДЕ

***Аннотация:** в статье мы рассматриваем проблему: как обучение эффективным коммуникативным стратегиям помогает студентам успешно взаимодействовать и обмениваться информацией в цифровой образовательной среде.*

***Ключевые слова:** цифровая среда, коммуникатор, коммуникат, виртуальное общение, виртуальная реальность (Virtual Reality, VR).*

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TEACHING COMMUNICATION STRATEGIES IN A VIRTUAL ENVIRONMENT

***Abstract:** in the article we consider the problem: how teaching effective communication strategies helps students successfully interact and exchange information in a digital educational environment.*

***Keywords:** digital environment, communicator, communicator, virtual communication, virtual reality (VR).*

Цифровая среда значительно расширяет возможности профессиональной коммуникации ученого. Адаптируясь к цифровым форматам, меняется и сама научная коммуникация: трансформируются традиционные коммуникативные практики в сфере науки, например, печатные научные издания заменяются цифровыми, что сопровождается изменением жанра научной статьи [1]. Научные мероприятия дополняются

ставшим уже привычным и даже обязательным онлайн-форматом. Кроме того, появляются новые коммуникативные практики и жанры, непосредственно «привязанные» к цифровой среде, так как параметры таких жанров обусловлены определенными техническими характеристиками среды, в рамках которой реализуется данный жанр [2]. К таким новым, «гибридным» (согласно определению в работе [3, р. 8]), жанрам можно отнести исследовательские блоги и комментарии к ним [4; 5, р. 111–112], видеолекции, страницы и посты в социальных сетях для исследователей.

Специфика социальной ситуации развития молодежной среды в условиях компьютеризации учебного процесса связана с выработкой новых стратегий организации учения на основе концепций личности и ее развития.

Анализ учебно-воспитательного процесса в учреждениях высшего и среднего профессионального образования показывает, что в образовательном процессе не уделяется достаточного внимания целенаправленному формированию коммуникативных умений в условиях сетевого взаимодействия. Таким образом, можно констатировать противоречие между востребованностью в жизни современной молодежи коммуникативных умений виртуального общения и отсутствием научного обоснования разработки психологических тренингов для осуществления процесса формирования этих умений.

Под виртуальным общением понимаем коммуникативное взаимодействие субъектов, осуществляемое посредством компьютера, при этом создается особая модель реальности, характеризующаяся эффектом присутствия в ней человека и позволяющая действовать с воображаемыми и реальными объектами. На основе изучения мотивационной направленности личности в условиях виртуального общения, стиля виртуального общения нами выделены три основных типа виртуального собеседника: деловой, социально-направленный и зависимый. Тип виртуального собеседника - это набор психологических качеств, черт характера, жизненных приоритетов, которые являются определяющими в цели виртуального общения.

Коммуникативные умения виртуального общения рассматриваем как комплекс коммуникативных действий, основанных на высокой теоретической и практической подготовленности личности к межличностному общению, позволяющего творчески использовать коммуникативные знания. Виртуальные коммуникативные умения характеризуются способностью коммуникатор оценивать собеседника с помощью составления психологического портрета, понимать и принимать цифровую информацию, выстраивать виртуальные отношения, вырабатывать индивидуальную тактику, стратегию поведения с виртуальным собеседником, реагировать на действия собеседника, умение

самопрезентации. Определены критерии экспертной оценки степени освоения коммуникативных умений виртуального общения: выражать свои мысли, понимать и принимать информацию, выстраивать виртуальные отношения, вырабатывать индивидуальную тактику, стратегию поведения.

Виртуальная реальность (Virtual Reality, VR) является одной из самых инновационных технологий, которая с каждым днем все больше проникает в различные сферы нашей жизни. Не остается в стороне и образование. VR-технологии могут эффективно применяться для развития коммуникативных навыков учащихся и создания новой реальности обучения.

Одной из главных проблем в обучении является недостаточное вовлечение учащихся в процесс обучения. Однако VR-технологии меняют эту ситуацию, предлагая новый, захватывающий способ обучения. Учащиеся могут погрузиться в виртуальную среду и стать участниками процесса обучения, а не просто слушателями.

Одним из преимуществ VR-технологий является возможность создания интерактивных сценариев для тренировки коммуникативных навыков. Студенты могут общаться с виртуальными персонажами и на практике применять свои знания. Таким образом, VR-технологии позволяют сделать обучение более привлекательным. Виртуальная реальность также предлагает уникальные возможности для развития социальных навыков. Студенты могут участвовать в симуляциях групповых дискуссий и сотрудничества, работать над проектами вместе с другими участниками. Такая практика помогает развить навыки командной работы, эмпатии и лидерства.

Значительное преимущество VR-технологий заключается в их доступности и гибкости. С использованием VR-шлемов и контроллеров можно создать обучающую среду прямо в классной комнате. Это позволяет учащимся иметь доступ к VR-обучению в любое удобное время и не зависеть от расписания специалистов или местоположения.

Наряду с пользой для развития коммуникативных навыков, VR-технологии также вносят вклад в развитие креативности и воображения. Учащиеся могут создавать свои собственные виртуальные миры, разрабатывать сценарии и экспериментировать с различными идеями. Это способствует развитию творческого мышления и предоставляет возможность для самовыражения.

Необходимо отметить, что на данный момент VR-обучение находится на начальном этапе развития и требует дальнейших исследований и улучшений. Однако уже сейчас очевидно, что VR-технологии могут значительно улучшить качество образования и развитие коммуникативных навыков учащихся.

Одной из наиболее актуальных проблем с использованием VR-технологий для развития коммуникативных навыков являются ограничения в техническом оснащении и доступности этих технологий.

1. Внедрение VR-систем требует специального оборудования, такого как шлемы виртуальной реальности, контроллеры и т.д. Это может быть дорогостоящим для многих учреждений образования и студентов. Более того, необходимость наличия специализированных компьютеров или графических карт также создает ограничения на использование технологий VR. Это ограничивает доступность VR-ресурсов и делает их менее доступными для широкого круга пользователей, особенно в образовательных учреждениях с ограниченным бюджетом.

2. Другой проблемой при использовании VR-технологий для развития коммуникативных навыков является качество и разнообразие контента. Хорошо спроектированный и качественный VR-контент может быть дорогостоящим для создания и обновления. Вместе с тем, в настоящее время доступный контент может быть ограничен в разнообразии и не соответствовать потребностям учащихся. Отсутствие разнообразного контента может ограничить возможности учащихся для практики различных коммуникативных навыков в виртуальной среде, отражающей реальные сценарии общения.

3. Третья проблема, связанная с использованием VR-технологий для развития коммуникативных навыков, заключается в опасениях, что эти технологии могут заместить реальное общение и взаимодействие между людьми. Виртуальная реальность предоставляет учащимся возможность практиковать коммуникативные навыки без необходимости общаться с реальными людьми.

В то же время, взаимодействие в реальном времени с другими людьми является важной частью развития коммуникативных навыков. Существует опасность, что VR-технологии могут создать зависимость от виртуального общения и снизить расположение к реальному общению в реальном мире.

В заключение можно сказать, что VR-технологии являются прорывом в области образования и могут стать ключевым инструментом для развития коммуникативных навыков учащихся. Они позволяют создать новую реальность обучения, где ученики активно участвуют в процессе обучения и развивают навыки, необходимые для успешной социализации в современном мире.

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РЕФОРМА ОБРАЗОВАНИЯ КАК ФАКТОР ВЫВОДА ГОСУДАРСТВА НА НОВЫЙ УРОВЕНЬ: РАЗВИТИЕ СОВРЕМЕННОГО ОБРАЗОВАТЕЛЬНОГО ПРОЦЕССА

***Аннотация.** По содержанию статьи подготовка и расстановка квалифицированных кадров в сфере производства, услуг и науки Узбекистана сегодня является решением проблемы поиска места молодежи в жизни. В настоящее время быстрый рост рыночной экономики, резкое увеличение численности населения и удовлетворение его потребностей требуют высококвалифицированных кадров. В статье акцентируется внимание на подготовке высококвалифицированных кадров посредством внедрения обучения в систему высшего образования.*

***Ключевые слова:** подготовка высококвалифицированных кадров, развитие производственного сектора, достижение высоких достижений в области науки.*

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EDUCATION REFORM AS A FACTOR IN BRINGING THE STATE TO A NEW LEVEL: DEVELOPMENT OF THE MODERN EDUCATIONAL PROCESS

***Annotation.** It is aimed at improving the social stratification of the population and their standard of living, reducing inequality. In addition, solving the issues of distribution and redistribution of the population's income will ensure a comfortable standard of living not only for the needy. In a certain sense, the provision of employment in the informal sector is aimed at protecting the social rights of employees. Establishing progressive tax rates on the incomes of individuals in order to reduce the level of income stratification of the population in our country. Entrepreneurship is aimed at creating new jobs and increasing income. According to the information given above, a new approach to higher education institutions, a modified introduction to the education system is becoming a demand of the times. The article focuses on the preparation of highly qualified personnel through the introduction of training into the higher education system.*

***Keywords:** training for highly qualified personnel, development of the production sector, achieving high achievements in the field of science.*

Введение. «Стратегия действий по пяти приоритетным направлениям развития Республики Узбекистан на 2017-2021 годы», Указ Президента Республики Узбекистан Ш. Мирзиёева от 8 октября 2019 года «Об утверждении концепции развития высшего Система образования Республики Узбекистан до 2030 года» № УП-5847 и от 5 июня 2018 года РП-2752 «О дополнительных мерах по повышению качества образования в высших учебных заведениях и обеспечению их активного участия в комплексных реформах, реализуемых в стране» и «Внедрение новых принципов управления в системе высшего и среднего специального образования» от 11 июля 2019 г. на мероприятиях № РП-4391, Постановление Кабинета Министров Республики Узбекистан от 3 декабря 2019 года №967 «О поэтапном переводе высших учебных заведений на самофинансирование», Постановление Кабинета Министров Республики Узбекистан от 133-у 25 февраля 2019 года служат основой для фундаментальной реформы современной системы высшего образования.

Президент Республики Узбекистан Шавкат Мирзиёев Миромонович 30 апреля на совещании, посвященном обсуждению вопросов качественного завершения текущего учебного года, организации выпускных и вступительных экзаменов, сообщил, что в зависимости от ситуации, необходимо пересмотреть учебный план и программы, повысить внимание к развитию практических навыков в высших учебных заведениях, а также скучным лекциям было подчеркнуто, что крайне важно развивать методику обучения и повышать уровень педагогов, отказавшись от неэффективных методов, таких как чтение и написание конспектов.

Тем не менее, сегодня в вопросе реформирования сферы высшего образования на основе необходимого опыта необходимо разработать четко целенаправленные и адресные предложения и провести их в качестве эксперимента в высших учебных заведениях, перейти от единообразия к всестороннему образованию, и выделить больше часов на профильные предметы в зависимости от направления образования. Велением времени остается необходимость сокращения предметов и адаптации выпускников вузов в обрабатывающей промышленности, сфере услуг и подотраслях наряду с теоретическими знаниями путем отказа от ненужных предметов в области науки.

С научной и практической точки зрения, на основе обсуждения достижений и недостатков системы высшего образования нашей республики, определения направлений ее реформирования, занимая место в первой 1000 мест в рейтинге международно признанных организаций, на основе международного опыта, внедрения передовых стандартов высшего образования и привлечения образовательных и научных технологий поднять содержание высшего образования на качественно новый уровень, систематически изучать и анализировать проблемы и недостатки во всех

сферах деятельности высших учебных заведений, а также осуществлять поворот. их в коммуникационные центры, которые обмениваются инновационными и технологическими идеями относительно их решения.

Внедрение системы оплаты труда, основанной на критериях эффективности высшего учебного заведения, поднятие качества образования на более высокий уровень, совершенствование организационных форм обучения, внедрение передового зарубежного опыта в национальную систему образования, налаживание эффективного общественного контроля. над образовательным процессом.

Обзор литературы. «Стратегия действий по пяти приоритетным направлениям развития Республики Узбекистан на 2017-2021 годы», Шавкат, Президент Республики Узбекистан. Указы Ш.Мирзиёева №УП-5847 от 8 октября 2019 года «Об утверждении Концепции развития системы высшего образования Республики Узбекистан до 2030 года» и от 5 июня 2018 года «Дополнение о повышении качества образования в высших учебных заведениях и Обеспечение их активного участия в комплексных реформах, реализуемых в стране» о мерах» № РП-2752 и решениях № РП-4391 от 11 июля 2019 года «О мерах по внедрению новых принципов управления в систему высшего и среднего специального образования». ", Постановление Кабинета Министров Республики Узбекистан от 3 декабря 2019 года №967 «О поэтапном переводе высших учебных заведений на самофинансирование», Постановление Кабинета Министров Республики Узбекистан №133-у от 25 февраля 2019 года о возможностях радикального реформирования сегодняшней системы высшего образования.

Трудовые отношения возникают с момента вовлечения работника в трудовой процесс и предполагают регулирование правовыми нормами в целях защиты его прав. Правовые нормы, регулирующие трудовые отношения, являются важным фактором, определяющим его статус в сфере труда, и в то же время выполняют важную социально-экономическую функцию на государственном уровне (Абдурахмонов К.К.). Освещены основные вопросы экономики «Экономики труда», изучены экономические закономерности деятельности человеческих ресурсов на макро- и микроуровне, а также рынок труда и экономические отношения, возникающие по привлечению и использованию рабочей силы на предприятиях.

Ресурсы – создают различные формы занятости. Описан порядок организации выплаты заработной платы и определения допустимой заработной платы, а также приведены требования к формированию фонда оплаты труда и обеспечению его эффективного использования. Основной проблемой экономики труда является ее система эффективности, в которой ведущая роль принадлежит производительности труда, которая способствует росту национального богатства, повышает уровень

благополучия всех членов общества, обеспечивает социальные стандарты и гарантии. (Алиев И.М.).

Основными характеристиками трудового процесса являются: полезность результатов, время и силы, затраченные работниками, их доходы и уровень удовлетворенности содержанием выполняемых функций (Генкин Б.М. 2007 -24с). Основы «Экономики управления персоналом» изучаются:

теоретические и методологические вопросы, в том числе организационно-экономический механизм формирования эффективной системы управления персоналом;

экономическая оценка трудового потенциала, интеллектуального и человеческого капитала;

разработка нормативной базы и применение методов анализа показателей труда, основанных на обоснованных организационно-экономических нормах; анализ, планирование и управление затратами на персонал, производительностью труда.

Необходимые инструкции предусмотрены для бакалавров, магистров, студентов дополнительного профессионального образования, в том числе студентов МВА, аспирантов, докторантов, специалистов по управлению персоналом организаций реального сектора экономики и органов государственной и муниципальной власти (Кибанов А.Я., Ивановская Л.В., Митрофанова Е.А., Есаулова И.А.). Курс университета «Управление электронным бизнесом и электронной коммерцией» посвящен одному из самых молодых и практикоориентированных направлений научных знаний.

Учебник раскрывает сущность цифровой экономики, дает теоретические основы и практические рекомендации по управлению электронным бизнесом и электронной коммерцией в условиях изменения бизнес-моделей под влиянием эволюции цифровых технологий. Люди обращают внимание на характер конкуренции, принимая во внимание инновационные технологии и их влияние на поведение потребителей, формирование новых рынков и изменения в природе компаний, глобальные тенденции цифровой экономики и особенности ведения электронного бизнеса.

Последнее поколение соответствует требованиям Федерального государственного образовательного стандарта высшего образования. Концепции предусмотрены для студентов, изучающих специальности «Экономика» и «Менеджмент» высших учебных заведений (Лапидус Л.В. Цифровая экономика).

Исследование экономической активности женщин на рынке труда находится в центре постоянного внимания экономистов, в том числе Л. С. Ряницыной, одного из ученых стран СНГ, по мнению «Женщина-мать, работница, служащая и домохозяйка, чтобы чтобы совместить вес этих

двух сторон, женщин следует всячески поддерживать, необходимо изучить этот процесс на уровне гендерного равенства, и необходимо облегчить не только занятость в общественном производстве, но и их озабоченность им. проблемы семьи, воспитание детей» (Мамадалиева Д.).

Он посвящен широкому кругу проблем, связанных с миграцией населения в глобализирующемся мире. Всесторонне рассмотрены теоретические аспекты изменения влияния миграции на различные сферы общественной жизни, включая демографические структуры, население, этнические процессы, рынок труда, территориальное развитие, социальную политику. Особое внимание уделено проблемам трудовой миграции. Освещены вопросы прогнозирования миграционных процессов, разработки основных принципов и направлений миграционной политики, социальной интеграции мигрантов в принимающее общество. (Миграционное население: теория, политика: Учебное пособие Воробьева О.Д., Топилин А.В.).

В соответствии с государственным образовательным стандартом последнего поколения всесторонне излагаются теоретические основы экономики труда, анализируются основные категории и термины, характеризующие деятельность рынка труда в условиях рыночной экономики. Использование этого учебника облегчит подготовку к экзамену по курсу и гарантирует получение высокого балла на экзамене. Имеется обширный иллюстративный материал (графики, диаграммы, таблицы).

Рекомендуется студентам, аспирантам, преподавателям вузов и экономических факультетов, экономистам, занимающимся различными аспектами моделирования поведения на рынке труда, специалистам в области социально-трудовых отношений, а также всем, кто интересуется проблемами эффективного использования трудовой потенциал общества (Михалкина Е.В., Белокрылова О.С., Фурса Е.В.).

Все чаще она включает детальную качественную и количественную оценку теоретических и практических характеристик личности: знаний, квалификации, навыков, накопленного производственного опыта, способностей, активности, ответственности и т. д. Их практическое значение возрастает. Появляются мысли и мнения о таких гуманитарных качествах, как честность, коллективизм и количественные качества, совесть, милосердие, толерантность и др. (Ю.Г. Одегов, Г.Г. Руденко.).

Методология исследования. При написании данной статьи использовался опросный метод в области статистики: анализировались методы наблюдения, классификации и группировки, структурного анализа, кадровой политики, высших учебных заведений.

Анализ и результаты. В 2017-2021 годах Стратегия действий по пяти приоритетным направлениям развития Республики Узбекистан определяет задачи инновационного развития экономики нашей страны, последовательного продолжения активной инвестиционной политики,

создания новых современных предприятий, всесторонней поддержки предпринимательства, а также обеспечение занятости и достойных доходов населения.

Президент Республики Узбекистан Шавкат Мирзиёев Миромонович в своем Послании Олий Мажлису 24 января 2020 года особо отметил, что «Мы должны всемерно поддерживать предпринимателей, которые создают новые рабочие места, так сказать, нести их на своих плечах». По состоянию на 22 апреля 2024 года численность постоянных жителей Республики Узбекистан составила 37,0 млн человек.

По результатам анализа, к 2030 году население достигнет 44 миллионов человек. Население страны на начало 2024 года составляло 36,8 млн человек. В среднем оно увеличивалось на 54,5 тыс. человек в месяц. Ежедневно оно увеличивается на 1,8 тыс. человек.

По предварительным данным Агентства по статистике, по состоянию на 1 января 2023 года состав постоянного населения Республики Узбекистан по возрастным группам:

- моложе трудоспособного возраста – 11,4 млн. человек. человек (31,7%)
- люди трудоспособного возраста - 20,5 млн. человек. человек (56,8%)
- старше трудоспособного возраста - 4,1 млн. человек. соответствует вкладу человека (11,5%).

По состоянию на 1 января 2024 года численность трудовых ресурсов составила 19 миллионов 724 тысячи 900 человек, что по сравнению с аналогичным периодом 2023 года увеличилось на 207 тысяч 400 человек (1,1%).

Это наглядно показывает, что обеспечение достойной постоянной работой работающего населения и молодежи, окончившей высшие учебные заведения Узбекистана, является очень важной и острой социальной проблемой.

На основе детального анализа упомянутых выше статистических данных в регионах нашей республики, исходя из спроса населения на науку, разработки региональных и отраслевых кадровых программ во взаимодействии с высшими учебными заведениями и координации их реализации, развития государственных заказов на создание новых рабочих мест и реализацию в высшем образовании комплекса мер, направленных на определение квоты рабочих мест для молодых выпускников:

- совместно с министерствами, ведомствами и органами экономического управления и высшими учебными заведениями обеспечить трудоустройство выпускников в соответствии с полученными ими специальностями и разработать связанные с ними нормативно-правовые документы;

-коренное совершенствование системы переподготовки и повышения квалификации специалистов в сфере экономики с высшим образованием, исходя из реальных потребностей рынка труда;

- активное внедрение передовых информационных технологий в процесс трудоустройства, в том числе создание и постоянное развитие Национальной базы вакансий;

- сотрудничество с органами государственного и хозяйственного управления, органами местного самоуправления, образовательными учреждениями, общественными организациями, органами самоуправления граждан и высшими учебными заведениями в вопросах создания современной инфраструктуры и конкурентной среды на рынке оказания услуг по содействию трудоустройству, обеспечение занятости населения и молодежи, формирование эффективных механизмов обеспечения;

- обеспечивать контроль за соблюдением законодательства в области занятости и охраны труда, проводить экспертизу условий труда, реализовывать конкретные меры по дальнейшему совершенствованию трудовых отношений, механизмов материального стимулирования труда во взаимодействии с высшими учебными заведениями;

- проведение широкой информационно-разъяснительной работы по вопросам трудовых прав и защиты между высшим образованием и работодателями.

Министерство высшего образования, науки и инноваций Республики Узбекистан и подведомственные ему высшие учебные заведения существенно отражают необходимость подготовки высококвалифицированных кадров для экономики труда и разработки основных теоретических, методических и практических мероприятий по социальной и трудовой сфере. отношения на государственном уровне.

По данным статистического ведомства, к началу 2022/23 учебного года количество студентов, обучающихся в 191 вузе, действующем в нашей республике, превысило один миллион.

Из этого:

- студенты – 544,8 тыс. человек

- студентки – 495,6 тыс. человек

По состоянию на 1 января 2022 года, по данным Статистического института ЮНЕСКО, количество узбекских студентов, обучающихся за рубежом, составило 808,4 тысяч человек.

Не зря говорилось о вышеупомянутых трудовых отношениях и новых рабочих местах. Требование настоящего времени - интеграция высших учебных заведений в подготовке специалистов необходимой квалификации для производственных и государственных организаций. Как мы знаем, образование преподается в области социальных, гуманитарных и естественных наук.

Содержание статьи заключается в том, что требованием времени становится не смешивание несвязанных между собой учебников в курсе этих предметов, сокращение семестровых предметов, акцентирование внимания на профильных предметах. По мнениям, высказанным студентами в ходе опросов, большинство предметов, которые преподаются, не относятся к нашему направлению, и в большинстве случаев они выразили мнение, что не смогли выполнить учебники вовремя из-за большого количества предметов в учебном заведении. семестре и что больше часов следует уделять специализированным предметам.

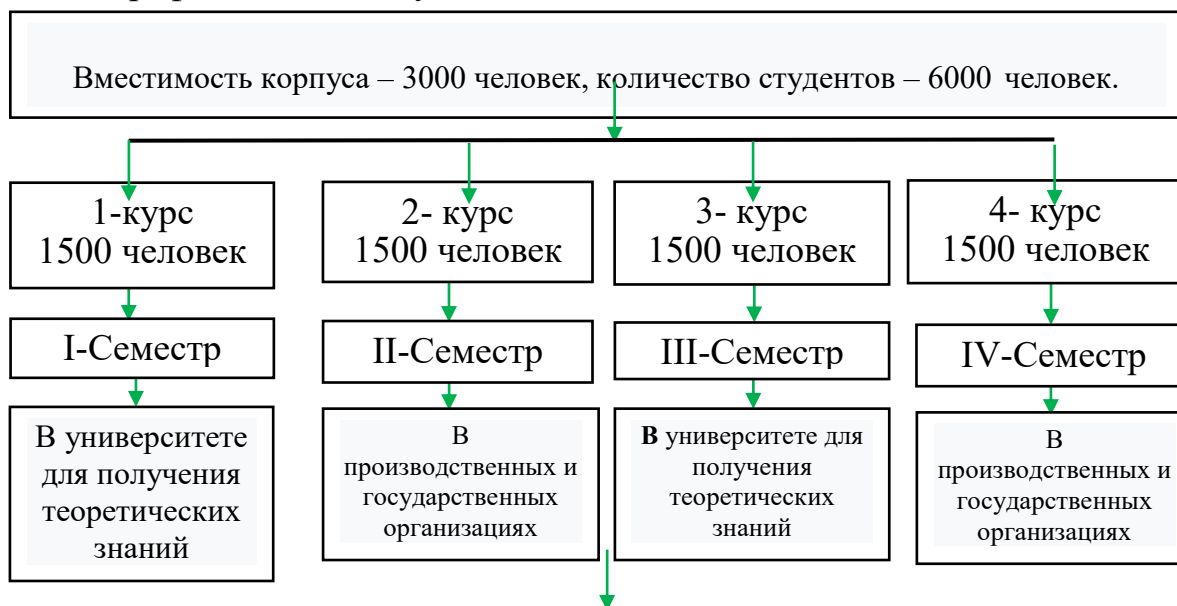
Например, по направлению история, философия, журналистика, узбекская филология вместо высшей математики, физики, биологии, химии следует увеличить часы профильных предметов, или наоборот.

Как мы знаем, степень бакалавра присуждается на протяжении 8 семестров, т.е. 4 лет. (График 1) Если обсуждать вопрос о смене данного учебного процесса на новое современное образование, то 1 семестр, т.е. 6 месяцев теоретических знаний, 2 семестра производственных или направление требований в государственные организации для прохождения практики по выбранным направлениям. Студенты, получившие теоретические знания, смогут дополнительно обогатить свои теоретические знания на практике. Знания, полученные за 4 года, 2 года расходуются в теоретическом вузе и 2 года в производственных и государственных организациях. Таким образом студенты сцены меняются местами, что приводит к более глубокому усвоению теоретических и практических знаний.

Стоит отметить, что сегодня будет завершено строительство государственного экзаменационного центра, необходимо положить конец переводу учебы и уделять больше внимания выпускной квалификации, а не вступительным экзаменам в вузы.

Сегодня поступает множество заявок на перевод межвузовской учебы, которые вызывают дискуссии. Абитуриенты, сдавшие экзамен из числа льгот, предоставляемых государством, выбирают один из университетов по своей образовательной траектории и принимаются к обучению на основании полученных баллов. В большинстве случаев после окончания первого курса студенты пытаются перенести учебу и перейти на другое направление обучения. После того, как это не дает своего результата, он вынужден завершить нежеланное ему направление, и в дальнейшем его карьера в этой сфере составляет всего 12%.

График-1. Высшее учебное заведение



Выводы и предложения. Чего мы достигнем в будущем в результате вышеуказанных статистических методов, анализа, опросов:

- высококвалифицированный персонал во всех сферах;
- заполнение вакантных должностей квалифицированным персоналом;
- развитие конкуренции по профессии;
- в будущем мы создадим для этих высококвалифицированных специалистов основу для создания новых рабочих мест;
- интеграция производственных и государственных организаций с высшими учебными заведениями;
- каким направлениям уделяется больше внимания;
- снизить контрактные платежи;
- достигается формирование сильной конкуренции между высшими учебными заведениями.

Будет создан важный фундамент для образования всей молодежи Узбекистана, особенно женщин, и образования следующего поколения. Вступительные экзамены в вуз, то есть испытания, организуемые Государственным экзаменационным центром, принимаются без экзамена на основе договорной оплаты, согласованной непосредственно с администрацией вуза в открытом виде. Это, в свою очередь, побуждает молодых людей учиться по профессиям по своему выбору, ставя точку в вопросе перевода межвузовского обучения.

Целесообразно уделить больше внимания выпускной квалификации, то есть защите диплома, если студентам, не сдавшим экзамен, выдается сертификат на 1 год, а затем в следующем году он снова защищает диплом.

Поскольку у Олигоха 2 года теории и 2 года практики, стоимость контракта снижается вдвое в обмен на 2 года практики, что дает возможность учиться детям из малообеспеченных семей.

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ИННОВАЦИОННЫЕ ПОДХОДЫ К УПРАВЛЕНИЮ В ВЫСШЕМ ОБРАЗОВАНИИ

Аннотация: в статье мы выделяем, что главным аспектом является внедрение цифровых технологий в образовательный процесс. В условиях стремительно развивающегося информационного общества, овладение навыками работы с современными ИТ-инструментами становится обязательным элементом подготовки квалифицированных специалистов.

Ключевые слова: инновационные подходы, ИТ-инструменты, координаторские роли, инновационное управление, менторских и коучинговых программ, цифровизации и международного сотрудничества

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INNOVATIVE APPROACHES TO MANAGEMENT IN HIGHER EDUCATION

Abstract: in the article we highlight that the main aspect is the introduction of digital technologies in the educational process. In the context of a rapidly developing information society, mastering the skills of working with modern IT tools is becoming a mandatory element of training qualified specialists.

Keywords: innovative approaches, IT tools, coordinating roles, innovative management, mentoring and coaching programs, digitalization and international cooperation

Инновационные подходы к управлению в высшем образовании становятся ключевыми факторами, определяющими его развитие в условиях быстро меняющегося общества. Современные университеты должны адаптироваться к новым вызовам, интегрируя технологии,

подходы к обучению и методы управления. Одним из самых перспективных направлений является внедрение цифровых платформ, которые способствуют созданию гибкой образовательной среды. Эти платформы не только упрощают доступ к образовательным ресурсам, но и активизируют взаимодействие между студентами и преподавателями.

Кроме того, важным является развитие междисциплинарных программ, которые позволяют объединять знания из разных областей и создавать новые компетенции. В этом контексте активно применяются практические подходы, такие как проектное обучение, координаторские роли для студентов и сотрудничество с предприятиями.

Таким образом, инновационное управление в высшем образовании требует не только внедрения новых технологий, но и переосмысления моделей взаимодействия между всеми участниками образовательного процесса. Это создает основу для формирования адаптивной и конкурентоспособной образовательной среды, способной отвечать требованиям времени.

Важнейшим аспектом инновационного управления в высшем образовании является и интеграция принципов устойчивого развития в образовательный процесс. Экотехнологии, социальная ответственность и экономическая устойчивость должны стать неотъемлемыми компонентами учебных программ и стратегий управления. Введение курсов, посвященных устойчивому развитию, поддержка экологических инициатив на кампусе и участие студентов в социальных проектах помогут сформировать у будущих специалистов осознание важности устойчивого развития во всех сферах жизни. Эта интеграция способствует не только формированию экологически воспитанного поколения, но и укреплению позиций учебного заведения как прогрессивного и отвечающего современным вызовам.

Кроме того, развитие инклюзивного подхода к образованию остается актуальным направлением. Образовательные учреждения должны создавать условия для доступа к образованию различных категорий студентов, включая лиц с ограниченными возможностями здоровья, представителей различных культур и этнических групп. Внедрение специальных образовательных технологий, проведение тренингов для преподавателей по вопросам инклюзии и развитие инфраструктуры для обеспечения доступности кампусов способствует созданию справедливой и равноправной образовательной среды. Инклюзивное образование не только открывает новые возможности для студентов, но и способствует обогащению образовательного процесса благодаря многообразию взглядов и опыта.

Не менее важным направлением является развитие менторских и коучинговых программ. В современной образовательной среде студенты нуждаются не только в теоретических знаниях, но и в практической

поддержке в процессе достижения своих профессиональных и личных целей. Внедрение систем наставничества, где опытные преподаватели или успешные выпускники помогают студентам в выборе дальнейшего карьерного пути, разработке индивидуальных образовательных траекторий и решении личностных вопросов, становится важным компонентом образовательной стратегии. Такие программы способствуют более продуктивной мотивации студентов, повышению их самооценки и уровня удовлетворенности обучением.

Важной целью является внедрение цифровых технологий в образовательный процесс. В условиях стремительно развивающегося информационного общества, овладение навыками работы с современными ИТ-инструментами становится обязательным элементом подготовки квалифицированных специалистов. Создание виртуальных учебных платформ, дистанционных курсов и цифровых библиотек предоставляет возможности для более гибкого и персонализированного обучения. Интерактивные методы преподавания, использование искусственного интеллекта и виртуальной реальности могут значительно повысить уровень усвоения знаний и сделать учебный процесс более увлекательным и эффективным.

Большое значение имеет также международное сотрудничество и академическая мобильность. Участие в международных образовательных программах, обмен студентами и преподавателями, совместные научные исследования с зарубежными вузами способствуют развитию межкультурного диалога и международного опыта. Это позволяет не только расширить профессиональные горизонты студентов и преподавателей, но и повысить конкурентоспособность образовательных учреждений на глобальном уровне. Международные партнёрства открывают доступ к лучшим мировым практикам и инновационным методологиям, что способствует повышению качества образования.

Не менее важен аспект поддержки и развития научных исследований. Вузы должны активно содействовать научной деятельности, предоставляя студентам и преподавателям необходимые ресурсы и условия для проведения исследований. Создание исследовательских лабораторий, научных центров и грантовых программ стимулирует инновационную деятельность и способствует появлению новых знаний и технологий. Результаты научных исследований не только обогащают образовательный процесс, но и могут находить практическое применение в различных отраслях, способствуя социально-экономическому развитию общества.

Таким образом, внедрение инновационных подходов в высшем образовании требует комплексного и системного подхода. Современные вызовы и возможности диктуют необходимость постоянного обновления образовательных стратегий и тесного взаимодействия с глобальным

сообществом. В условиях глобализации и быстрого технического прогресса, только те образовательные учреждения, которые готовы адаптироваться к изменениям и активно использовать передовые практики, смогут эффективно готовить специалистов, способных успешно работать в условиях новой реальности.

Особое внимание необходимо уделять подготовке преподавательского состава к работе в условиях цифровизации и международного сотрудничества. Профессиональное развитие педагогов должно включать регулярные тренинги, курсы повышения квалификации и обмен опытом с зарубежными коллегами. Это позволит не только повысить качество преподавания, но и внедрить новейшие образовательные технологии в учебный процесс. Преподаватели, обладающие современными компетенциями и знаниями, смогут эффективно адаптировать учебные программы под потребности студентов и рынков труда будущего.

Одновременно с этим значима роль обратной связи от студентов. Анализ их мнений и предложений позволяет оперативно выявлять недостатки в образовательном процессе и вносить необходимые коррективы. Современные цифровые технологии, такие как опросы, форумы и платформы для обсуждений, облегчают сбор и анализ такой информации. Таким образом, студенты становятся активными участниками формирования образовательной среды, что повышает их мотивацию и удовлетворенность учебным процессом.

Интеграция междисциплинарного подхода также представляет собой важный аспект модернизации высшего образования. Объединение знаний из разных областей позволяет развивать у студентов критическое мышление, способность к комплексному анализу и решению сложных задач. Это особенно актуально в условиях глобальных изменений и вызовов, требующих нестандартных и инновационных решений. Междисциплинарные программы и проекты стимулируют творческое мышление и расширяют горизонты студентов, готовя их к успешной профессиональной деятельности в многообразных и динамичных условиях.

Кроме того, огромное значение имеет развитие цифровых компетенций как у преподавателей, так и у студентов. В эпоху стремительного технологического прогресса умение эффективно использовать цифровые инструменты становится неотъемлемой частью профессиональной деятельности. Для этого образовательные учреждения должны предлагать программы обучения, направленные на развитие навыков работы с цифровыми технологиями и онлайн-ресурсами. Интенсивное использование виртуальных лабораторий, онлайн-курсов и симуляторов позволяет создавать более гибкую и адаптивную

образовательную среду, что, в свою очередь, способствует улучшению учебных результатов и повышению конкурентоспособности выпускников.

Значительной частью этой стратегии является также внедрение методов активного обучения и проектной деятельности. Преподаватели должны уметь организовывать учебный процесс таким образом, чтобы студенты могли не только получать знания, но и активно применять их на практике. Совместные проекты, исследовательские группы и практико-ориентированные задания помогают закрепить теоретические знания и развивают у студентов ценные навыки, такие как критическое мышление, командная работа и способность к самостоятельному решению проблем. Важно также поощрять студентов к самостоятельному поиску и анализу информации, что стимулирует их когнитивную активность и способствует более глубокому освоению учебного материала.

Немаловажную роль играет и международное сотрудничество между образовательными учреждениями. Обмен студентами и преподавателями, участие в международных конференциях и исследовательских проектах открывают перед участниками новые перспективы и расширяют их кругозор. Такие инициативы способствуют не только академическому росту, но и культурному обмену, что особенно важно в условиях глобализации. Многонациональная образовательная среда стимулирует студентов и преподавателей к более широкому восприятию мировых процессов и гибкому адаптированию к изменяющимся обстоятельствам.

Подводя итоги, можно отметить, что успешная адаптация образовательных учреждений к цифровизации и международному сотрудничеству требует комплексного подхода и инвестиций в развитие преподавательского состава, улучшение инфраструктуры и активное использование современных технологий в учебном процессе. Только при этих условиях возможно формирование среды, в которой студенты будут получать высококачественное образование, отвечающее требованиям современного рынка труда и подготавливающее их к успешной профессиональной деятельности в будущем.

В заключение следует отметить важность развития инфраструктуры образовательных учреждений. Современные кампусы, оборудованные по последнему слову техники, предоставляют необходимые условия для комфортного и эффективного обучения. Важно инвестировать в создание инновационных учебных пространств, оснащенных интерактивными досками, компьютерными классами и лабораториями. Пространства, способствующие кросс-функциональному взаимодействию и командной работе, помогают студентам развивать навыки, которые востребованы на рынке труда и необходимы для успешной карьеры в будущем.

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МНОГОЛЕТНЯЯ ДИНАМИКА ЗАПЫЛЕННОСТИ АТМОСФЕРЫ В НИЖНЕ-АМУДАРЬИНСКОМ ОАЗИСЕ

Аннотация. Как известно, чрезмерная запыленность атмосферы имеет множество негативных последствий. Прежде всего это рост различных заболеваний, включая онкологические, кардиоваскулярные, нейродегенеративные и др. В данной работе методами статистического моделирования количественно оценена многолетняя динамика (1961-2020гг.) запыленности атмосферы в наиболее густонаселенной части Южного Приаралья – Нижне-амударьинском оазисе, окруженного со всех сторон пустынями Аралкум, Устюрт, Кызылкум и Каракумы. Многолетняя динамика факторов – ветрового режима, количества осадков, растительного покрова и площади пустынных поверхностей – аппроксимирована регрессионными уравнениями, полученными в ходе статистической обработки фактических данных. Результаты исследования свидетельствуют о прогрессирующем характере запыленности атмосферы в Нижне-амударьинском оазисе, вследствие отрицательной динамики ослабляющих запыленность атмосферы факторов (количества осадков, растительного покрова) и положительной динамики усиливающих запыленность атмосферы факторов (ветрового режима и площади пустынь).

Ключевые слова: многолетняя динамика, запыленность атмосферы, Нижне-амударьинский оазис, статистический анализ, общее проективное покрытие, моделирование.

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LONG-TERM DYNAMICS OF ATMOSPHERIC DUST CONTENT IN THE LOWER AMUDARYA OASIS

Annotation. As is known, excessive dustiness of the atmosphere has many negative consequences. First of all, this is an increase in various diseases, including cancer, cardiovascular, neurodegenerative, etc. In this paper, statistical modeling methods are used to quantitatively assess the long-term dynamics (1961-2020) of atmospheric dustiness in the most densely populated part of the Southern Aral Sea region - the Lower Amudarya oasis, surrounded on all sides by the Aralkum, Ustyurt, Kyzylkum and Karakum deserts. The long-term dynamics of factors - wind regime, precipitation amount, vegetation cover and desert surface area - are approximated by regression equations obtained during statistical processing of factual data. The results of the study indicate a progressive nature of atmospheric dustiness in the Lower Amudarya oasis, due to the negative dynamics of factors weakening atmospheric dustiness (precipitation amount, vegetation cover) and the positive dynamics of factors increasing atmospheric dustiness (wind regime and desert area).

Key words: long-term dynamics, atmospheric dustiness, Lower Amudarya oasis, statistical analysis, total projective coverage, modeling.

Введение. Запыленность атмосферы (ЗА) является важной частью глобальной проблемы загрязнения окружающей среды. Значительную часть загрязняющих веществ составляет пыль как промышленного, так и естественного происхождения. Природные источники атмосферной пыли (пустынные территории) по сравнению с промышленными имеют гораздо большие пространственные масштабы влияния, менее управляемы и имеют ряд малоизученных аспектов. ЗА актуальна для многих стран мира, особенно для расположенных в зоне пустынь, в том числе и для Узбекистана, обширные территории которого заняты пустынями Кызылкум, Устюрт, Аралкум и частично Каракумами.

Чрезмерная запыленность атмосферы влияет на рост заболеваемости населения, региональную окружающую среду и климат, изменяя

биогеохимические циклы, оказывая радиационное воздействие на атмосферу, подавляя активность циклонов и влияя на микрофизику облаков и гидрологический цикл (Rashki et.al.,2015). Сингх и др. (2008) выявили, что отложение пыли над Аравийским морем может влиять на цветение хлорофилла, влиять на фитопланктон и охлаждать поверхность океана (Rashki et.al.,2015).

Другие возможные негативные последствия пылевых бурь включают в себя: снижение видимости, влияющее на авиа- и автотранспорт; снижение количества солнечного света, достигающего поверхности Земли; эффект теплового «покрывала»; «эффект Воейкова» с повышением температуры воздуха на 6-7°K; угнетение растительного покрова.

Болезни связанные с запыленностью атмосферы возникают при вдыхании частиц пыли вместе с микробами, тяжелыми металлами, пестицидами и другими загрязняющими веществами, содержащимися в почве (Bozlaker et al., 2013). Благодаря микро- и нано-размерам, частицы легко попадают в легкие и проникают в кровоток. Пылевые бури способствуют росту таких заболеваний, как астма, трахеит, пневмония, аллергический ринит и силикоз (Wu et al., 2021). Кроме этих хорошо известных заболеваний дыхательной системы (Middleton, 2020), минеральная пыль считается одним из наиболее важных факторов риска аллергии и менингита в Иране и в Западной Африке (Rashki et.al.,2015) кардиоваскулярных, психологических и когнитивных и нейродегенеративных заболеваний (Broomandi et al., 2023).

В настоящее время ЗА является самой большой проблемой здравоохранения стран Приаралья, поскольку пыль с осушенного дна Арала, содержащая токсичные сульфаты опасна вдвойне.

Большинство исследований по ЗА посвящено диагнозу концентрации пыли во время пылевых бурь (Hersbach et al., 2020), значение которых заключается в кратковременном, остром воздействии на окружающую среду. Но как известно, длительное воздействие загрязняющих веществ, пусть даже в гораздо меньших концентрациях, опаснее, так как чревато хроническим отравлением. А именно этот аспект в отношении ЗА пустынями наименее изучен. Что касается Нижне-амударьинского оазиса (НО), где проживает большинство населения Каракалпакстана, все население Хорезма (Узбекистан), Куняургенчской и Ташаузской областей Туркменистана (рис.1), то ЗА этого региона является вообще неисследованной (за исключением выноса солей с осушенного дна Аральского моря).



Рис. 1. Нижне-амударьинский оазис в окружении пустынь.

Исследования многолетней динамики природных процессов необходимы для выявления их устойчивых тенденций и зависимости от различных факторов. Результаты таких исследований практически востребованы при прогнозировании этих процессов и разработке соответствующих мер реагирования антропогенным воздействием на их факторы. Особо актуальны такие исследования для регионов с динамичной трансформацией природной среды, к каковым относится и Южное Приаралье – эпицентр Аральского кризиса.

Очевидно, такое исследование должно включать и изучение динамики как усиливающих ЗА, так и его ослабляющих факторов. Поскольку пыление пустынных поверхностей происходит преимущественно в теплом сезоне (апрель-октябрь) (Тлеумуратова и др.,

2024), ЗА исследуется только для этого времени года. Таким образом, цель данной работы – статистическое моделирование многолетней динамики (1961-2020гг.) загрязнения атмосферы в Нижне-амударьинском оазисе вследствие ветрового выноса пыли с комплекса источников – пустынь Аралкум, Устюрт, Кызылкум и Каракумов в теплом сезоне (апрель-октябрь).

Методы исследования. Задача определения запыленности атмосферы в НО состоит в вычислении полей приземных (в слое жизнедеятельности человека – 0-2м) концентраций пыли. Для исследования многолетней динамики загрязнения атмосферы разработана статистическая модель многолетней динамики загрязнения атмосферы (МДЗА), как совокупность уравнений регрессии, служащих эмпирическими генерализациями (обобщениями) динамики факторов ЗА и их влияния на динамику концентрации пыли. В данном исследовании факторами являются ветровой режим, количество осадков, растительный покров (РП) и площади пустынных поверхностей.

Динамичность экологических процессов, обусловленная Аральским кризисом, требует квантования периода моделирования. Период моделирования – 1961-2020гг. – разделен на десятилетия (1961-1970, 1971-1980 и т.д.), так как это время существенных природных трансформаций, а также это традиционное в эколого-географических исследованиях разделение времени эволюции Аральского кризиса (Тлеумуратова, 2018; Кубланов, 2023). Кроме того, такое квантование периода моделирования позволяет нивелировать существенные межгодовые изменчивости экологических условий, обусловленные внешними геофизическими факторами (засушливые, маловодные годы, смена циркуляционных эпох и т.п.). Десятилетия нумеруются по хронологии: $N = 1$ для 1961-1970гг., $N = 2$ для 1971-1980гг. и т.д.

Рассмотрим структуру построенной модели МДЗА. Первый блок статистической модели МДЗА состоит из регрессионных уравнений многолетней динамики факторов пылевыноса с каждого из 4 источников (Аралкум, Устюрт, Кызылкум, Каракумы).

Второй блок МДЗА представлен уравнениями выноса пыли при отсутствии проективного покрытия и осадков. Вынос V_0 пустынного аэрозоля с единицы площади конкретного источника p ($p = \overline{1,4}$) за конкретный период времени Δt , в течение которого дует ветер с определенной скоростью u . Среднесезонный вынос пыли со всей площади p -го источника выноса равен:

$$V_0 = F \Delta t S_p \quad (1)$$

где F – мощность источника, S_p – площадь источника.

Для определения мощности источника F (поток примеси с единицы площади в единицу времени, $\text{мкг/м}^2\text{с}$) в работах (Тлеумуратова, 2004, 2018; Кубланов, 2023) используется формула (Lu, Shao, 2001):

$$F = \frac{0,12C_H g \rho_s}{p} Q, \quad Q = \frac{c \rho u_*^3}{g} \left[1 - \left(\frac{u_{*кр}}{u_*} \right)^2 \right] \quad (2)$$

где Q – расход примеси, ρ – плотность воздуха, ρ_s – плотность частиц, p – давление деформации, оказываемое поверхностью почвы на движущиеся по ней частицы аэрозоля, g – гравитационная постоянная, u_* – скорость трения, $c = 0,25 + 0,33 \frac{wg}{u_*}$ – коэффициент Оуэна (Owen, 1964), d – диаметр частиц, $u_{*кр}$ – критическая скорость трения (Кондратьев, Григорьев, 2000), C_H – наземная концентрация аэрозоля, определяемая по солесодержанию поверхностных слоев почвы (Тлеумуратова, 2004).

Третий блок модели содержит уравнения для вычисления влияния РП и осадков на значения приземной концентрации пыли $C(x, y)$. Воздействие РП определяется уменьшением мощности источника пыли ΔF , обусловленным уменьшением скорости ветра в растительном слое (Тлеумуратова, 2004, 2018; Кубланов, 2023). Для вычисления степени ослабления ветра растительным покровом применяется формула (Быкова, Дубов, 1974):

$$u_r = 0,83 \delta_f c_{Hh}^{0,5} u_a + (1 - \delta_f) u_a \quad (3)$$

здесь u_a – фоновая скорость ветра, c_{Hh} – коэффициент теплообмена на верхней границе слоя растительности, δ_f – общее проективное покрытие (ОПП).

Вычислив $\Delta F = F(u_a) - F(u_r)$ с использованием формулы (3) получим величину уменьшения мощности пылеиспускания подстилающей поверхности ($\text{мкг/м}^2\text{с}$) (Тлеумуратова, 2004, 2018; Кубланов, 2023):

$$\Delta V_{\text{РП}}(N) = \Delta F(N) \Delta t(N) S_p(N) \quad (4)$$

Эффект ослабления выноса осадками вычисляется по формуле:

$$\Delta V_{oc} = V_0 f_{oc} \quad (5)$$

где f_{oc} – среднее за десятилетие повторяемость осадков в теплом сезоне.

В четвертом блоке модели МДЗА вычисляется среднесезонный вынос пыли с p -ой пустыни с учетом влияния РП и осадков:

$$V_p(N) = V_0(N) - \Delta V_{\text{РП}}(N) - \Delta V_{oc}(N) \quad (6)$$

В пятом блоке вычисляются усредненные по десятилетию N и по сезону поля концентрации пыли в зависимости от среднесезонного выноса пыли:

$$C_p(N) = 3,3kV_p(N) \exp(-0,015x - 0,6) \quad (7)$$

И наконец, последний блок модели МДЗА содержит уравнения для вычисления совокупного поля среднесезонной концентрации пыли в НО от всех источников по десятилетиям периода моделирования.

$$C(x, y, N) = \sum_{p=1}^4 C_p(x, y, N) \quad (8)$$

Результаты исследования. Статистический анализ фактических данных показал, что многолетняя динамика факторов может быть представлена следующими уравнениями регрессии (табл.1). В табл.1. площадь измеряется в тыс.кв.км, ОПП – в долях единицы, ветровой режим – в количестве дней за теплый сезон с ветром более 4м/с, количество осадков – в мм/год.

Таблица 1

Многолетняя динамика факторов

	Площадь	ОПП	Ветровой режим	Количество осадков
А	$S_p(N) = 10,809N - 1,0133$	$\delta_f(N) = -0,1214N + 0,8404$	$B(N) = 1,0633N + 41,468$	$R(N) = -1,6671N + 64,823$
У	$S_p(N) = 212$	$\delta_f(N) = -0,0954N + 0,784$	$B(N) = 0,5203N + 64,383$	$R(N) = -2,3264N + 71,215$
Кз	$S_p(N) = 0,0971N + 299,9$	$\delta_f(N) = -0,0226N + 0,3273$	$B(N) = 0,3096N + 22,209$	$R(N) = -1,0729N + 61,987$
Кр	$S_p(N) = 0,1049N + 349,9$	$\delta_f(N) = -0,0186N + 0,2643$	$B(N) = 1,4438N + 47,252$	$R(N) = -5,5429N + 52,417$

Примечание: N – номер десятилетия, А – Аралкум, У – Устюрт, Кз – Кызылкум, Кр – Каракумы.

Среднесезонный вынос пыли в десятилетия с учетом влияния РП и осадков аппроксимирован, как показано в табл.2.

Таблица 2

Аппроксимации среднесезонного выноса пыли

	Аралкум	Устюрт	Кызылкум	Каракумы
$V_p(N)$	$V_p(N) = 2,7752 \cdot e^{0,7037N}$	$V_p(N) = 52,959 \cdot e^{0,0303N}$	$V_p(N) = 235,61 \cdot e^{0,0188N}$	$V_p(N) = 294,6 \cdot e^{0,0284N}$

Результаты расчетов полей среднесезонной концентрации пыли на уровне 2м с использованием формулы (8) представлены на рис. 2. Для иллюстрации отобраны по контрасту результаты моделирования для 1 и 6 десятилетий периода моделирования. Из рисунка видно увеличение ЗА во всех точках расчетной области, особенно в северо-восточных и северо-западных районах НО.

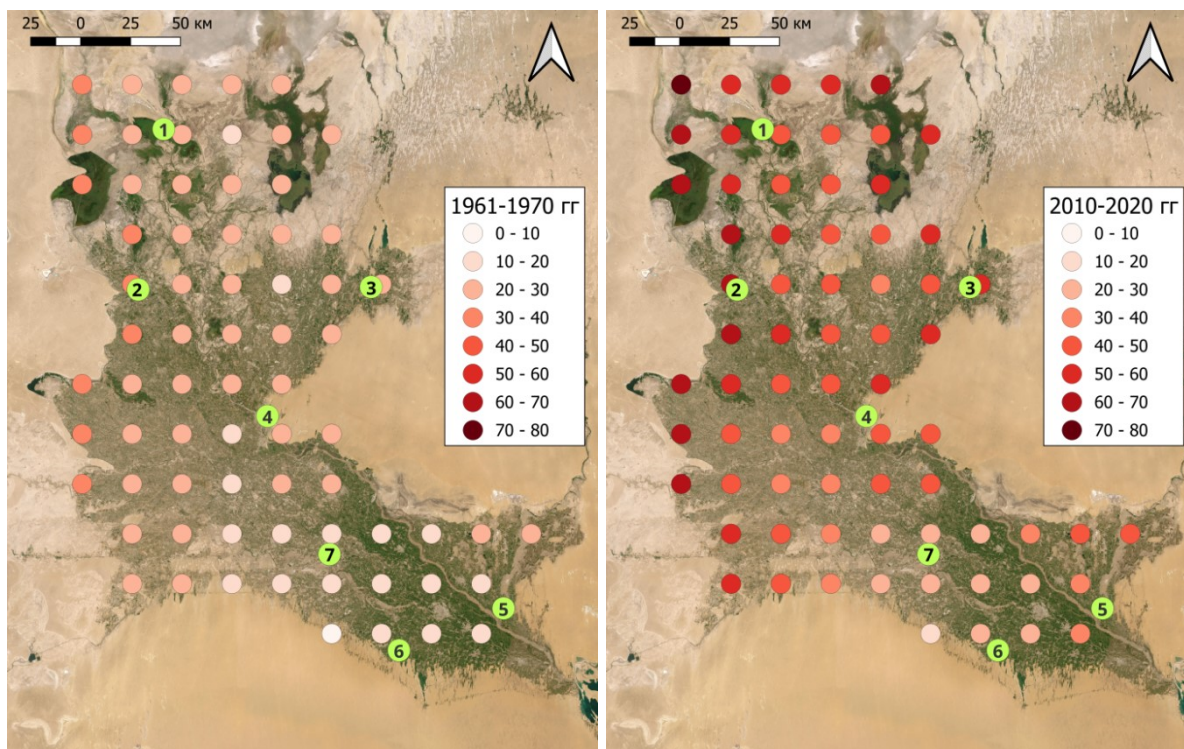


Рис. 2. Динамика среднемесячной концентрации (мкг/м^3) пыли от всех источников (1-Муйнак, 2-Кунград, 3-Тахтакупыр, 4-Нукус, 5-Турткуль, 6-Хива, 7-Дашогуз).

Более наглядно многолетняя динамика ЗА отображена на графике (рис.3). Среднесезонная концентрация пыли максимальна в Кунградском и Тахтакупырском районах. Заметим, что близость среднесезонной концентрации к ПДК означает значительность количества дней с превышением ПДК.

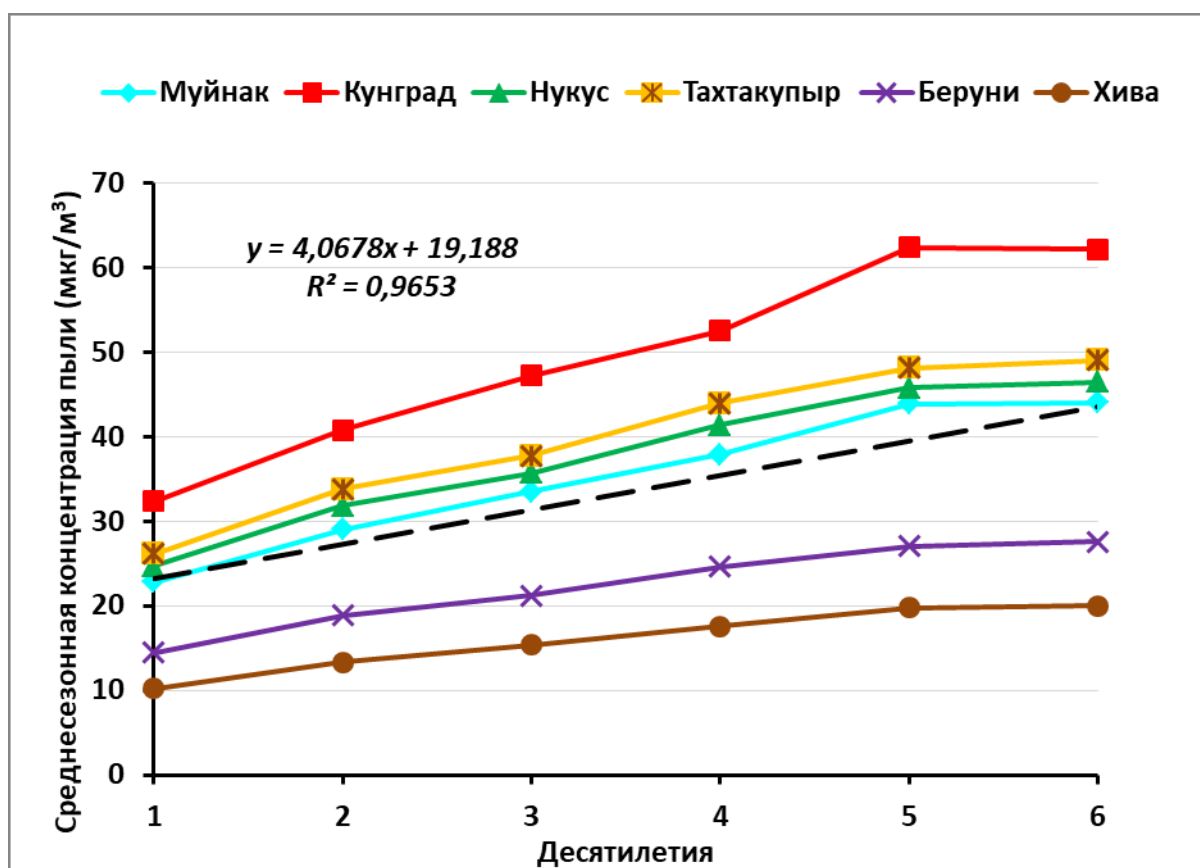


Рис. 3. Динамика среднесезонной концентрация пыли и песка с комплекса пустынь в различных точках Нижне-амударьинского оазиса

В среднем по региону (пунктирная линия на рис.3) многолетняя динамика выражается следующим уравнением:

$$C(x, y, N) = 4,0678N + 19,188 \quad (9)$$

Верификация модели МДЗА проводилась сравнением модельных результатов с данными наземных измерений (полевые замеры счетчиком аэрозоля и городские замеры автоматическими регистраторами фирмы Comde-Derenda GmbH (Германия)). Погрешность статистической модели МДЗА, складывающаяся в основном из погрешности аппроксимации многолетней динамики факторов, не превышает 8%. При этом мы считали информацию по ветровому режиму и осадкам достоверной. Погрешность модели обусловлена главным образом нерепрезентативностью и пространственной, и временной, данных по ОПП пустынной растительности.

Дополнительный статистический анализ многолетней динамики количества пылевых бурь показал их периодическое уменьшение/увеличение. Некоррелированность с динамикой ЗА объясняется сравнительной редкостью пылевых бурь (не более 5-6 за сезон). Таким образом, доказывается ошибочность вывода многих авторов, основанный на количестве пылевых бурь, что в частности вынос солей с осушенного дна Арала уменьшается. Одновременно доказывается, что

объем годового выноса пыли с пустынь должен определяться статистической повторяемостью всех случаев ветра со скоростью более 4 м/с.

В целом, темпы увеличения ЗА замедляются вследствие лимитированности ветроактивности, которая не может увеличиваться неограниченно. Также лимитировано увеличение площади Аралкума, обуславливавшие наибольшие темпы роста ЗА в 1-4 десятилетиях. Но, тем не менее ЗА прогрессирует из-за устойчивой тенденции РП и осадков к уменьшению вследствие потепления климата.

Заключение. Научная значимость данного исследования заключается в построении и реализации статистической модели ЗА на территориях, соседствующих с пустынями. Модель может быть применима например, в странах прилегающих к таким пустыням как Сахара, Гоби, Такламакан и др. Результаты данного исследования необходимы в медицинских исследованиях зависимости заболеваний от качества воздуха, климатических исследованиях вклада аэрозольного форсинга в региональные климатические изменения. Выявленные закономерности многолетней динамики исследуемых процессов служат подспорьем для построения различных моделей развития окружающей среды в условиях деградации РП.

Практическое значение работы состоит в возможности (и необходимости) использования результатов исследования при решении таких задач охраны окружающей среды, как уменьшение рисков для здоровья населения и улучшение состояния РП в Южном Приаралье. Количественная оценка динамики запыленности воздуха и ее факторов, конкретизирует направленность, степень и объем мероприятий, предпринимаемых с целью улучшения экологической обстановки в Каракалпакстане и в целом по региону Южного Приаралья. Анализ возможных мер ослабления ЗА позволяет обоснованию предпочтения при планировании соответствующими организациями мероприятий по охране окружающей среды.

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РЕШЕНИЕ ЭКОЛОГИЧЕСКИХ ПРОБЛЕМ НА ОСНОВЕ ФУНДАМЕНТАЛЬНЫХ НАУЧНЫХ ПОДХОДОВ

Аннотация

В статье представлены основные направления и научные подходы, используемые при решении экологических проблем – интеграционный и эколого-экосистемный подходы. Особое значение в обеспечении целостности знаний по экологическим проблемам придается социальному и экологическому образованию, устойчивому развитию, безопасности, экологической ответственности и деятельности в области окружающей среды. Наука в деятельности человека является важнейшей составляющей его действий, мировоззрения и определения позиции, ведущей к гармонизации отношений в системе “природа – человек – общество”.

Ключевые слова: социально-экологическое образование, социальная экология, экосистемный подход, экологический подход, интеграция, экологизация.

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SOLVING ENVIRONMENTAL PROBLEMS BASED ON FUNDAMENTAL SCIENTIFIC APPROACHES

Abstract: *The article presents the main directions and scientific approaches used in solving environmental problems - the integration and ecological-ecosystem approaches. Particular importance in ensuring the integrity of knowledge on environmental issues is given to social and environmental education, sustainable development, safety, environmental responsibility and activities in the field of the environment. Science in human activity is the most important component of his actions, worldview and determination of the position leading to the harmonization of relations in the system "nature - man - society".*

Keywords: *social and environmental education, social ecology, ecosystem approach, environmental approach, integration, greening.*

Введение

Глобальная экологическая проблема связана с усилением антропогенного и техногенного воздействия на окружающую среду. В основе экологических бедствий лежит непродуманная деятельность человека, его отношение к природе. Постигая законы природы и овладевая силами природы, человек, тем не менее, не способен изменить эти законы или подчинить их социальным закономерностям. Характерной чертой современной экологической ситуации является проверка и взаимодействие этих разнородных социальных систем, взаимосвязанных с той или иной экосистемой. Поэтому сегодня появление экологической проблемы и ее решение производством становится более заметным.

Выявление наличия ряда объективных и субъективных факторов, препятствующих успешному решению экологических проблем, обусловило формирование новой тенденции в науке естественнонаучного и гуманитарного познания, помогает обеспечить прямую объективную поддержку окружающей среды и безопасности:

- рассмотрение каких-либо вопросов с учетом экологических факторов;
- любое рассмотрение экологических вопросов в том виде, в котором они были получены;
- получение экологических требований.

В общем плане под экологией понимают получение возможных последствий воздействия человека на природную среду с целью сведения к минимуму отрицательные результаты природопреобразовательной деятельности. Насущная потребность современного общества, ее развитие призвано решить экологическую проблему на всех аспектах: глобальном, региональном и локальном [2, с. 134].

Экологизация сегодня рассматривается в научно-техническом развитии промышленности, сельского хозяйства, промыслового и городского хозяйства, а также в социальной жизни общества. [3, с. 134].

Одна из наиболее характерных черт экологизации науки - это стремление к комплексному исследованию поведения природных систем при взаимодействии с обществом. Использование принципа комплексности в экологизации науки способствует повышению теоретического уровня исследований взаимоотношений общества с природной средой и его связи с практической деятельностью человека. Поэтому существенным и важным моментом экологизации науки должно стать толерантное отношение к природе, которое важно для всех форм общественного сознания, в том числе и для науки. Современная наука дает возможность достичь согласия с природой, а как этим воспользуется человек и воспользуется ли - зависит от него самого.

Экологическая проблема является общенаучной проблемой. В. В. Вернадский говорил о сближении наук по проблемам «Рост научных

знаний, быстро стирает грани между отдельными науками. Мы все более специализируемся не по наукам, а по проблемам» [1, с. 54].

Исходные данные и методы исследования.

Интеграция в образовании является отражением тенденций, характеризующих сегодня все сферы деятельности человека, поэтому необходимо говорить о формировании интегративного стиля мышления. Есть два типа уровней интеграции знания:

1. Горизонтальный, связанный с площадью перекрывания предметных полей в трех пластах - внутрипредметном, внутрицикловом и межцикловом;

2. Вертикальный, отражающий глубину взаимодействия интегрирующая знания на трех подуровнях - эмпирическом, теоретическом, методологическом.

Взаимосвязь горизонтального и вертикального анализа отношений «человек - общество - биосфера» составляет основу фундаментальных социально-экологических исследований. В этом случае можно говорить о голографическом подходе, который должен отражать единство и взаимосвязь природных явлений и процессов, а значит, и системы отношений «человек - общество» и «человек - природа». Под голографическим подходом подразумевается система способов, технологий в образовании, направленная на объемное, многомерное изучение знания, соответствующего особенностям многомерности восприятия окружающего мира и запаса жизненного опыта. Технология голографического подхода позволяет возможность не только опираться на прошлое, но и прогнозировать будущее человека, не только укреплять, но и открывать новые знания.

В XXI веке современная фундаментальная наука должна взять на себя общую ответственность разработку путей, способствующих рациональной эксплуатации естественных ресурсов Земли, сохранения и целенаправленного преобразования окружающей природной среды, должна взять на себя существующая в настоящее время фундаментальная наука, представленная как своими естественноисторическими, гуманитарными, так и техническими, социально-экономическими системами.

Наука, имея свою методологическую основу, не стоит на месте, а каждый раз представляет новые взгляды, теории, подходы к изучаемым проблемам. Социальная экология как самостоятельная комплексная наука направлена на решение социально-экологических проблем и оптимизацию отношений в системе «человек - природа - общество».

Результаты и обсуждение.

Исследуя проблему отношений в системе «человек - природа» в истории развития цивилизации были выделены три типа отношения «человек - природа». Первый тип отношения основан на представлении о

полной зависимости человека от естественной среды его обитания. Второй тип исходит из трактовки человека как «венца творения», то есть его главенствующей роли в системе природных связей и отношений. Наконец, в рамках третьего типа отношений человек и природа рассматриваются как две силы, действующие и действующие в одной сфере и существующие совместно, что предопределяет гармоничный характер их взаимоотношений.

Анализ выделенных типов отношений в названной системе показывает, что накопленный человечеством эмпирический опыт, развитие социально-экологических знаний, а также внедрение в науку таких подходов, как экологизация, интеграция, голография и др. способствовали осознанию человеком своей связи с природной средой, а также изменению взглядов человека на проблемы глобального характера.

Рассмотреть многообразие эволюционных путей социальной системы как источник изменений через ее взаимодействие с другими системами позволяет экологический подход. Экологический подход может служить основой культурного синтеза, выходящего за рамки науки и связывающего ее с другими отраслями культуры. В развитии экологического подхода большое значение имеет концепция открытых систем в теории и на практике. Экологический подход позволяет рассматривать в широком смысле гармонизацию человека и его социального и физического окружения, в более узком смысле - взаимные адаптивные процессы, необходимые для такой гармонизации. В науке экосистемный подход выделяется как самостоятельное направление.

В рамках экосистемного подхода решаются следующие задачи:

- выстраивание индивидуальной траектории решения социальных и экологических проблем в соответствии с этническими, культурными, религиозными, социоэкономическими предпочтениями;

- развитие социально-экологического образования в альтернативных формах в зависимости от возрастных и индивидуальных особенностей обучающегося;

- расширение ресурсного пространства за счет внедрения новых форм взаимодействия в различные системы отношений в процессе решения социальных и экологических проблем и т.д.[3, с. 104].

Новые подходы в науке помогают развитию общества в разных отраслях и сферах жизнедеятельности человека. Особое значение мы уделяем развитию социально-экологического образования, которое обеспечивает целостность знаний об экологических проблемах. В настоящее время развитие социально-экологического образования можно определить в нескольких направлениях:

- от экологического образования к образованию для устойчивого развития (социально-экономический аспект);

от экологического просвещения населения к экологической культуре (эколого-культурологический аспект);

от экологических знаний к экологической компетентности как обязательному компоненту в профессиональной деятельности человека.

Методология современного социально-экологического образования базируется на следующих основных идеях: системность и синергия, гуманитарно-аксиологическая направленность, устойчивое развитие, безопасность, экологическая ответственность и деятельность в области окружающей среды.

Идея системности и синергетизма отражает междисциплинарный характер современного научного мышления, объединяющего естественные и гуманитарные науки в осмыслении и решении экологических проблем.

Идея гуманитарно-аксиологической направленности направлена на реализацию образовательной деятельности в экогуманитарной парадигме, осмысление путей и технологий гуманизации и гуманитаризации образовательного пространства.

Идея устойчивого развития ориентирует школу, колледж, вуз на организацию образовательного процесса, включающего в себя следующие компоненты: экологическую, экономическую, социальную и культурологическую.

Идея безопасности образования входит в взаимодействие обучающего и обучаемого в условиях - экологических, социальных, психологических, педагогических, культурологических, криминогенных и др., где степень риска должна быть минимальной.

Идея экологической ответственности и деятельности в области окружающей среды ориентирует систему образования на формирование у учащихся и студентов умений и навыков соблюдать экологические требования, правилам здорового образа жизни, вести исследовательскую работу по изучению состояния окружающей среды и на ее основе осуществлять посильные действия по оптимизации взаимоотношений с окружающей средой.

Выводы.

Итак, экологическая парадигма, подход во взаимоотношениях человека, природы и общества должны составлять основу современного мировоззрения, этики поведения и нового образа жизни человека, что может обеспечить безопасное развитие не только государства, общества, но и отдельного человека. Поэтому экологическая парадигма основана на следующих принципах:

-экосистемного подхода, направленный на регулирование всех общественных отношений устойчивого развития государства путем введения комплекса научно обоснованных ограничений, нормативов и правил ведения хозяйственной и иной деятельности;

- подчинение региональных и локальных задач экологической безопасности глобальным и национальным целям предупреждения экологических угроз;

-обязательности компенсации нанесенного ущерба окружающей среде и здоровью человека;

-эколого-экономической сбалансированности развития и размещения производственных сил (принципы экологической емкости и территориального планирования);

- обязательная оценка воздействия хозяйственной и иной деятельности человека на окружающую среду с последующей экологической экспертизой;

- обеспечение использования населением экологической информации и участия общественности в решении экологических проблем;

-партнерства в международном сотрудничестве и соблюдение норм международного права [4, с. 9].

Таким образом, использование научных подходов в решении экологических проблем помогает людям быть в курсе того, что происходит в природной и социальной среде. Наука в деятельности человека является важнейшей составляющей, определяющей его поведение, мировоззрение и позицию, что приводит к гармонии отношений в системе: «природа - человек - общество». Мы считаем, что гармонизированная наука поможет создать гармоничную систему взаимоотношений человека с природой и обеспечить гармоничность развития самого человека.

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ВЛИЯНИЕ НЕПРАВИТЕЛЬСТВЕННЫХ ОРГАНИЗАЦИЙ НА УПРАВЛЕНИЕ И ОБЩЕСТВЕННЫЕ ПРОЦЕССЫ

Аннотация. В статье рассматривается значение неправительственных коммерческих организаций (НКО) в развитии партнерства, укреплении гражданского общества и их влияние на социально-экономические процессы в Казахстане. Особое внимание уделяется деятельности НКО в области социальной поддержки детей с особыми потребностями и их семей, а также созданию инклюзивной инфраструктуры и образовательных программ. Обсуждаются аспекты адвокации и защиты прав, а также психологической поддержки матерей особенных детей. В работе подчеркивается важность НКО в укреплении демократических процессов и формировании справедливого и инклюзивного общества.

Ключевые слова: неправительственные коммерческие организации, гражданское общество, партнерство, социальная поддержка, дети с особыми потребностями.

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THE IMPACT OF NON-GOVERNMENTAL ORGANIZATIONS ON GOVERNANCE AND SOCIAL PROCESSES

Abstract. The article examines the importance of non-governmental commercial organizations (NPOs) in developing partnerships, strengthening civil society and their impact on socio-economic processes in Kazakhstan. Particular attention is paid to the activities of NGOs in the field of social support for children with special needs and their families, as well as the creation of an inclusive infrastructure and educational programs. Aspects of advocacy and protection of rights, as well as psychological support for mothers of special children are discussed. The work emphasizes the importance of NGOs in strengthening democratic processes and the formation of a fair and inclusive society.

Keywords: non-governmental commercial organizations, civil society, partnership, social support, children with special needs.

В начале XXI века структура мировой политики стремительно усложняется. Все более значительную роль в процессах глобального управления начинают играть негосударственные акторы. Особое место среди них занимают международные неправительственные организации (МНПО). И хотя мировая система все еще основывается на принципе примата государств, к началу третьего тысячелетия глобальные неправительственные организации заслуженно и правомерно утвердились как влиятельные участники международных отношений.

В связи с этим представляется, что изучение роли и значения международных неправительственных организаций в процессах глобального управления — насущная необходимость современной политологической науки. Международная неправительственная организация — это форма объединения представителей общественности различных стран мира, связанных единой внутренней целью, соответствующей духу и принципам Устава ООН и нормам международного права, не преследующая в своей деятельности цели извлечения прибыли и коммерческих целей, функционирующая на территории более чем двух государств.

Формальными атрибутами МНПО (организации, ассоциации, фонда, движения, института, союза и т. д.) являются независимость от власти, демократические принципы построения и четко определенные программы действий, удаленные от политики и насилия. В отличие от межгосударственных, неправительственные организации не учреждаются на основе договора между государствами и создаются путем объединения физических и/или юридических лиц, деятельность которых осуществляется вне рамок официальной внешней политики государств. Фактически МНПО создается на основании учредительных документов, зарегистрированных в соответствии с национальным законодательством одного государства, но в строго юридическом плане деятельность международных НПО регулируется нормами именно международного права, что достигается путем предоставления им консультативного статуса со стороны Организации Объединенных Наций.

Неправительственные организации в современном виде возникли в еще XIX веке, однако существенное политическое влияние они приобрели лишь в последние полвека. Сам термин «неправительственная организация» вошел в международно-юридический лексикон в ходе создания Устава Организации Объединенных Наций в 1945 году благодаря включению в него Статьи 71 — радикальной по тем временам инновации, позволивший НПО на легальных основаниях участвовать в международных отношениях и межгосударственной дипломатии. С этого времени число международных НПО неуклонно увеличивалось, особенно бурный рост неправительственных организаций, как подчеркивают исследователи вопроса, пришелся на страны с эффективной системой

государственного управления и развитыми демократическими институтами [1].

На 2023 год в Казахстане зарегистрировано более 23 тысяч неправительственных организаций (НПО) [2]. Основная часть этих организаций сосредоточена в крупных городах, таких как Алматы, Астана и Шымкент, а также в Карагандинской и Кызылординской областях (рис. 1). Только в столице зарегистрировано 2996 неправительственных организаций (НПО), что составляет 13,4% от общего числа НПО в Казахстане.



Рис. 1 – Количество зарегистрированных НПО на 2023 год

Одним из ключевых аспектов данных инициатив стало утверждение Главой государства «Концепции развития гражданского общества в Республике Казахстан» 27 августа 2020 года [3]. Благодаря стратегическому документу, определившему вектор развития гражданского сектора, в стране активно создают НПО по различным направлениям. Основная цель неправительственных организаций - достижение общественно важных целей и задач.

Важно подчеркнуть, что неправительственные организации играют ключевую роль в сфере социальной поддержки, особенно в тех областях, где традиционные государственные и частные структуры либо недостаточно охватывают потребности населения, либо не в состоянии адекватно и оперативно реагировать на возникающие вызовы. Эти организации компенсируют недостаток ресурсов и услуг, способствуя улучшению условий и обеспечивая поддержку, необходимую для эффективного решения социальных проблем.

В Казахстане насчитывается более 162 000 детей с особыми потребностями [4]. Эти дети сталкиваются с различными вызовами, связанными с обучением и социализацией, что влечет за собой

необходимость квалифицированной поддержки со стороны родителей и специалистов. Опросы родителей показывают, что они чаще всего нуждаются в профессиональной помощи для обеспечения адекватного сопровождения своих детей, что позволяет им совмещать трудовую деятельность, заботу о других детях и финансирование услуг реабилитологов.

Важными аспектами в данном направлении НПО являются создание доступной инфраструктуры, разработка специализированных образовательных программ и реализация социальных инициатив, направленных на интеграцию детей с особыми потребностями в общественную жизнь [5]. Например, в столице медицинский центр Фонда им. Карабекова Агабека предоставляет бесплатную медико-консультативную и диагностическую помощь родителям детей с сосудистыми патологиями и занимается социальной реабилитацией детей и подростков. В свою очередь, общественный фонд Strong Mothers организует образовательные курсы для детей из социально уязвимых семей, развивает волонтерские инициативы и оказывает юридическую помощь многодетным матерям. Организация «Бакытты шанырак» предоставляет поддержку матерям детей с особыми потребностями в трудоустройстве и обучении новым профессиям.

Психологическая поддержка также является неотъемлемой частью работы НКО. Индивидуальные и групповые консультации с квалифицированными психологами помогают матерям справляться с эмоциональными трудностями и стрессом, связанным с воспитанием особенных детей. Адвокация и защита прав матерей особенных детей также являются важными аспектами деятельности НКО. Организации активно занимаются улучшением законодательных и социальных условий, обеспечивая защиту прав на образование, медицинское обслуживание и социальную интеграцию. Данные усилия способствуют созданию более инклюзивной и поддерживающей среды, повышая общественное сознание и способствуя изменениям в политических и социальных нормах.

Формирование партнерства между государственными и негосударственными учреждениями, выступающими в качестве доноров благотворительных организаций, представляет собой многоэтапный процесс, включающий ряд последовательных действий, направленных на достижение взаимных целей и задач в социальной сфере.

Первым этапом является установление начального контакта и определение общих интересов и приоритетов. В ходе данного этапа государственные учреждения и негосударственные организации, включая потенциальных доноров, осуществляют первичные переговоры для выявления пересечений в целях и задачах, которые могут быть достигнуты путем совместной работы. Данный процесс включает в себя анализ

потребностей общества и возможностей партнеров, а также определение потенциальных областей сотрудничества.

На втором этапе происходит разработка и согласование формата взаимодействия. Данный этап предполагает создание детализированного плана совместных действий, в котором четко определяются роли и ответственность каждой стороны. В рамках данного этапа особое внимание уделяется разработке механизмов координации и обмена информацией между партнерами, а также установлению прозрачных условий финансирования и распределения ресурсов.

Третий этап связан с непосредственной реализацией согласованных программ и инициатив. На этом этапе партнеры переходят к практическому выполнению задач, намеченных в рамках совместного плана. В процессе реализации проектов происходит регулярный обмен информацией между участниками, обеспечивается контроль за выполнением задач и достижением запланированных результатов. Кроме того, на данном этапе осуществляется привлечение дополнительных ресурсов и участников, если это требуется для успешного выполнения намеченных мероприятий.

Четвертый этап включает мониторинг и оценку результатов совместной деятельности. В данном контексте проводится систематическая оценка хода выполнения проектов, анализируются достигнутые результаты и оценивается эффективность предпринятых действий. Оценка осуществляется на основе заранее установленных критериев и показателей, что позволяет объективно судить о прогрессе и выявлять области, требующие улучшения.

Пятый этап предусматривает корректировку и адаптацию стратегии партнерства на основе полученных данных и анализа. В зависимости от выявленных результатов и возникающих вызовов вносятся необходимые изменения в планы и стратегии. Корректировка может включать перераспределение ресурсов, изменение методик работы или пересмотр подходов к выполнению задач. Адаптация позволяет учитывать изменяющиеся условия и потребности, что способствует повышению эффективности партнерства.

Заключительный этап включает завершение сотрудничества и подведение итогов. Готовятся итоговые отчеты о выполненной работе, анализируются достигнутые результаты и рассматриваются возможности для дальнейшего взаимодействия. Эффективное взаимодействие, основанное на взаимном доверии, открытости и готовности к сотрудничеству, позволяет достигать значительных результатов и вносит существенный вклад в развитие гражданского общества и улучшение благосостояния населения.

Таким образом, понимание и анализ роли МНПО в современном глобальном управлении, а также эффективное взаимодействие между

государственными и негосударственными структурами представляют собой ключевые аспекты для дальнейшего развития гражданского сектора и достижения устойчивого социального прогресса.

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МЕЖДИСЦИПЛИНАРНОСТЬ В РАЗВИТИИ КОМПЕТЕНЦИЙ УЧИТЕЛЕЙ ФИЗИКИ

Аннотация: В статье обсуждается роль межпредметных коммуникаций в развитии компетентности учителей физики. Предложены научно обоснованные рекомендации по формированию междисциплинарных компетенций.

Ключевые слова: компетентностный подход, объективная необходимость, интеграция наук, дифференция, политехническое образование, лабораторный практикум.

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INTERDISCIPLINARITY IN THE DEVELOPMENT OF DIFFERENT LEVELS OF COMPETENCE OF PHYSICS TEACHERS

Abstract: The article discusses the role of interdisciplinary communications in the development of different levels of competence of physics teachers. Evidence-based recommendations for the formation of interdisciplinary competencies are proposed.

Keywords: competence-based approach, objective necessity, integration of sciences, differentiation, polytechnic education, laboratory workshop.

Введение

Сегодняшние условия и изменения требуют от учителей, в том числе учителей физики, умеющих использовать все возможности, требовательных, умеющих в полной мере использовать свои способности и возможности. Именно поэтому им важно знать, разрабатывать и применять на практике методы, способы, средства и формы, виды оценивания для развития разных уровней компетентности.

Полное владение учителем физики содержательной и методической стороной своего предмета является необходимым условием. В связи с этим мы считаем, что необходимо обратить внимание на следующие ситуации развития своих компетенций: принятие факта фундаментального обновления содержания физической науки как объективной необходимости; методическое определение приоритета принципа преемственности в системе непрерывного образования; модернизация и проектирование предметов физики; избегать повторов в обеспечении междисциплинарности; установление баланса между уроками и самостоятельным обучением на основе использования современных методов обучения; усиление образовательного направления преподавания физики.

Методы и исследования.

Совершенствование развития компетенций учителя физики: различение, анализ, обобщение, выявление недостатков традиционных и нетрадиционных уроков; обосновать методы использования инновационных образовательных технологий в обучении; понимать необходимость внедрения инноваций в учебный процесс, использования технологий, интерактивных методов и внедрения их в учебный процесс; формирование образовательного процесса на основе инновационных методов, научно обоснованных принципов и законов; проектирование, уточнение образовательных целей и задач с использованием категорий Блума, обеспечение образования на основе электронных и мультимедийных систем; необходимо придерживаться демонстрации использования методов, форм и приемов при проведении открытых занятий и грамотного подхода к обучению.

Н. В. Борисова [1], К. Насриддинова [2], основное внимание преподавателя при обучении физике уделяется изучению основных факторов, понятий, законов, теорий и методов этой науки, ознакомлению учащихся с физическими явлениями, результатами экспериментов, устройств и считают, что необходимо сосредоточиться на том, чтобы научить их самостоятельно использовать свои знания при объяснении работы инструментов. Творческий и компетентный подход к вопросам обеспечения преемственности в преподавании физики, новые взгляды и практические рекомендации имеют большое значение в развитии компетенций учителя физики различного уровня.

По мнению Н.Ш. Турдиева, междисциплинарная связь важна в развитии компетенций учителей физики [3]. В его реализации можно выделить следующие основные направления: правильный подбор и объяснение общих понятий, терминов и определений, относящихся к нескольким учебным предметам; прекрасно преподавать изучаемые вопросы по смежным предметам, не повторяя их; выбор последовательности по времени при изучении понятий, необходимых по одному учебному предмету, но изучаемых по другому учебному предмету; обеспечение последовательности в разработке научных концепций и формировании у студентов обобщающих умений и навыков; реализация единого подхода к формированию общих междисциплинарных компетенций; показать общность методов и инструментов в научных исследованиях, проводимых в разных дисциплинах; показать, что явления, изучаемые в разных науках (например, в физике, химии, биологии, географии), взаимосвязаны.

Основная цель соединения курса физики с другими учебными предметами – обеспечить систематизацию знаний, сформировать в сознании учащихся представления о явлениях природы и их взаимосвязи; формирование у них умения устанавливать связи между событиями, понятиями и теориями; усиление политехнического направления образования; заключается в формировании у учащихся представлений об общности основных законов природы и значении естественных знаний в различных областях[4].

Связь между предметами укрепляет знания о них и повышает интерес к физике.

Есть возможности формирования междисциплинарной компетентности при изучении определенных тем.

В экспериментально-исследовательском процессе базовые компетенции формируются во взаимосвязи с компетенциями, относящимися к учебному предмету. Полагаем, что для развития компетентности учителя физики в работе с информацией целесообразно использовать следующие методы: при изучении новых терминов сначала пользоваться учебником, толковым словарем, а затем подробно определять их самостоятельно; поиск информации из различных источников при подготовке презентаций по темам; в учебниках решение задач дается преимущественно в виде текста; предоставление учащимся задач в виде таблиц, графиков и диаграмм[5].

Результаты

На основании вышеизложенного можно внести следующие предложения, направленные на повышение качества физического образования: предоставление практических вопросов в учебнике или пособии в конце каждого предмета физики; обучение студентов решению задач, с которыми они сталкиваются в незнакомых ситуациях; доработка

учебной программы по физике на основе предложений; разработка критериев оценки и показателей, определяющих уровень сформированности компетентности; выбор методов обучения и методов формирования компетенций у обучающихся; продолжить экспериментальные исследования; развитие разных уровней компетентности учителей физики.

В этом направлении также есть проблемы, которые необходимо решить, а именно: содержание базовых компетенций дается одинаково независимо от того, какой предмет преподается. Замечаний и рекомендаций по их формированию с учетом специфики наук нет. Например, при наличии широких возможностей для формирования коммуникативной компетентности по филологическим предметам легко сформировать компетенцию математической грамотности по математике; содержание базовых компетенций приводится аналогично в разделе групп. Элементы этих компетенций следует распределить отдельно по группам; Никаких рекомендаций о том, какие методы, способы и технологии будут наиболее эффективными для формирования базовых компетенций, не дано. Преподавателю не предоставляются источники информации о том, как их искать, выбирать и использовать; методы и критерии определения наличия у студентов развитых компетенций не разработаны. Отсутствуют научно обоснованные рекомендации по формированию базовых и предметных компетенций по каждому учебному предмету; эксперименты по формированию междисциплинарных компетенций не проводились.

Для демонстрации теоретических знаний учитель физики должен определить и описать изученные физические законы и закономерности, привести примеры их практического применения; решать задачи, связанные с применением изученных физических законов, и выполнять тестовые задания. На занятиях, связывающих физику с другими предметами, желательно организовать деятельность, направленную на формирование компетенций и ориентацию учащихся на профессию.

Существует множество понятий и величин, общих для курсов физики и химии. Учебный материал о строении атома делится следующим образом: в курсе химии изучаются явления, связанные со свойствами и строением электронной оболочки (кроме радиации), заполнение электронной оболочки, строение и свойства атомного ядра изучаются в курсе физики.

Способы установления связи между курсами физики и биологии примерно следующие: изучать явления и законы, влияющие на жизнь растений, животных и человека, и объяснять эти эффекты; изучение электромагнитных излучений различного проявления в нижних слоях атмосферы и объяснение их влияния на органический мир; изучение физических методов и физических инструментов исследования, используемых в биологии. Мы, учителя, должны осознавать, что

интеграция и дифференциация предметов возникла вследствие практических потребностей [6]. Это показывает, что это должно найти отражение в содержании обучения молодого поколения. Это осуществляется посредством межпредметного общения. Благодаря осуществлению межпредметного общения создаются условия для повышения уровня знаний учащихся, правильного формирования их научного мировоззрения, развития их мыслительных способностей, творческих способностей, совершенствования всего учебного процесса.

Связи между предметами мы считаем целесообразным осуществлять по следующим направлениям: необходимо выбирать такую последовательность учебных предметов, чтобы изучение одного предмета создавало основу для изучения другого; обеспечение последовательности в реализации концепций и навыков; обеспечить единство в объяснении общих понятий, законов и теорий; реализация единого подхода к формированию общих представлений и умений. Приемами установления межпредметных связей являются: показ связи явления, изучаемого по одному предмету, с ранее изученным явлением по другому предмету; полагаться на знания, полученные по одному предмету, для получения знаний по другому предмету; решение задач, характерных для межпредметного общения и выполнение лабораторных работ.

Формы учебного урока, допускающие межпредметное общение: урок с элементом межпредметного общения; междисциплинарные семинары и конференции; комплексные экскурсии (например, экскурсия из физики и биологии на природу); лабораторный практикум по межпредметному общению; полевые эксперименты и наблюдения с исследовательским элементом.

Заключение:

В осуществлении междисциплинарной коммуникации можно выделить следующие основные направления: единый подбор и объяснение общих понятий, терминов и определений, относящихся к нескольким учебным предметам; необходимо в совершенстве преподавать изучаемые вопросы по схожим учебным предметам, не изучая их повторно; при изучении понятий, необходимых для одного учебного предмета, но изучаемых по другому учебному предмету, следует правильно выбирать последовательность по времени; необходимо обеспечить последовательность в разработке научных концепций и формировании у студентов обобщающих умений и навыков; необходимо реализовать единый подход к формированию общих междисциплинарных компетенций; необходимо показать общность методов и взаимозависимость изучаемых явлений в научных исследованиях, проводимых в разных дисциплинах.

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ПЕРСПЕКТИВЫ РАЗВИТИЯ РЕЛИГИОЗНОГО И ПАЛОМНИЧЕСКОГО ТУРИЗМА В УЗБЕКИСТАНЕ

***Аннотация:** В данной статье рассматривается религиозный и паломнический туризм в Узбекистане, как важная составляющая туристической индустрии этой страны. Описывается историческое и культурное наследие Узбекистана, его священные места, такие как Самарканд, Бухара, Шахрисабз и Ташкент, которые привлекают паломников и верующих со всего мира. Автор подчеркивает значение религиозного и паломнического туризма для развития туристической отрасли Узбекистана, а также уникальность культурного наследия этой страны.*

***Ключевые слова.** Религиозный туризм, паломнический туризм, историческое наследие, культурное наследие, мечети, мавзолеи, мечеть Биби-Ханым, туристическая индустрия, верующие, паломники.*

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PROSPECTS FOR THE DEVELOPMENT OF RELIGIOUS AND PILGRIMAGE TOURISM IN UZBEKISTAN

***Abstract:** This article examines religious and pilgrimage tourism in Uzbekistan as an important component of the tourism industry of this country. It describes the historical and cultural heritage of Uzbekistan, its sacred places such as Samarkand, Bukhara, Shakhrisabz and Tashkent, which attract pilgrims and believers from all over the world. The author emphasizes the importance of religious and pilgrimage tourism for the development of the tourism industry of Uzbekistan, as well as the uniqueness of the cultural heritage of this country.*

Keywords. *Religious tourism, pilgrimage tourism, historical heritage, cultural heritage, mosques, mausoleums, Bibi-Khanyam mosque, tourism industry, believers, pilgrims.*

Введение. Религиозный и паломнический туризм являются важной составляющей туристической индустрии Узбекистана, страны с богатым историческим и культурным наследием. Страна привлекает верующих и паломников со всего мира, благодаря своим историческим святыням, мечетям, мавзолеям и другим религиозным объектам. Города Самарканд, Бухара, Шахрисабз и Ташкент являются центрами религиозного туризма, где можно посетить древние мечети, мавзолеи и другие священные места. Одной из самых известных достопримечательностей Узбекистана является мечеть Биби-Ханым в Самарканде, которая поражает своей архитектурой и историческим значением. Религиозный и паломнический туризм в Узбекистане имеет долгую историю и продолжает привлекать туристов своей уникальной культурой и гостеприимством.

Основная часть: Туризм, как важный источник дохода большинства стран мира, занимает центральное место в их национальной экономике. Ожидается, что к 2030 году количество туристов достигнет 1,8 млрд. человек.³⁵ Туризм занимает третье место в мире по прибыльности, требует исследований, направленных на решение географических, социальных, экономических и иных проблем, связанных с его значением в развитии экономических территорий, приоритетных направлений развития туристской отрасли, а также влияющих на развитие отрасли [8].

Паломничество, как разновидность религиозного туризма представляет собой странствие людей для поклонения святым местам. Святые места играют важную роль в религиозной жизни мусульман в Центральной Азии, где они обычно носят название мазаров. Основным мотивом паломничества мусульманами является стремление исполнить пятый столп ислама, который носит название - хадж. Как известно, в Центральной Азии совершение паломничества (хадж) в Мекку, ввиду его значительной отдалённости и крупных финансовых расходов на поездку, вызывало определенные трудности и было не доступно для широких слоев населения. Взамен этого важного предписания ислама (фарз) многие местные жители совершали паломничество к святым местам (зийарат), расположенным в своих и соседних районах Ферганской долины, а также других областях Центральной Азии, Афганистана, Восточного Ирана и китайского Синьцзяна. Наиболее популярными центрами такого паломничества в Фергане были, в частности, гробница Хазрата Али к югу от г. Маргилана, гора Тахт-и Сулайман в г. Ош и мавзолей Сафид Булан к

³⁵ <https://www.unwto.org/tourism-in-2030-agenda>

северу от г. Намангана. Такие святыни в глазах простых людей считались равными по положению к Каъбе в Мекке.

О СТРАТЕГИИ «УЗБЕКИСТАН – 2030», в перспективе, планируется доведение числа зарубежных туристов до **15 миллионов**, внутренних туристов — до **25 миллионов**, туристов приезжающих по паломническому туризму, — до **3 миллионов**[1]. Поэтому важно изучать сферу туризма религиозного и паломнического направления в Узбекистане и его регионах.

Согласно экспертным оценкам ВТО, емкость туристических ресурсов Узбекистана составляет один миллион человек. В прошлом году нашу страну посетило около 262 тысяч путешественников. Почти в четыре раза меньше имеющегося потенциала. Между тем, Узбекистан по туристскому потенциалу занимает высокий рейтинг в мировой шкале, однако отдача от этой отрасли весьма незначительна – всего 0,6% от валового национального продукта. Паломнический туризм в Узбекистане имеет существенный потенциал развития благодаря своим древнемусульманским святым городам Бухары и Самарканда. Здесь имеются много святых мест для последователей ислама. Международная неделя паломнического туризма прошла в Самарканде, Бухаре, Хиве 1-3 ноября 2022 года. По данным организаторов – Министерства туризма и культурного наследия Узбекистана, ее цель – раскрыть потенциал паломнического туризма в стране, диверсифицировать услуги паломнического туризма и увеличить экспорт туризма.

О развитии этого вида туризма в Самарканде рассказал заместитель премьер-министра, министр туризма и культурного наследия Республики Узбекистан Азиз Абдухакимов. Об инфраструктуре для паломнического туризма, специально обученных гидах, транспортном сообщении, турфирмах и имеющихся проблемах в сфере нам в интервью рассказали председатель исполкома координационного центра мусульман Северного Кавказа, муфтий Ставропольского края и первый заместитель начальника главного управления туризма и культурного наследия Бухарской области. В результате нашей работы по адаптации инфраструктуры к паломническому туризму, Узбекистан поднялся с 32-го на 9-е место в отчете GMTI (Global Muslim Tourism Index) за 2017 год, - сказал министр туризма. - В этом году на Глобальном саммите Halal in Travel Awards в Сингапуре, посвященном восстановлению и развитию туристического рынка мусульманского мира, Самарканд стал победителем в номинациях «Направление года исламского наследия» и «Лучший развивающийся мусульманский город года». Еще одним важным событием является то, что Организация исламского сотрудничества объявила город Хиву туристической столицей исламского мира 2024 года.

Узбекистан - страна с богатым историческим наследием и множеством священных мест, которые привлекают множество паломников

и туристов, интересующихся религиозной и культурной историей этой страны. Религиозный туризм в Узбекистане имеет давние корни и представляет собой важную часть туристической индустрии этой страны. Одним из самых известных и посещаемых священных мест в Узбекистане является город Самарканд, который считается одним из старейших городов в мире. В Самарканде находятся такие знаменитые архитектурные памятники, как мавзолей Гур-Эмир, где похоронен Тимур - великий завоеватель и правитель, построенная в честь великого ученого и астронома Улугбека[6].

Другим важным центром религиозного туризма в Узбекистане является город Бухара, который также известен своими многочисленными мечетями, мавзолеями и другими священными местами. В Бухаре можно посетить мавзолей Саманидов, рубеж IX-X вв. Династическая усыпальница возведена Султаном Самани. Это первый из известных мусульманских мавзолеев в Средней Азии и один из самых ранних на всём Востоке, так как до середины IX в. исламом запрещалось строительство. А также мечеть Калян - соборная джума-мечеть - лицо города, построенная в 1-й половине XV в., 1514 г.-середине XVI в. и минарет Калян - самый ранний из сооружений -минарет- построен в 1127 г.. Минарет Калян - это архитектурный символ города. Но в эмирской Бухаре он был ещё и символом религии и власти: с его вершины не только призывали на молитву, но и сбрасывали притворённых к казни.

Помимо Самарканда и Бухары, в Узбекистане также можно посетить множество других священных мест, таких как Шахрисабз, город-родина Амира Тимура, где находится его мавзолей, а также Ташкент - столица страны, с его знаменитым комплексом Хаст-Имам.

Паломнический туризм в Узбекистане также привлекает множество верующих людей, желающих посетить святыне места и молиться на них. Мусульмане приезжают в Узбекистан для посещения мечетей и мавзолеев святыне людей, а христиане интересуются древними церквями и храмами этой страны.

Таким образом, религиозный и паломнический туризм играют важную роль в развитии туристической индустрии Узбекистана, привлекая культурных и религиозных туристов со всего мира. Знакомство с богатым культурным наследием этой страны позволяет путешественникам погрузиться в уникальную атмосферу древности и духовности.

1. Маршрут "Священные города Узбекистана":

- День 1-3: Прибытие в Ташкент, посещение храма Хаст-Имам, мавзолея Кафал Шоши, мечети Хаст-Имам.

- День 4-6: Приезд в Самарканд, посещение мавзолеев Шахи-Зинда, медресе Улугбека и мавзолея Амира Тамура.

- День 7-9: Прогулка по древней Бухаре, где можно посетить мечеть Калян, мечеть Саманидов (Семь святынь Бухары Баховуддин Накшбанд-

Ариф Ревгари-Бабой Самосий-Ромитаний-Абдухолик Гиждуваний-Саид Амир Кулол-Хожа Махмуд Анжир- Фагнавий).

- День 10-12: Поездка в Шахрисабз, где находится мавзолей Тамерлана и мечеть Джахонгира Мирзо.

2. Маршрут "Духовное путешествие по Узбекистану":

- День 1-3: Прибытие в Ташкент, посещение мечети Хаси-Имам, Хазрет-Имам, мавзолея Шейха Зайнулдина Бобо.

- День 4-6: Путешествие по Самарканду, где можно посетить мавзолей Гури Эмир, мечеть Биби-Ханум, медресе Улугбека. (В паломническом туризме в Самарканде Худжа Даниер-Худжа Ахрори Вали-Худжа Абу Берун-Худжа Абу Дарун-Махдуми Азам-Имам Бухари).

- День 7-9: Переезд в Бухару, посещение мавзолея Бахауддина Накшбанди, мечети Калян, мавзолея Имама Аль-Бухари.

- День 10-12: Поездка в Шахрисабз, где находится мавзолей Тамерлана, мечеть Джахонгира и другие исторические объекты.

Проблемы: 1. Ограниченный доступ к некоторым религиозным святыням из-за их статуса или политических обстоятельств.

2. Недостаточное развитие инфраструктуры для паломнического туризма, включая отсутствие комфортного проживания и транспортных услуг.

3. Недостаточная информированность туристов о религиозных традициях и обычаях Узбекистана, что может привести к конфликтам или недопониманиям.

4. Возможные проблемы с сохранением и защитой исторических религиозных объектов от разрушения или вандализма.

Перспективы и развитие: 1. Развитие специализированных туров и экскурсий для паломников, включая программы духовного развития и обучения.

2. Создание центров информации о религиозных местах и традициях Узбекистана для повышения осведомленности туристов.

3. Совершенствование инфраструктуры и услуг для паломников, включая строительство гостиниц и мест для молитв.

4. Сотрудничество с религиозными организациями для организации паломнических мероприятий и мероприятий по духовному развитию.

Потенциал религиозного и паломнического туризма в Узбекистане огромен, и при правильном подходе можно создать уникальные и привлекательные программы для путешественников, интересующихся духовным развитием и историческими традициями.

Эти маршруты позволят путешественникам погрузиться в атмосферу религиозной истории Узбекистана, посетить святыни и места паломничества, а также увидеть богатое культурное наследие страны.

Выводы: Религиозный и паломнический туризм в Узбекистане играют значительную роль в развитии туристической индустрии страны.

Благодаря своему богатому историческому и культурному наследию, Узбекистан привлекает верующих и паломников со всего мира, предоставляя им возможность посетить древние святыни, мечети, мавзолеи и другие религиозные объекты. Города Самарканд, Бухара, Шахрисабз и Ташкент являются центрами религиозного туризма, где туристы могут погрузиться в атмосферу древности и почувствовать дух веры.

Религиозный и паломнический туризм в Узбекистане представляют собой важное направление развития туристической индустрии, способствующее сохранению и продвижению культурного наследия страны. Посещение религиозных мест и святынь не только позволяет туристам познакомиться с историей и традициями Узбекистана, но и способствует духовному обогащению и взаимопониманию между различными культурами. Религиозный туризм в Узбекистане открывает уникальные возможности для путешественников испытать глубокое уважение к религиозным традициям и ощутить связь между прошлым и настоящим.

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АСАЛАРИЧИЛИКНИ РИВОЖЛАНТИРИШДА УКРАИНА ТОМОНИДАН ЭРИШИЛГАН ИЖОБИЙ ТАЖРИБАЛАРНИ ҚЎЛЛАШ ИМКОНияТЛАРИ

***Аннотация.** Мазкур мақолада дунёда асаларичилик тармогининг ривожланиши, уни етиштириш ва экспорт қилишда етакчи давлатлар, уларнинг улуши, Украинада асал етиштириш ва экспорт қилиш тажрибаси тўғрисида тадқиқотлар олиб борилган ва уни мамлакатимизда жорий этиш бўйича ижобий жиҳатлари тўғрисида таклифлар ишлаб чиқилган.*

***Калит сўзлар:** асаларичилик, янги технологиялар, экспорт, моддий воситалар, соғлом рақобат, асал етиштириш*

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OPPORTUNITIES TO APPLY POSITIVE EXPERIENCES ACHIEVED BY UKRAINE IN THE DEVELOPMENT OF BEEKEEPING

***Annotation.** This article discusses the development of the beekeeping industry in the world, the leading countries in its cultivation and export, their share, the experience of growing and exporting honey in Ukraine, and also develops recommendations for its implementation in our country.*

***Key words:** beekeeping, new technologies, export, material resources, healthy competition, honey cultivation*

Кириш. Дунёда асаларичилик қишлоқ хўжалигининг жадал ривожланиб бораётган, янги инновацион технологияларни ва илм-фан ютуқларини тез ўзлаштираётган тармоқлардан бири бўлиб, у қарийб барча қиталарда кенг тарқалган агробизнеслардан бири ҳисобаланди. Шу билан биргаликда, асаларичилик тармоғи барча давлатлар ўзига хос бўлган инновацион технологияларга ҳамда йўналишларга эгаллиги билан ажралиб туради.

Шу боис, асаларичилик тармоғи ривожланган давлатлар тажрибалари ва уларни мамлакатимиз шароитида жорий этиш имкониятларини ўрганиб чиқиш долзарб касб этмокда.

Асал етиштиришда етакчи бўлган давлатларнинг барчаси ҳам аҳоли жон бошига нисбатан ўз давлатини тўлиқ таъминлаган ҳолда уни экспортга йўналтира олмайди. Ўз навбатида асал етиштириш бўйича кучли 10 таликка кирмаган бази давлатлар ҳам асал экспорт қилишда етакчилар рўйхатида ўз улушига эга бўлиб бормоқда. Бу албатта асал сифати ҳамда агротехнологиясининг ўзига хослиги билан жаҳон бозоридаги конюктурга ўзгариб бориши билан изоҳланади.

Юқоридагиларга асосан, асал етиштиришда ҳажм ва сифат кўрсаткичларига кўра етакчи давлатлар тажрибаларини мунтазам равишда ўрганиб бориш, улар томонидан эришилган ижобий тажрибаларни мамлакатимизда қўллаш имкониятлари тадқиқ этиш долзарблик касб этади.

Украина асал ишлаб чиқариш бўйича нафақат МДХ давлатлари орасида, балки Европада ҳам етакчи ҳисобланиб, асаларичилик қишлоқ хўжалигининг энг ривожланган тармоқларидан биридир. Виннитса, Житомир, Запорожье, Ивано-Франкивск, Николаев ва Хмельнитский вилоятларининг ҳар бирида 100 мингдан ортиқ асалари оилалари мавжуд. Бугунги кунда асалари уяларини 87 фоизи хусусий секторда, тахминан 97 фоизи Украинанинг ғарбий минтақаларида жойлашган [5].

Украинада асалга бўлган талаб даражаси бозордаги таклифга нисбатан анча юқори. Бу, ўз навбатида, асаларичиликни аграр тадбиркорлик фаолияти сифатида ривожлантириш учун ажойиб имкониятлар беради. Бундан ташқари, мамлакатда 2000 йилда “Асалчилик тўғрисида”ги қонун қабул қилинган, унга кўра барча асаларичилик маҳсулотлари ва асаларичилик фаолиятининг ўзига солиқ солинмайди. Қонун асалариларни кўпайтириш, саноатда фойдаланиш жараёнларини тартибга солади, асалари оилаларини муҳофаза қилишни таъминлайди, бу эса янги тадбиркор учун яхши имкониятларни яратиб беради.

Украинада ишлаб чиқариш самарадорлиги бошқа давлатлар билан солиштирганда, жуда паст бўлиб қолмоқда. Мисол учун, Канадада бир асаларичи 4 тоннадан ортиқ асал ишлаб чиқарса, Украинада бу кўрсаткич 200 килограммни ташкил қилади. Кўрсаткичлардаги бундай фарқнинг мавжудлиги Украинада асал ишлаб чиқаришнинг ҳаваскорлик даражасида эканлиги билан изоҳланади. Асал етиштиришни самарали ташкил этишга “Асаларичиларнинг кооперативлар бирлашмаси” ёрдам беради.

Сўнгги йилларда Украинада асаларичик соҳасидаги асосий йўналишлардан бири бу сифат жиҳатидан тармоқни янги босқичларга олиб чиқариш саналади. Бунда Европа Иттифоқининг бозорларига кириб бориш учун Европа стандартларига мос маҳсулотларни етиштиришга урғу қаратилмоқда. Бунинг учун эса, асал етиштиришда антибиотиклардан фойдаланиш кўламини камайтириш, мумсиз ишлаб чиқриш усулларини жорий этиш ҳамда асал етиштириш агротехнологияларига, хусусан асални пишиб етилиш муддатларига қатъий риоя этишни талаб этади. Бу каби тадбирларни бажаришда эса асаларичиларга “Асаларичиларнинг

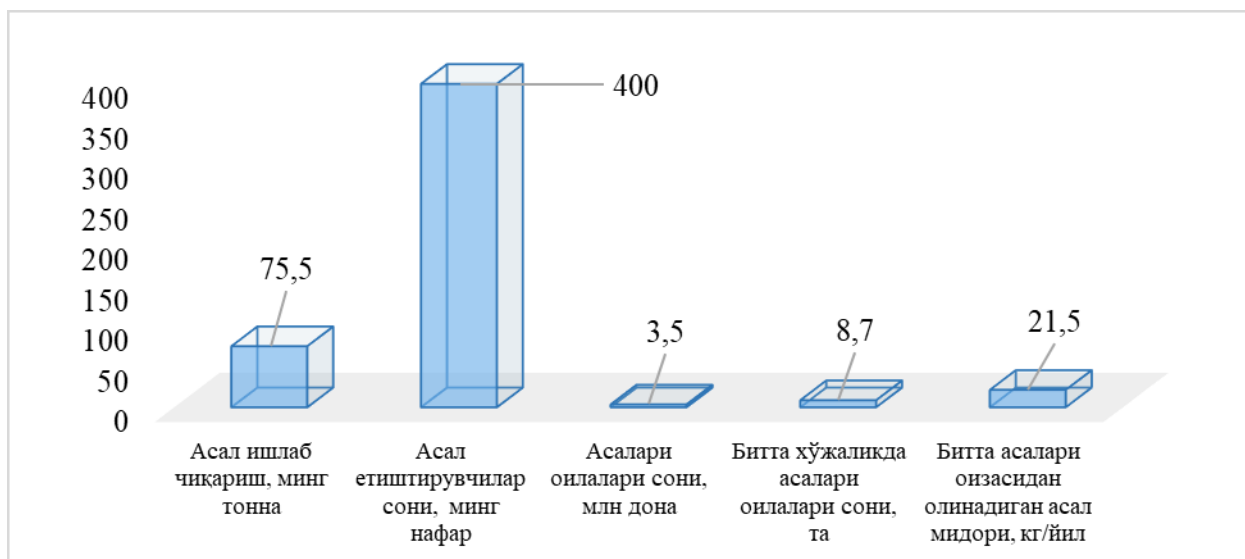
кооперативлар бирлашмаси” ташкилий, иқтисодий ва илмий кўмак кўрсатиб келмоқда. Айниса ЕИ бозорларига киришда имтиёзларни олиш ва асал экспорт қилувчи корхоналарга ташкилий кўмак беришда бирлашманинг ўрни беқиёс.

Асаларичилик маҳсулотларини сифат кўрсаткичларининг яхшиланиши ҳамда белгиланган агротехнологияларга амал қилиниши натижасида баъзи қишлоқ хўжалиги ва озиқ-овқат маҳсулотлари учун Европа Иттифоқи ва Украина имтиёзли тариф квоталари қўллайди. Имтиёзли тариф квоталари белгиланиши квотадан ортиқ экспортни тақиқлашни англатмайди. Хусусан, Украина компаниялари товарларни тариф квотасидан ортиқ чекловларсиз етказиб бериши мумкин, аммо бу ҳажмлар ЕИда умумий импорт режимида бўйсунди. Яъни, квота доирасидаги экспорт учун 0 % бож, квотадан ташқари экспорт учун Европа Иттифоқи божхона тарифи билан белгиланадиган импорт божлари қўлланилади. Сўнгги йилларда Украина компанияларига ЕИ 36-40 минг тоннагача асал экспорти учун имтиёзли квоталар тақдим этилган [4].

Умуман олганда Украинада асал етиштириш бўйича статистик рақамлар кўрсатишича, йиллик ишлаб чиқариш қуввати 75 минг тоннани ташкил этади. Ушбу маҳсулот 400 мингдан ортиқ асал етиштирувчи хўжаликлар томонидан етиштирилади. Ушбу хўжаликларда жами 3,5 млн атрофида асалари оилалари парвариш қилинади. Ўртача битта асаларичилик хўжалигида 8,7 қути асалари оиласи парвариш қилинади. Битта асал оиласидан олиннадиган асал миқдори эса 21,5 килограмми тақшил этади (1-расм).

Рақамлардан кўришимиз мумкинки, асаларичилик соҳасида фаолият юритувчи хўжаликлар сони, ишлаб чириш ҳажми ва бир асалари оиласининг ҳосилдорлиги дунёдаги ўртача кўрсаткичлардан юқори бўлиб, у соҳада олиб борилган узоқ йиллик ислохотлар ва илм фанга киритилган инвестициялар натижаси ҳисобланади.

Украинада асаларичилик тармоғи қонун билан мустаҳкамланган бир қатор ўзига ҳосликлари билан ажралиб туради. Хусусан, асаларичиликда фақат маълум ҳудудда районлаштирилган, ижро ҳокимияти томонидан тасдиқланган асалари зотларини боқишга рухсат этилади.



1-расм. Украинада асаларичилик тармоғининг асосий кўрсаткичлари, 2020 йил ҳолатига

Асаларичилик хўжаликларини ҳисобга олиш ва даволаш-профилактика тадбирларини ўтказиш учун махсус ветеринария-санитария паспорти жорий этилган. Барча турдаги хўжалик юритиш шакллари асаларичилик билан шуғулланиши мумкин, аммо улар асаларичилик хўжалиги сифатида рўйхатдан ўтиши ҳамда ишлаб чиқрилган маҳсулотларини ветеринария-санитария экспертизасидан ўтказиши шарт. Асаларичилик хўжаликларининг барчаси, хусусан, етиштирувчилар, саноат асосида қайта ишловчилар солиқлардан озод этилган.

Эътиборлиси жисмоний ва юридик шахсларга асаларичилик хўжаликларига қонун билан белгиланган тартибда ер майдонлари ажратиб берилади.

Ўсимликчилик соҳасида фаолият юритувчи хўжаликлар ўсимликларни касаллик ва заруркунандалардан ҳимоялаш мақсадида кимёвий препаратлардан фойдаланган тақдирда, 10 кун олдин 10 километргача бўлган майдонда фаолият юритувчи асаларичилик хўжаликларини огоҳлантириши шарт. Бунда қўлланилаётган кимёвий восита тури, номи ва таъсир кўлами тўғрисидаги маълумотлар тақдим этилиши талаб этилади.

Украинада асаларичилик тармоғини давлат томонидан қўллаб қувватлаш, ички бозорда талаб паст бўлган юори сифатли ва нисбатан қиммат асал етиштирган хўжаликларни молиявий рағбатлантириш, экспортига кўмаклашиш мақсадида бир қатор давлат дастурлари ишлаб чиқилган.

Шу билан биргаликда Украинада органик маҳсулот етиштиришга ҳам алоҳида эътибор қаратилаётган бўлиб, буни амалга ошириш учун мамлакатда табиий шароит, жумладан, тоғли ва ўрмон ҳудудлари кенг тарқалган. Ушбу ҳудудларда органик маҳсулот етиштирувчи асаларичилик

хўжаликлари асалари қутиси, ташиш ва етиштирилган асални сақлаш қурилмаларини имтиёзли асосда харид қилиш тизимини ишлаб чиқилган.

Юқорида таъкидланганидек Украинада асаларичилик хусусий секторда, хаваскорлик даражасидаги агробизнес шаклига айланган бўлиб, уни ишлаб чиқарушга қизиқишлари юқори бўлган ёрдамчи оила хўжаликлари сони йилдан йилга ортиб бормоқда. Аммо, мавжуд қонунчиликка кўра асаларичилик билан фақатгина етарли билим ва кўникмаларига эга бўлган шахсларгина шуғулланиши мумкин. Шу боис мамлакатда ҳудудлар кесимида табиати, иқлими, ўсимликлари ва районлаштирилган асалари зотларидан келиб чиққан ҳолда ўқитиш, билим ва кўникмаларини ошириб бориш тизими жорий этилган. Бунда “П.И.Прокопович номидаги асаларичилик институти” миллий илмий марказнинг алоҳида ўрни бор. Ушбу илмий марказ томонидан ташкил этиладиган илмий семинар ва ўқув курслари учун бюджетдан алоҳида молиявий ресурслар ажратилади.

Умуман олганда асаларичилик тармоғини барқарор ривожлантиришда ушбу тармоқ ривожланган давлатлар тажрибалари кўрсатишича соҳани ривожлантиришнинг асосий дастаклари сифатида қонунчилик асосида тартибга солиш, илм-фанни ривожлантириш, шунингдек, моддий-техник базасини мустаҳкамлаш йўналишларига эътибор қаратилмоқда.

Мамлакатимиз шароитида ҳам бу борада бир қатор ислохотлар амалга оширилган бўлиб, олиб борилаётган ислохотлар кўламини янада ошириш мақсадида Украина давлатининг қуйидаги тажрибаларини жорий этиш таклиф этилади. Жумладан:

- “Асалчилик тўғрисида”ги қонун қабул қилиш;
- асаларичилик хўжаликларини ҳисобга олиш ва даволаш-профилактика тадбирларини ўтказиш учун махсус ветеринария-санитария паспорти жорий этиш;
- жисмоний ва юридик шахсларга асаларичилик хўжаликларига қонун билан белгиланган тартибда ер майдонлари ажратиш;
- ўсимликларни касаллик ва зарурқунандалардан ҳимоялаш мақсадида кимёвий препаратлардан фойдаланган тақдирда, 10 кун олдин 10 километргача бўлган майдонда фаолият юритувчи асаларичилик хўжаликларини огоҳлантириш;
- асаларичиликка ихтисослашган алоҳида миллий марказ томонидан субъектларга хизмат кўрсатиш, асаларичиларни билим ва малакаларини ошириш, асалари зотларини яхшилаш ва ҳок.

Ушбу ташкилий янги механизмларнинг жорий этилиши натижасида мамлактаимизда асаларичилик соҳаси барқарор ривожланишини таъминлаш, ички талаб даражасида маҳсулот етиштирган ҳолда сифатли асал маҳсулотларини экспорт қилиш имкониятлари яратилади.

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ПОМИДОРНИНГ ЎРГАНИЛГАН F₁ ДУРАГАЙ АВЛОДЛАРИ ҲОСИЛДОРЛИГИ ВА УНИ СИФАТИ

Аннотация. Мақолада помидорнинг ўрганилган F₁ дурагай авлодларида олиб борилган фнологик кузатувлар, ҳосилдорлик ва уни сифати бўйича маълумотлар келтирилган.

Калит сўзи: помидор, ҳосилдорлик, ўсиши ва ривожланиши, ёруғлик, мева, тупроқ, ўсимлик.

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PRODUCTIVITY AND QUALITY OF STUDIED F₁ HYBRID GENERATIONS OF TOMATO

Abstract. The article presents data on phenological observations, productivity and flour quality of the studied F₁ hybrid generations of tomato.

Key words: tomato, yield, growth and development, light, fruit, soil, plant.

Помидор сайёрамизда тарқалган сабзавот экинлари қаторида асосий экинлардан бири ҳисобланади. Бу экин, нисбатан, кечроқ ҳаётга тадбиқ этилганига қарамасдан ҳозирги даврда кўпчилик мамлакатларда катта майдонларда етиштирилмоқда. Помидор иссиқсевар ўсимлик. Ҳарорат помидорни ўсиши ва ривожланиши учун энг муҳим омиллардан бири ҳисобланади. Помидор учун ёруғлик муҳим омил бўлиб унда содир бўладиган барча фотосинтез жараёни сермахсул бўлади. Кучли ёруғлик таъсирида органик моддаларни синтез бўлиши, вегетатив органларини ўсиши ва репродуктив аъзоларини вазни жадал суръатда ошади.

Ёруғликни етишмаслиги карбонат ангидридни барглари ўзлаштиришини сусайтириб, ўсимликлари ривожланишини сезиларли даражада сусайтиради.

Демак, ёруғлик помидорни ўсиши ва ривожланишида ҳал қилувчи омиллардан бири экан.

Помидор кўп барг юзасига эга бўлиши ва илдиз тизимини асосий қисми тупроқ қатламининг 30-40 см га жойлашганлиги, қолаберса тропик мамлакатлардан келиб чиққанлиги сабабли у намталаб ўсимлик ҳисобланади. Маълум даражада қурқоқчиликка ҳам чидамли ҳисобланади.

Тажрибалар Андижон қишлоқ хўжалиги ва агротехнологиялар институтининг тажриба хўжалигида 2023 йил июн-ноябр ойларида

ўтказилди.

Институт тупроғи кимёвий таркибида азот миқдори кўп бўлмай, у 0,04-0,05 ва фосфор 0,15-0,20% ни ташкил этади, аммо калий билан етарлича таъминланган бўлиб, гумус миқдори 0.5-1.5% атрофида. Ернинг ҳайдалма қатламида ҳаракатчан нитратлар ва фосфор кислотаси кам, шунинг учун тажриба станцияси тупроғи унумдорлиги пастлиги ва ўғит солишга муҳтожлиги билан характерланади.

Институт тупроғи барча суғориладиган бўз тупроқлар каби ўзининг биологик активлиги билан тегишли технологик жараёнларни ўз вақтида ўтказиш ва сунъий суғориш ҳисобига унда полиз, сабзаёт ўсимликлари ва картошкадан юқори ҳосил олиш мумкин.

Тажриба участкасининг тупроғи озиқа элементлари билан таъминланиши куйидагича тавсифланади:

Тупроқ қатлами, см	1 кг сабзаёт куруқ тупроқ таркибидаги озиқ элементлар, м ² да		
	Ҳаракатчан		Гумус умумий, %
	NO ₃	P ₂ O ₅	
0-25	20.0	14.0	1.2
25-40	16.3	9.6	1.0

Тадқиқот услуби. Тажрибада помидорнинг Рунер F₁, Варганза F₁, Алабина F₁ дурагай авлодлари 40 кунлик кўчати экиб синалди.

Тажриба 4 қаторли 4 такрорланишли, эгатлар узунлиги 5 м, ҳисобга олинadиган майдон юзаси 10,5 м², эгатларга экиш схемасига кўра 25 тупдан 10 тупгача ниҳоллар экилди.

Тажриба майдончасида куйидаги фенологик, биометрик ва бошқа кузатиш ишлари ўтказилди:

1. Фенологик кузатишлар – кўчат етиштиришда помидорни 10 ва 75% ниҳолларини ҳосил бўлиши, биринчи ва кейинги чин баргланиши ҳамда ғунчаларини ҳосил бўлиши кун оралатиб кузатиш усули билан аниқланди.

2. Экиш олдида кўчатларни сифати кўрсаткичлари аниқланди. Бунда ҳар бир помидор навидан 10 тупдан ажратилиб (ўртача ривожланганида) олиб уни, баландлиги, барг сони, ғунчалар ҳамда гуллари сони саналиб ўрганилди.

3. Ниҳолларни ўсиши ва ривожланиши даражаси помидорни ҳар бир навидан 10 тупи ажратилиб ҳар тўрт такрорланишда, асосий пояси баландлиги, барг сони, бирламчи ва иккиламчи ён поялари сони ҳамда узунлиги аниқланди.

4. Помидор ўсимлигини турли хилдаги вирус касалликлари билан зарарланиши, оддий кўриш ва кузатиш усули билан бажарилди.

5. Ҳосилдорлиги ва унинг сифати аниқланди. Бу кузатиш ҳар 3-4 кун ораланиб, терилган помидор мевалари таварбоб ва нотоворга ажратилиб тарозида тортиш усули билан бажарилди. Гектардан олинган ялпи умумий

ҳосил сўнги терим даврида (5 октябрда) тўлиқ пишиб етилган, нимранг ва кўк мевалари ёппасига териблиб, улар хилланиб оғирлиги тарозида тортилиб аниқланди. Мева хилларининг фоиз ҳисобидаги миқдори, бири-бирига таққос-лаб ҳисоблаш билан аниқланди. Бунда ҳосилни таркибий қисми (майда, нотава, чириган, ёрилган ҳамда хашоратлар билан зарарланган) ҳам аниқланди.

6. Ўрганилган масалаларни иқтисодий самарадорлигини таҳлил қилинди.

Тадқиқот натижалари. Помидор такрорий экин сифатида етиштирилганда ундан олинадиган ялпи ҳосил ва уни таркибида биологик пишиб етилган мевалари миқдори асосий кўрсаткич ҳисобланади. Чунки помидорни эртаги сабзавот ва бошоқчилардан бўшаган ерларга экишдан асосий мақсад, аҳолини узоқ муддат узлуксиз, очиқ майдонда етиштирилган, таннархи арзон помидорни янги ҳосил билан таъминлаш ва юза бирлигидан олинадиган ҳосил миқдорини кўпайтиришдан иборат.

Биз помидор ҳосили терими даврида кузатишларни давом эттириб қуйидаги натижаларни олдик (1-жадвал).

1-жадвал

Помидорнинг F_1 дурагай авлодлари ҳосилдорлиги ва уни сифати

Нав намуналар	Терим сони, марта	Ҳосилдорлик (жами) т/га	Пишган товарбоп мевалари миқдори		Пишиб етилмаган товарбоп мевалари миқдори		Нотовар мевалари миқдори	
			т/га	%	т/га	%	т/га	%
Рунер F_1	9	24,2	17,4	72	5,2	21,5	1,6	6,5
Варганза F_1	7	29,1	18,9	65	7,4	25,4	2,8	9,6
Алабина F_1	6	22,4	13,4	60	5,7	25,4	3,3	14,6
Октябрь st	6	21,7	12,3	57	5,6	26,7	3,8	16,3

1-жадвалда келтирилган рақамлардан ҳосилни энг кўп териш Рунер F_1 дурагай авлоди экилган майдончада (9 марта), энг кўп ҳосилни эса Варганза F_1 дурагай авлоди экилган майдондан олинди (29,1 т/га).

Помидор кўчати бир хил шароитда етиштирилиб бир хил озикланиш майдонига экилиб, агротехник тадбирларни бир меъёрга ўтказилишга қарамасдан, уларнинг ҳосилдорлиги, биологик пишиб етилган ҳамда етилмаган мевалари ҳар хил бўлди. Жумладан, такрорий экин сифатида етиштириб юқори ҳосил олиш учун синалган помидорлардан, тезпишар Рунер F_1 дурагай авлоди гектарида 24,2 тонна ҳосил берди. Шундан 17,4 тоннасини ёки 72% ни пишиб етилган мевалари ташкил этди. Пишиб етилмаган аммо товарбоп мевалари эса умумий ҳосилнинг 5,2 т/га, 21,5% сини ташкил қилди. Нотовар мевани миқдори эса 0,9 т/га ёки 6,5 %дан ошмади.

Саналган помидор навларидан Варганза F₁ нави барча дурагай авлодларига нисбатан биринчи навдан 4,9 т/га, Алабина F₁ дурагай авлодидан дан эса 6,7 т/га га кўп ҳосил берди. Шу билан бирга уни пишиб етилган мевалари миқдори ҳам биринчи ва учинчи дурагай авлодларига нисбатан тегишлича 1,5; 5,5 т/га га кўп бўлди. Аммо товарбоп пишиб етилмаган меваларини салмоғи Рунер F₁ дурагай авлодидан 3,9 % га кўп бўлди.

1-жадвалдаги рақамларни таҳлили асосида, помидор дурагай авлодлари такрорий экин сифатида етиштирилганда, уларнинг умумий ҳосили таркибида пишиб етилмаган, аммо товарбоп ҳамда нотовар мева ҳосилини турли миқдорда бўлишига қуйидагилар сабаб бўлиши мумкин. Яъни, помидор кўчатлари бир вақтда экилган даврда уларда, ғунча ва гулларни бўлиши, гуллаш, бирламчи ва иккиламчи ён шохларини эрта ҳосил қилиши ҳамда меваларини эртароқ қизара бошлашлари каби ривожланиш босқичларини барвақт ўтишини асосий сабаб деб қўрсатиш мумкин.

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ИСТОРИЯ ГЕОГРАФИЧЕСКОГО И ПОЧВЕННО- ГЕОБОТАНИЧЕСКОГО ИЗУЧЕНИЯ ПЕСКОВ УСТЮРТА

Аннотация

В статье рассматривается история географического и почвенно-геоботанического изучения песков Устюрта. Устюрт представляет собой в основном гипсовую пустыню с пространствами солончаков. Песчаные пустыни рассеяны в виде довольно многочисленных площадей. Однако значение пустыни для освоения Устюрта очень велико, так как именно здесь находятся наиболее ценные пастбища.

Ключевые слова: пастбища, пески, площадь, впадина, фрагмент, солончаки.

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HISTORY OF GEOGRAPHICAL AND SOIL-GEOBOTANIC STUDY OF USTYURT SANDS

Annotation

The article discusses the history of geographical and soil-geobotanical study of the sands of Ustyurt. Ustyurt is mainly a gypsum desert with areas of salt marshes. Sandy deserts are scattered in quite numerous areas. However, the importance of the desert for the development of Ustyurt is very great, since it is here that the most valuable pastures are located.

Key words: pastures, sands, area, depression, fragment, salt marshes.

Приведенные данные о песках, окружающих Устюрта и до сих пор в большей своей части не подвергавшихся систематическому исследованию. Охарактеризованы своеобразные гипсово-песчаные и солончаково-

песчаные пустыни бессточных впадин и фрагменты щебнисто-песчаных пустынь на чинках (обрывах).

Плато Устюрт остается системой массивов высокопродуктивных пастбищ, пригодных для использования в овцеводстве, коневодстве верблюдоводстве. Поэтому Устюрт представляет значительный интерес для народного хозяйства.

Отдельные части этой пустыни и некоторые типы ее ландшафтов исследованы пока недостаточно. В первую очередь это следует отнести к песчаным массивам Устюрта. Участки песчаной пустыни на Устюрте рассеяны в виде довольно многочисленных площадей, каждая из которых не очень велика. Однако значение этого типа ландшафтов для освоения Устюрта очень велико, так как именно здесь находятся наиболее ценные пастбища, пригодные для зимовки скота и здесь же существуют наиболее благоприятные условия для формирования локальных скоплений неглубокозалегающих пресных или слабосоленоватых вод, которые могут быть использованы при создании сети водопоев. Между тем, песчаные массивы Устюрта в силу своей разобщенности, а также в силу сложных условий работы в них, почти не подвергались специальному изучению. Более других известен массив Сам (Агеева, Соломоченке, 1951; Пельт, Червинский, 1956; Халмуратов, 1979), а отчасти также и Матайкум. Прочие же пески получили лишь беглую, по преимуществу чисто ботаническую, характеристику в небольшом числе мелких статей или разделов монографий, описывающих Устюрт в целом (Викторов, 1971; Алланиязов, Викторов, Пальт 1984), а некоторые вообще не описаны. Поэтому специальное рассмотрение песчаных массивов Устюрта очень актуально.

Помимо практических прикладных аспектов изучения песков Устюрта оно имеет и большое научное значение для познания взаимоотношения разных ландшафтов друг с другом. Как известно Устюрт представляет собой в основном гипсовую пустыню с обширными включенными в нее пространствами солончаков, лежащих по дну бессточных впадин. Пески, рассеянные в виде острогов на этом фоне и лежащие то среди территории с высокой гипсоносностью субстрата, то контактирующие с солончаками несомненно подвергаются определенным изменениям. Они определяются подобным ландшафтным соседством. И осуществляется за счет геохимических потоков. Поэтому-исследования эволюции этих островных песков позволит сделать некоторые ландшафтно-геохимические и экологические выводы. Также актуальна и охрана песков от опустынивания, вызываемого нерациональным использованием их.

На Устюрте расположено много песчаных массивов наиболее крупные из них - Сам и Матайкум - лежат частью на дне, частью на бортах Северо-Устюртского прогиба. Несколько юго-западнее по южному берегу впадины Каратюлей находятся сильно засоленные и обогащенные гипсом

пески Исен-Казах. На северном конце впадины Агыйн лежит массив Картпайкум, а у северо-западного борта впадины Барсакелмес-пески Табын-су. В районе увала Карабаур находится массив Ильтедже. Три значительных по площади, безымянных участков песков отмечены на юге и юго-западе впадины Ассаке-Аудан. Во всех перечисленных массивах кроме песков Сам (а отчасти и в песках Матайкум) пески пылеватые и содержат большое количество гипса. На равнинах северного Устюрта, между Северо-Устюртским прогибом и чинком рассеянно несколько мелких массивов-Сейткулмола, Итес, Кумшоны. На северном чинке выделяется в средней части его обрывов довольно широкая полоса безымянных песков (район оврагов Аксай-Курусай-Тобукты). На юго-восточной окраине плато, вблизи впадины Караумбет располагается массив того же имени.

История географического и почвенно-геоботанического изучения песков Устюрта несложна. Очевидно, первом из массивов, который стал известен путешественникам, был Сам. По данным, приводимым историками (Бартольд, 1902) в этом районе, в древности лежал город Шом, о существовании которого упоминают Хафизн-Абру и Абд-ар-Реззак Самарканде, труды которых относятся к XV веку. Видимо, поселения на Саме существовали в течении ряда веков, так как район этот очень богат архитектурными памятниками (Басенов, 1947).

Очевидно, это связано с богатством Сама водой и с расположением его на одной из главных караванных дорог, ведущих от низовий Урала на Амударью. Колодцы в песках Сам упоминаются под названием «Шамских копаней» в статейных списках» (то есть отчетах о поездках посольств) ряда русских дипломатов, ездивших в Бухару Хиву. В первой половине XVIII века Устюрт пересек по дороге от Астрахани на Хиву греческий купец Василий Ватиди. На составленной им карте, которая опубликована Л. С. Бергом (1908) в центре пустыни схематично указан контур песков Сам. Урочище Сам названо и в числе тех пунктов, через которые шла в Хиву экспедиция Бековича-Черкасского (Викторов, 1971). Русский путешественник Гербер, пытавшийся пересечь Устюрт в 1932 году) и остановленный вблизи Сама, нападшими на него кочевниками, упоминает об обилии здесь развалин.

Первым натуралистом, сообщившим о флоре и растительности песков Сам был Э. А. Эверсман. Например, в дневнике Э. А. Эверсмана от 18 января можно прочесть: «Корма были весьма хороши, в песках Сам было довольно травы иркека, хорошего корма для лошадей, корма биюргуна по пескам вовсе не было» (Первые русские научные исследования Устюрта», 1963).

Присутствие злаковых сообществ в этом песчаном массиве, впервые отмеченные Э. А. Эверсманом, рассматриваются в настоящее время

многими исследователями как один из этапов прогрессирующего остепнения этой территории.

В период с 2021 по 2023 гг. песках Устюрта были произведены маршрутные и полустационарные геоботанические исследования автором настоящей работы. Как уже было отмечено выше, песчаные массивы Устюрта расположены в виде обособленных ландшафтов, как бы вкрапленные в общий фон пустыни. По своему положению в макрорельефе они могут быть разделены на пески чинков, пески равнин и пески депрессий. Последняя группа является наиболее распространенной и занимает довольно значительные площади.

По своему происхождению пески Устюрта достаточно разнородны. Пески чинков (наиболее распространенные на северных обрывах плато) являются результатом ветровой переработки свиты песков и песчаников среднего и верхнего олигоцена. Пески равнин связаны с развитием плиоценовых отложений (Клейнер, Плещеев, 1964). Наконец, пески депрессий имеют различный генезис. Наиболее крупные из них (Сам, МатайКум др.) образовались аналогично пескам равнин. Однако, по мнению Б.А.Федоровича (1950) песчаные массивы Северного Устюрта представляют собой осадки ветрового перемещения («волочения»), скопившиеся в местах выхода воздушного потока из котловин на плато. Котловины сформировались, по его мнению, в результате преобразования ветром обширных солончаковых понижений. Действительно, допустимо, что значительное число мелких массивов (пески окраин депрессий Барсакельмес, Каратюлей, Ассак-Аудан и др.) формируются за счет развития суровых отложений. Характер отложений оказывает значительное влияние на почвы и растительность и придает ландшафтам песков большое разнообразие.

Почвенный покров песчаных массивов сильно варьирует. Руководствуясь наиболее новой классификацией почв, предложенной для Каракалпакского Устюрта коллективом узбекских почвоведов во главе с В. Г Поповым (Попов, Сектименко, Попова, Розаков, Гринберг, 1984), можно отметить широкое распространённо пустынных почв, карбонатно-гипсовых почв саксаульников, пустынных песчаных почв чоколаков. В качестве включений в этот фон распространены различные варианты солончаков, такырных почв и такыров. Часты участки совсем незакрепленных барханных песков с невыраженным почвенным горизонтом, а также серо-бурых солончаковых почв (Балясный, 1984).

Солончаки в этих песках приурочены к днищам впадин, где близко расположены грунтовые воды. Поверхность их покрыта ноздреватой соленой коркой с необычайно высоким содержанием солей. Согласно с классификацией растительности Средней Азии (Закиров, Закиров, 1978) растительный покров песков Устюрта и приустюртских массивов надо отнести к климату термоэуксерофитов. Менее распространены климатипы

термомезофитов и термогигрофитов (фрагменты тугаев и солончаковая растительность).

А. Алланиязов, С. В. Виктор и Н. П. Пельт считают, что рассмотренные растительности всех встречавшихся на Устюрте песчаных массивов позволяет разделить псаммофильный тип на три подтипа-эупсаммофильный, гипсофильно-псаммофильный и хасмофильно-псаммофильный. Первый объединяет собой истинные, типичные псаммофильные сообщества, второй - сообщества, развитые на песчаных субстратах, обогащенных гипсом, или же на гипсоносных псевдопесках-рыхлых, сыпучих и аэродинамический подобных настоящим пескам. Хасмофильно-псаммофильный подтип включает в себя фитоценозы, развивающиеся на песках со значительной примесью щебня, а также на болитовых песках.

В пределах эупсаммофильного подтипа растительности довольно четко выделяются два географических варианта - северный и южный. Первый отвечает тем ландшафтам, которые прежде обозначались Е. П. Коровиным как «песчаная полупустыня», и имеет большое сходство с песками северо-восточного Прикаспия и северного Приаралья. Второй географический вариант близок к типичным песчаным пустыням, по составу и облику может быть сближен с растительностью северной части Кара-Кумов и песков Куны-Дарьинской равнины. Гипсофильно-псаммофильный и хасмофильно-псаммофильный подтипы не обнаруживают подобного варьирования.

Таким образом, учитывая особенности современного использования и перспективы будущего практического освоения, можно разделить пески Устюрта на следующие группы, различающие по направленности их прикладного а значения: 1) пески, которые могут быть в настоящее время использованы (а отчасти уже используются) для зимнего выпаса стад на Устюрте и его ближайшем окружении (сюда относятся пески Сам, Матайкум и северная группа приустюртских песков от Исен-Чагыла на востоке до Карын-Ярыка на западе); 2) пески, которые требуют фитомелиорации и в настоящее время не пригодны для выпаса, но могут приобрести большое значение в будущем (сюда принадлежат пески в районе солончаковых депрессий Агыин и Барсакельмес, пески во впадине Ассак-Аудан и пески Ильтедже); 3) мелкие песчаные массивы, не имеющие самостоятельного пастбищного значения, но важные при перегоне стад (сюда принадлежат пески северного чинка Устюрта).

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ХИМИЧЕСКИЙ СОСТАВ ПЛОДОВ РАСТЕНИЯ *ZIZIPHUS JUJUBA* И ИХ ПРИМЕНЕНИЕ В НАРОДНОЙ МЕДИЦИНЕ

*Аннотация: растение *Ziziphus jujuba* в народе называлось чилонджийда или унаби и издавна использовалось в народной медицине. Она питательная, калорийная и целебная. В статье излагается история происхождения унаби, его целебные свойства, состав, применение в народной и традиционной медицине, а также приведены результаты проведенных исследований.*

*Ключевые слова: унаби, *Ziziphus jujuba*, белок, углевод, сахар, микроэлементы, органические кислоты, витамин С, онкология, опухоли, антоцианы, стероидные вещества.*

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CHEMICAL COMPOSITION OF THE FRUITS OF THE PLANT *ZIZIPHUS JUJUBA* AND THEIR APPLICATION IN FOLK MEDICINE

*Abstract: The plant *Ziziphus jujuba* was popularly called chilonjiida or unabi and has long been used in folk medicine. It is nutritious, high-calorie and healing. The article describes the history of the origin of unabi, its healing properties, composition, application in folk and traditional medicine, as well as the results of the research.*

*Keywords: unabi, *Ziziphus jujuba*, protein, carbohydrate, sugar, trace elements, organic acids, vitamin C, oncology, tumors, anthocyanins, steroid substances.*

Введение.

Ни для кого не секрет, что потребность человека в продуктах питания увеличивается с каждым годом. Для полного удовлетворения этой

потребности важно проводить такие мероприятия, как правильное питание, выращивание более калорийных, богатых витаминами продуктов питания, озеленение, выращивание питательной плодовой рассады, уход за ней. Одним из таких высококалорийных, богатых витаминами и целебных натуральных продуктов питания является *Ziziphus jujube* - унаби.



Рисунок 1. *Ziziphus jujuba* - растение и его плоды

Унаби или чилонджийда – древовидное растение высотой до 10 метров, устойчивое к засухе, холоду и жаре, не выбирает почву для роста. Ветви гладкие, колючие, листья длинные, яйцевидной формы, расположены индивидуально [1]. Унаби — растение, принадлежащее к семейству Зизифовыеб роду Рамновые, насчитывающее более 400 видов.

Литературный анализ.

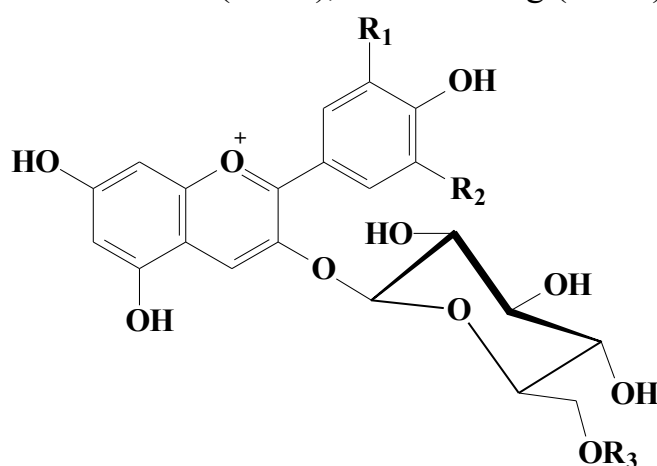
По мнению авторов, содержание сухого вещества, сахара, органических кислот и витамина С у изученных ими видов унаби незначительно различается в зависимости от вида растения. Но количественный и качественный состав веществ не отклоняются от общего закона. Например, у изученного ими вида унаби количество сахара высокое – до 30%, органических кислот – 0,07%, а количество витамина С – 370 мг на 1 кг плодов. Плоды унаби содержат от 17% до 76% сухого вещества в зависимости от сорта. Учеными изучено и подтверждено, что количество сахара составляет 15-28%, органических кислот – до 3%, белка – до 1,6%, жира – около 0,3%. Также отмечается, что количество витамина С велико, а количество В₁, В₂, В₅, бета-каротина и стероидов мало, это один из факторов, обеспечивающих лекарственных свойств плодов унаби. А также, выделены такие минералы, как Са, Р, К, Fe, Mg, Со, I₂, которые являются то же важными факторами физиологического действие плодов этого растения [2].

Химический состав плодов унаби
(в 100 г свежих фруктах)

Основные вещества						
Калорийность	Вода	Углеводы	Белки	Липиды		
79 ккал	77.86 г	20.23 г	1.2 г	0.2 г		
Низкомолекулярные активные вещества						
Фенолы	Флаваноиды	Антоцианы	Каротины	β-каротин	α-токоферол	
275.6-541.8 мг	62.0-284.9 мг	29.79-42.91 мг*	4.12-5.98 мг*	35 мг	0.04-0.07 мг	
Витамины						
С	А	РР	В ₁	В ₂	В ₆	
69.0 мг	2.0 мг	0.9 мг	0.02 мг	0.04 мг	0.081 мг	
Микроэлементы						
К	Р	Са	Mg	Na	Fe	Zn
250 мг	23 мг	21 мг	10 мг	3 мг	0.48 мг	0.05 мг

* - в 100 г сухих фруктах;

Химический состав местного вида унаби *Ziziphus jujube* Mill, изученного китайскими учеными, по количеству и качеству существенно не отличаются от других видов. В изученной ими пробе присутствуют витамины С, В₁, В₂, В₆, РР, А, из них витамины С и А находятся в большом количестве, т. е. 69 мг и 40 мг соответственно. Среди микроэлементов количество калия К значительно больше, чем других микроэлементов и его количество составляет 250 мг в 100 г свежего фрукта. Также достаточно велика масса важных биогенных элементов, таких как фосфор - Р (23 мг), кальций - Са (21 мг), магний - Мg (10 мг) (таблица) [3].



	R ₁	R ₂
Малвидин	OCH ₃	OCH ₃
Петунидин	OCH ₃	ОН
Пеонидин	OCH ₃	Н
Делфинидин	ОН	ОН
Каинидин	ОН	Н
R ₃ – ацетил, кумарин группы.		

Рисунок 2. Общая формула и представители антоцианов

Антиоксидантная способность плодов унаби тесно связана с наличием в их составе фенольных соединений и витамина С, нейтрализующих кислородные радикалы. Х. Чжан и его коллеги сравнили антиоксидантные свойства экстрактов, полученных из разных органов

унаби и установили, что кожура плодов всех сортов проявляет самые высокие антиоксидантные свойства. Они указали, что причиной этого является большое количество в кожуре плодов фенольных соединений, флавоноидов и антоцианов (рисунок 2), обладающих антиоксидантными свойствами [4].

Группа иранских ученых отметила, что унаби может эффективно использоваться при лечении опухолевых заболеваний. Исследования показали, что такие органические кислоты, как урсолин, олеаноллин и ботулин, содержащиеся в плодах унаби, проникают в опухолевые клетки, вырабатывают токсичные вещества и останавливают рост и развитие опухолевых клеток, вызывая их гибель [5].

Применение в народной медицине.

В народной и современной медицине унаби широко используется как антиоксидантное, отхаркивающее, противопростудное средство, повышающее иммунитет, разжижающее кровь, успокаивающее нервную систему, при сердечно-сосудистых заболеваниях, особенно кровяном давлении, и средство, снижающее уровень холестерина. Плоды унаби также являются очень хорошим мочегонным средством. Кроме того, спелые плоды полезны при запорах, а сырые — как слабительное.

В качестве сырья для получения лекарственных препаратов используются все органы унаби: плоды, семена, листья, кора, корни. Они обладают широким спектром физиологической активности. Например, его семена снижают повышенную чувствительность к различным лекарствам, улучшают пищеварение, отвар корневых стручков предотвращает диарею. Исследования показали, что благодаря антиоксидантам, содержащимся в экстракте плодов ежевики, добавляемому в кремы для кожи, он обладает омолаживающими свойствами и лечит хронические запоры. Также исследования подтвердили, что отвар плодов очень полезен при лечении желтухи у детей раннего возраста.

Густой отвар коры дерева унаби богат витаминами и физиологически активными веществами, укрепляет волосы, улучшает кровообращение в волосяных фолликулах, устраняет закупорки при нанесении на волосы. Обычно рекомендуется есть плоды, не снимая кожицы. Ведь кожица плодов богата многими полезными веществами, особенно антибактериальными и антиоксидантными веществами. Поэтому косметологи используют густую массу из кожуры плодов в средствах для омоложения кожи и кремах.

Листья обладают уникальным вкусом и свойством, а если их немного пожевать, язык теряет способность воспринимать горький и сладкий вкус. Раньше его эффективно использовали при лечении некоторых заболеваний. То есть, прежде чем выпить горькое лекарство, больному советовали пожевать листья чилонджи. В результате пациент не ощущал горького вкуса лекарства.

Выводы.

Плоды *Ziziphus jujuba* содержат большое количество витаминов, таких как С, А, РР, В₁, В₂, В₆, биологически важных микроэлементов, таких как К, Р, Na, Ca, Mg, Fe, Zn, а также антоцианы и стероиды. С учетом наличия органических кислот предложено разработать и внедрить в практику пищевую добавку, повышающую иммунитет, предупреждающую возникновение опухолей и помогающую в лечении, на основе плодов унаби.

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ЗАГРЯЗНЕННОСТЬ ОРОСИТЕЛЬНЫХ ВОДОТОКОВ РЕСПУБЛИКИ КАРАКАЛПАКСТАН В УСЛОВИЯХ ИЗМЕНЕНИЯ КЛИМАТА

Аннотация. В связи с неблагоприятной гидроэкологической обстановкой в Южном Приаралье наблюдения за загрязненностью воды в водных объектах данного региона имеют как научную, так и практическую ценность, это касается не только качества воды р. Амударья, но и воды оросительных каналов. В связи с этим в данной статье рассмотрена загрязненность наиболее крупных водотоков вышеуказанной территории по данным республиканского комитета по экологии и охране окружающей среды за 2015-2023 гг.

В статье также приведены современные сведения некоторых метеорологических характеристик метеорологических станций Тахиаташ, Тахтакупир, Нукус и Кунград за 2010-2020 гг., находящихся в различных районах Республики Каракалпакстан.

Ключевые слова: водотоки Южного Приаралья, загрязняющие ингредиенты, минерализация, температура воздуха, осадки.

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POLLUTION OF IRRIGATION WATERCOURSES OF THE REPUBLIC OF KARAKALPAKSTAN IN THE CONTEXT OF CLIMATE CHANGE

Abstract. *Due to the unfavorable hydroecological situation in the Southern Aral Sea region, observations of water pollution in the water bodies of this region have both scientific and practical value, this concerns not only the water quality of the Amu Darya River, but also the water of irrigation channels. In this regard, this article examines the pollution of the largest watercourses of the above-mentioned territory according to the data of the Republican Committee on Ecology and Environmental Protection for 2015-2023.*

The article also provides up-to-date information on some meteorological characteristics of the weather stations Takhiatash, Takhtakupir, Nukus and Kungrad for 2010-2020, located in various regions of the Republic of Karakalpakstan.

Keywords: *watercourses of the Southern Aral Sea region, polluting ingredients, mineralization, air temperature, precipitation.*

Введение. В настоящее время климатические изменения оказывают негативное воздействие на социально-экономическое развитие различных регионов, в том числе и Узбекистана, причем наиболее остро это ощущает на себе Республика Каракалпакстан. Рост числа экстремальных погодных явлений в республике сопровождается не только потеплением температуры, пыльными бурями, но по мнению специалистов это связано с глобальным изменением климата, при этом наблюдается некоторое изменение качества поверхностных водных ресурсов.

В связи с неблагоприятной гидроэкологической обстановкой в Южном Приаралье наблюдения за загрязненностью воды в водных объектах данного района имеют как научную, так и практическую ценность. В данной статье приведен анализ многолетнего изменения качества воды в р.Амударья ниже гидроузла г. Тахиаташ, в канале Дуслик выше и ниже г. Нукус, канале Суенли выше и ниже г.Хожейли, канале Кегейли выше и ниже г. Чимбай за 2015-2023 гг.

Гидрохимическое состояние р.Амударья и крупных оросительных каналов за 1947-1965 гг. было проанализировано по сведениям, приведенным в следующей монографии [Рогов и др., 1968]. В этот период амплитуда изменений минерализации Амударьи в створе Чатлы была сравнительно невелика от 297 мг/л (сентябрь 1947 г.) до 920 мг/л (март 1965 г.), средняя многолетняя величина минерализации амударьинской воды составила 466,7 мг/л. Химический состав воды был, в основном, сульфатно-гидрокарбонатно-магниевый-кальциевый (СГ-МК), иногда гидрокарбонатно-сульфатно-натриево-магниевый-кальциевый(ГС-НМК).

В 1984 г. Э.И.Чембарисов и Б.А.Бахритдинов в своей монографии подробно рассмотрели особенности влияния орошения на минерализацию речных вод в бассейне р.Амударья. По их расчетам величина минерализации речной воды у створа Саманбай(Чатлы) в 1975-1979 гг. изменялась от 0,56 г/л до 1,35 г/л, а химический состав от

гидрокарбонатно-хлоридно-сульфатно-магниво-кальциево-натриевого (ГХС-МКН) до сульфатно-хлоридно-магнивево-кальциево-натриевого (СХ-МКН) [Чембарисов, Бахритдинов, 1984].

Ф.Э.Рубинова, рассматривая влияние водных мелиораций на сток и гидрохимический режим бассейна Аральского моря, отметила также заметные изменения величины минерализации воды р. Амударья по длине реки [Рубинова, 1987].

Ф.Э.Рубинова вместе с Ю.Н.Ивановым рассмотрели качество воды рек бассейна Аральского моря и его изменение под влиянием хозяйственной деятельности, отмечая тот факт, что на изменение величины минерализации речной вод по длине рек значительное влияние оказывает орошаемое земледелие [Рубинова, Иванов, 2005].

В.Е.Чуб, рассматривая изменение климата и его влияние на гидрометеорологические процессы, агроклиматические и водные ресурсы Узбекистана, также отмечает, что оно может влиять и на качество природных вод [Чуб, 2007].

Б.Е.Аденбаев значительную часть своей научной деятельности посвятил изучению гидрологического и гидрохимического режимов водных объектов низовьев р. Амударья [Аденбаев, 2020].

В 2020 г. Э.И.Чембарисов и Р.Т.Хожамуратова оценивая комплексное влияние мелиорации на гидроэкологическое состояние водных ресурсов Республики Каракалпакстан, приводят сведения о минерализации и химическом составе р. Амударья за 2017-2018 гг. Согласно их данным, величина минерализации речной воды у створа Саманбай в среднем колебалась от 987 мг/л до 1107 мг/л, в химическом составе также преобладали ионы хлоридов, сульфатов, магния и натрия [Чембарисов, Хожамуратова, 2020].

Б.Э.Нишоновым создана электронная база данных по гидрохимическим показателям качества воды в среде MSAccess и на основании этой базы данных проведена сравнительная оценка качества вод рек Узбекистан, а также составлены тематические карты гидрохимического состояния рек с использованием ГИС-технологий, включая реку Амударья [Нишонов, 2023].

Несмотря на отмеченные публикации, в них мало внимания уделялось освещению загрязненности как реки Амударья, так и оросительных каналов. В определенной степени описанию названной проблемы посвящена данная статья.

Целью данного исследования является оценка современного состояния загрязнения отдельных водотоков Республики Каракалпакстан в условиях изменения климата, с учетом анализа данных метеостанций. **Объектом** исследования являются река Амударья, каналы Дустлик, Суенли, Кегейли, метеорологических станции Тахтакупыр, Тахиаташ, Кунград, Нукус. **Предметом** исследования являются выявление

количества загрязняющих ингредиентов в перечисленных водотоках и степень их превышения предельно допустимой концентрации (ПДК) в условиях изменения климата.

Исходные данные. В исследовании использованы данные по загрязнению оросительных вод Государственного комитета по экологии и охране окружающей среды Республики Каракалпакстан, частично данные Агентства гидрометеорологической службы Республики Узбекистан [Ежегодник ..., 2022].

Методы исследования. В статье применены методы географического анализа, гидрохимического обобщения, математической статистики.

Основные результаты и обсуждение. Анализ современного состояния загрязненности оросительных вод проведен по р.Амударья и основным каналам, приведенным в табл.1.

Таблица 1

**Изменение загрязненности оросительных водотоков Южного Приаралья
в период 2015-2023 гг.**

Река Амударья ниже гидроузла г. Тахиаташ

Годы	Жесткость, мг-экв/л	Показатели и ингредиенты, мг/л							
		ХПК	БПК ₅	NH ₄ ⁺	NO ₂ ⁻	Cl ⁻	SO ₄ ²⁻	Fe ³⁺	минерализация
ПДК	7-10	15	3,0	0,5	0,08	300	100	0,5	1000
2015	8,6	26,7	2,7	0,1	0,14	200	77,1	0,04	1129
2016	7,3	11,3	2,4	0,18	0,04	204	59,2	0,08	987
2017	7,7	3,4	2,9	0,20	0,031	165,9	44,84	0,015	883
2018	5,4	10,5	2,8	0,21	0,053	60,5	89,26	0,17	839
2019	6,9	7,3	5,2	0,19	0,038	161	84,4	0,03	693
2020	9,2	14,8	6,8	0,41	0,064	297	126	0,041	1442
2021	9,2	12	4,0	0,58	0,068	279	143	0,033	1428
2022	8,2	20,3	3,7	0,47	0,06	309	176	0,05	1397
2023	5,9	31,7	2,5	0,49	0,08	238	80,9	0,03	1125

Канал Дуслик, выше г. Нукус

Годы	Жесткость, мг-экв/л	Показатели и ингредиенты, мг/л							
		ХПК	БПК ₅	NH ₄ ⁺	NO ₂ ⁻	Cl ⁻	SO ₄ ²⁻	Fe ³⁺	минерализация
ПДК	7-10	15	3,0	0,5	0,08	300	100	0,5	1000
2015	8,4	25,9	2,7	0,1	0,10	184	71,3	0,05	1062
2016	7,2	12,0	2,6	0,17	0,05	193	55,1	0,07	1002
2017	8,0	3,1	2,5	0,25	0,044	174,1	37,2	0,05	997
2018	5,6	9,3	2,9	0,17	0,62	69,44	81,76	0,12	812
2019	6,9	6,8	5,1	0,23	0,38	173	83,4	0,044	725
2020	9,4	14,7	6,4	0,35	0,62	313	121	0,047	1495
2021	9,0	12	3,9	0,55	0,07	291	141	0,037	1198
2022	9,4	16,1	3,9	0,57	0,07	305	168	0,08	1343
2023	6,1	12,4	3,5	0,74	0,057	260	95,8	0,028	1125

Канал Дуслик, ниже г. Нукус

Годы	Жесткость, мг-экв/л	Показатели и ингредиенты, мг/л							
		ХПК	БПК ₅	NH ⁺ ₄	NO ₂ ⁻	Cl ⁻	SO ₄ ²⁻	Fe ³⁺	минерализация
ПДК	7-10	15	3,0	0,5	0,08	300	100	0,5	1000
2015	8,9	23,8	2,6	0,2	0,07	188	66,6	0,04	1097
2016	7,4	10,7	2,6	0,16	0,04	190	49,6	0,07	974
2017	7,8	3,0	2,4	0,24	0,045	178	36,8	0,028	934
2018	5,7	7,6	2,5	0,17	0,056	77,22	90,51	0,14	861
2019	6,5	8,6	5,0	0,21	0,041	187	86,2	0,03	712
2020	9,5	15,7	5,8	0,36	0,057	318	123	0,039	1368
2021	9,0	12,0	3,9	0,55	0,07	291	141	0,037	1198
2022	8,5	17,0	3,8	0,57	0,06	309	175	0,053	1373
2023	6,1	11,4	2,9	0,80	0,05	229	71,9	0,023	1112

Канал Суенли, выше г.Хожейли

Годы	Жесткость, мг-экв/л	Показатели и ингредиенты, мг/л							
		ХПК	БПК ₅	NH ⁺ ₄	NO ₂ ⁻	Cl ⁻	SO ₄ ²⁻	Fe ³⁺	минерализация
ПДК	7-10	15	3,0	0,5	0,08	300	100	0,5	1000
2015	8,6	24,1	2,5	0,1	0,04	196	60,1	0,03	1026
2016	7,4	12,9	2,6	0,03	0,06	202	48,6	0,07	1029
2017	8,7	3,2	2,6	0,23	0,03	177,1	38,57	0,055	1018
2018	5,9	8,0	2,3	0,23	0,058	73,64	94,58	0,12	870
2019	6,9	6,3	6,3	0,45	0,06	148	84,9	0,025	841
2020	9,7	17,4	6,8	0,46	0,065	312	122	0,041	1749
2021	9,0	12,3	3,5	0,49	0,071	293	158	0,04	1299
2022	8,4	23,1	4,4	0,50	0,06	405	180	0,05	1531
2023	6,0	34,7	4,0	1,3	0,07	279	149	0,04	1360

Канал Суенли, ниже г.Хожейли

Годы	Жесткость, мг-экв/л	Показатели и ингредиенты, мг/л							
		ХПК	БПК ₅	NH ⁺ ₄	NO ₂ ⁻	Cl ⁻	SO ₄ ²⁻	Fe ³⁺	минерализация
ПДК	7-10	15	3,0	0,5	0,08	300	100	0,5	1000
2015	8,9	21,7	2,5	0,2	0,04	194	57,4	0,04	1111
2016	7,5	12,0	2,6	0,21	0,05	198	49,9	0,10	975
2017	8,6	3,3	2,5	0,20	0,03	175,7	35,76	0,034	949
2018	6,1	8,5	2,4	0,24	0,064	81,98	94,06	0,13	889
2019	6,8	8,2	5,9	0,25	0,059	181	86,7	0,021	824
2020	9,8	17,3	6,6	0,48	0,062	252	125	0,043	1545
2021	9,1	10,7	4,8	0,54	0,07	298	150	0,036	1383
2022	8,2	21,7	4,3	0,61	0,06	400	180	0,04	1354
2023	6,3	41,7	3,7	1,05	0,048	199	139	0,04	1150

Канал Кегейли, выше райцентра Чимбай

Годы	Жесткость, мг-экв/л	Показатели и ингредиенты, мг/л							
		ХПК	БПК ₅	NH ⁺ ₄	NO ₂ ⁻	Cl ⁻	SO ₄ ²⁻	Fe ³⁺	минерализация
ПДК	7-10	15	3,0	0,5	0,08	300	100	0,5	1000
2015	7,9	24,6	2,9	0,1	0,04	182	58,1	0,04	1056
2016	7,3	12,3	2,7	0,22	0,05	186	48,8	0,10	949
2017	8,4	4,4	3,0	0,17	0,75	174,5	48,97	0,024	967
2018	6,2	7,6	2,9	0,23	0,055	79,47	91,10	0,12	833
2019	6,9	7,8	5,5	0,20	0,037	180	86,0	0,043	753
2020	9,2	15,3	5,7	0,46	0,064	515	125	0,031	1455

2021	8,8	12,5	3,8	0,49	0,063	279	167	0,034	1268
2022	7,1	14,3	4,2	0,50	0,07	379	141	0,04	1186
2023	6,0	31,0	5,1	0,80	0,055	306	142	0,04	1210

Канал Кегейли, ниже райцентра Чимбай

Годы	Жесткость мг-экв/л	Показатели и ингредиенты, мг/л							
		ХПК	БПК ₅	NH ₄ ⁺	NO ₂ ⁻	Cl ⁻	SO ₄ ²⁻	Fe ³⁺	минерализация
ПДК	7-10	15	3,0	0,5	0,08	300	100	0,5	1000
2015	8	27,0	2,9	0,1	0,04	180	52,9	0,06	996
2016	7,3	12,1	2,4	0,30	0,05	185	46,2	0,10	894
2017	8,5	4,3	2,7	0,22	0,061	172	47,06	0,047	962
2018	6,3	7,2	2,8	0,23	0,057	86,30	90,7	0,12	878
2019	7,0	9,0	5,8	0,20	0,04	175	80,4	0,027	706
2020	9,4	16,2	5,5	0,45	0,083	320	127	0,036	1481
2021	8,8	14,0	4,0	0,52	0,068	285	169	0,038	1203
2022	6,2	14,1	3,4	0,40	0,07	318	143	0,03	1176
2023	4,5	25,7	3,4	0,47	0,062	251	126	0,024	1211

За прошедшие годы в пункте отбора пробы в р.Амударья ниже гидроузла г. Тахиаташ среднегодовые значения жесткости воды изменялись от 5,4 мг-экв/л (2018г.) до 9,2 мг-экв/л (2020,2021 гг.), величина химического потребления кислорода (ХПК) изменилась от 3,4 мг/л (2017г.) до 31,7 мг/л (2023 г.), т.е. превысило ПДК в 2,1 раза; величина биохимического потребления кислорода за пять суток (БПК₅) изменилась от 2,5 мг/л (2023) до 6,8 мг/л (2020), т.е. превысило ПДК в 2,26 раза.

Концентрация ионов аммония (NH₄⁺) изменялась от 0,10 мг/л (2015 г.) до 0,58 мг/л (2021 г), когда ее содержание превысило ПДК в 1,16 раз; ионы нитрита изменялись от 0,04 мг/л (2016 г.) до 0,14 мг/л (2015 г.), когда его содержание превысило ПДК в 1,75 раз ; содержание хлоридов (Cl⁻) изменялось от 60,5 мг/л (2018 г.) до 309 мг/л (2022), когда их величина превысила ПДК в 1,03 раза; содержание сульфатов (SO₄²⁻) изменилось от 59,2 мг/л (2016 г.) до 176 мг/л (2022 г), когда их величина превысила ПДК в 1,76 раз; содержание железа (Fe³⁺) изменялось от 0,03 мг/л (2023 г.) до 0,17 г/л (2018 г.), превышение ПДК содержания железа в эти годы не наблюдалось. Величина минерализации изменялась от 693 мг/л (2019 г.) до 1442 мг/л (2020 г.), т.е. ее величина превысила ПДК в 1,44 раза.

В воде канала Дустлик выше г.Нукуса среднегодовые значения жесткости изменялись от 5,6 мг-экв/л (2018 г.) до 9,4 мг-экв/л (2020г.) величина ХПК изменялась от 3,1 мг/л (2017г.) до 25,9 мг/л (2015 г.) т.е. его содержание превысило ПДК в 1,73 раза; величина БПК₅ изменялась от 2,5 мг/л (2017) до 6,4 мг/л (2020), т.е. его содержание превысило ПДК в 2,13 раза.

Концентрация ионов аммония (NH₄⁺) изменялась от 0,10 мг/л (2015 г.) до 0,74 мг/л (2023 г), когда его содержание превысило ПДК в 1,48 раз; ионы нитрита изменялись от 0,038 мг/л (2019 г.) до 0,10 мг/л (2015 г.),

когда его содержание превысило ПДК в 1,25 раз; содержание хлоридов (Cl^-) изменялось от 69,4 мг/л (2018 г.) до 313 мг/л (2020), когда их величина превысила ПДК в 1,04 раза; содержание сульфатов (SO_4^{2-}) изменялось от 37,2 мг/л (2017 г.) до 168 мг/л (2022 г.), когда их величина превысила ПДК в 1,68 раз; содержание железа (Fe^{3+}) изменялось от 0,0028 мг/л (2018 г.) до 0,12 г/л (2018 г.), превышение ПДК содержания железа в эти годы не наблюдалось.

Величина минерализации изменялась от 725 мг/л (2019 г.) до 1495 мг/л (2020 г.), когда ее величина превысила ПДК в 1,49 раза.

В воде канала Дустлик ниже г.Нукус среднегодовые значения жесткости изменялись от 5,7 мг-экв/л (2018г.) до 9,5 мг-экв/л (2020г.), величина ХПК изменялась от 3,0 мг/л (2017г.) до 23,8 мг/л (2015 г.), т.е. превысило ПДК в 1,59 раза; БПК₅ изменялась от 2,4 мг/л (2017) до 5,8 мг/л (2020), т.е. превысило ПДК в 1,93 раза.

Концентрация ионов аммония (NH_4^+) изменялись от 0.17 мг/л (2015 г.) до 0,80 мг/л (2023 г.), когда её содержание превысило ПДК в 1,60 раз; ионы нитрита NO_2^- изменялись от 0,004 мг/л (2016 г.) до 0,07 мг/л (2021г.), когда его содержание превысило ПДК не наблюдалось; содержание хлоридов (Cl^-) изменялось от 77,22 мг/л (2018 г.) до 318 мг/л (2020), когда их величина превысила ПДК в 1,06 раза; содержание сульфатов (SO_4^{2-}) изменялось от 49,6 мг/л (2016 г.) до 141 мг/л (2021 г.), когда их величина превысила ПДК в 1,4 раз; содержание железа (Fe^{3+}) изменялось от 0,03 мг/л (2019 г.) до 0,14 г/л (2018 г.), превышение ПДК в эти годы не наблюдалось. Величина минерализации изменялась от 712 мг/л (2019 г.) до 1373 мг/л (2022 г.), когда ее величина превысила ПДК в 1,37 раза.

В воде канала Суенли выше г.Хожейли среднегодовые значения жесткости изменялись от 5,9 мг-экв/л (2018г.) до 9.7 мг-экв/л (2020 г.), величина ХПК изменялась от 3,2 мг/л (2017г.) до 34,7 мг/л (2023 г.), т.е. его содержание превысило ПДК в 2,31 раза; величина БПК₅ изменялась от 2,5 мг/л (2015) до 6,8 мг/л (2020), т.е. его содержание превысило ПДК в 2,127 раза.

Концентрация ионов аммония (NH_4^+) изменялась от 0,1 мг/л (2015 г.) до 1,30 мг/л (2023 г.), когда его содержание превысило ПДК в 12,6 раз; ионы нитрита (NO_2^-) изменялись от 0,03 мг/л (2017 г.) до 0,71 мг/л (2021 г.), когда его содержание превысило ПДК в 1,42 раза ; содержание хлоридов (Cl^-) изменялось от 73,64 мг/л (2018 г.) до 405 мг/л (2022 г.), когда их величина превысила ПДК в 1,35 раза; содержание сульфатов (SO_4^{2-}) изменялось от 38,57 мг/л (2018 г.) до 180 мг/л (2022 г.), когда их величина превысила ПДК в 1,8 раз; содержание железа (Fe^{3+}) изменялось от 0,025 мг/л (2019 г.) до 0,12 г/л (2018 г.), превышение ПДК содержания железа в эти годы не наблюдалось. Величина минерализации изменялась от 841 мг/л (2019 г.) до 1749 мг/л (2020 г.), когда ее величина превысила ПДК в 1,74 раза.

В воде канала Суенли ниже г.Хожейли среднегодовые значения жесткости изменялись от 6,1 мг-экв/л (2018г.) до 9,8 мг-экв/л (2020г.), величина ХПК изменялась от 3,3 мг/л (2017г.) до 41,7 мг/л (2023 г.), т.е. его содержание превысило ПДК в 2,78 раза; величина биохимического потребления кислорода за пять суток (БПК₅) изменялась от 2,4 мг/л (2018) до 6,6 мг/л (2020), т.е. его содержание превысило ПДК в 2,2 раза.

Концентрация ионов аммония (NH₄⁺) изменялась от 0,2 мг/л (2015 г.) до 1,05 мг/л (2023 г), когда его содержание превысило ПДК в 2,10 раз; ионы нитрита (NO₂⁻)изменялись от 0,03 мг/л (2017 г.) до 0,064 мг/л (2018г.), когда превышение ПДК не наблюдалось; содержание хлоридов (Cl⁻) изменялось от 81,98 мг/л (2018 г.) до 400 мг/л (2022), когда их величина превысила ПДК в 1,33 раза; содержание сульфатов (SO₄²⁻) изменилось от 35,76 мг/л (2017 г.) до 180 мг/л (2022 г), когда их величина превысила ПДК в 1,8 раз; содержание железа (Fe³⁺) изменялось от 0,034 мг/л (2017 г.) до 0,13 г/л (2018 г.), превышение ПДК в эти годы не наблюдалось. Величина минерализации изменялась от 824 мг/л (2019 г.) до 1383 мг/л (2021 г.), когда её величина превысила ПДК в 1,38 раза.

В воде канала Кегейли выше г.Чимбай среднегодовые значения жесткости изменялись от 6,0 мг-экв/л (2023г.) до 9.2 мг-экв/л (2020г.) ХПК изменялась от 4,4 мг/л (2017г.) до 31,0 мг/л (2023 г.) т.е. его содержание превысило ПДК в 2,07 раза; величина (БПК₅) изменялась от 2,7 мг/л (2016) до 5,7 мг/л (2020), т.е. превысило ПДК в 1,9 раза.

Концентрация ионов аммония (NH₄⁺) изменялись от 0,10 мг/л (2015 г.) до 0,80 мг/л (2023 г), когда его содержание превысило ПДК в 1,6 раз; ионы нитрита (NO₂⁻) изменялись от 0,037 мг/л (2019 г.) до 0,075 мг/л (2017 г.), т.е. превышение ПДК нитрата не наблюдалось; содержание хлоридов (Cl⁻) изменялось от 79,5 мг/л (2018 г.) до 379 мг/л (2022), когда их величина превысила ПДК в 1,26 раза; содержание сульфатов (SO₄²⁻) изменялось от 48,8 мг/л (2016 г.) до 167 мг/л (2021 г), когда их величина превысила ПДК в 1,67 раз; содержание железа (Fe³⁺) изменялось от 0,034 мг/л (2021 г.) до 0,12 г/л (2018 г.), превышение ПДК содержания железа в эти годы не наблюдалось. Величина минерализации изменялась от 753 мг/л (2019 г.) до 1455 мг/л (2020 г.), когда ее величина превысила ПДК в 1,46 раза.

В воде канала Кегейли ниже г.Чимбай среднегодовые значения жесткости изменялись от 4,5 мг-экв/л (2023г.) до 8,8 мг-экв/л (2021г.) величина ХПК изменялась от 4,3 мг/л (2017г.) до 27,0 мг/л (2015 г.), т.е. его содержание превысило ПДК в 1,8 раза; величина БПК₅ изменилось от 2,4 мг/л (2016) до 5,8 мг/л (2019), т.е. его содержание превысило ПДК в 1,93 раза.

Концентрация ионов аммония (NH₄⁺) изменялась от 0,1 мг/л (2015 г.) до 0,52 мг/л (2021 г), т.е. содержание превысило ПДК в 1,04 раз; ионы нитрита (NO₂⁻)изменялись от 0,04 мг/л (2015, 2019гг.) до 0,083 мг/л

(2020г.), т.е. его содержание превысило ПДК в 1,04 раза; содержание хлоридов (Cl⁻) изменялось от 86,3 мг/л (2018 г.) до 318 мг/л (2022), т.е. когда их содержание превысило ПДК в 1,06 раза; содержание сульфатов (SO₄²⁻) изменялось от 46,2 мг/л (2016 г.) до 169 мг/л (2021 г.), когда их величина превысила ПДК в 1,69 раз; содержание железа (Fe³⁺) изменялось от 0,027мг/л (2019 г.) до 0,12 г/л (2018 г.), превышение ПДК содержание железа в эти годы не наблюдалось. Величина минерализации изменялась от 878 мг/л (2018 г.) до 1481 мг/л (2020 г.), когда ее величина превысила ПДК в 1,48 раза.

Оценка метеорологических характеристик. Анализ динамики метеорологических характеристик был проведен по данным четырех метеорологических станций Тахиаташ, Тахтакупир, Нукус и Кунград (табл.2).

Таблица 2

Многолетние внутригодовые изменения некоторых метеорологических характеристика на метеостанциях Республики Каракалпакстан за 2010-2020 гг.

Изменение температуры воздуха (t°С в градусах), метеорологическая станция Тахиаташ													
Годы	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Ср.вели
2010-2014	-3,6	-4,2	6,6	16,5	24,1	28,3	29,0	27,2	20,5	12,6	4,36	-2,6	13,2
2015-2019	-0,52	1,5	8,1	15,4	23,3	23,0	30,7	26,8	20,9	12,0	3,10	-0,3	13,7
2010-2020	-1,2	0,5	8,1	15,8	23,8	26,7	30,0	26,6	20,1	12,1	3,0	-3,0	13,6
Изменение количества осадков (в мм), метеорологическая станция Тахиаташ													
2010-2014	7,61	7,41	20,9	19,1	1,47	0,76	1,15	2	0,93	3,92	13,9	13,4	7,7
2015-2019	6,4	11,5	24,0	12,2	17,4	3,50	1,9	8,6	10,7	14,9	13,4	9,9	11,2
2010-2020	6,0	9,0	16,0	20,6	14,8	1,5	1,0	5,5	3,9	6,3	9,8	7,9	8,5
Изменение температуры почвы на глубине 10 см (t°С в градусах), метеорологическая станция Тахтакупир													
2010-2014	0	0	8,7	15,4	23,0	29,0	30,4	29,0	23,3	16,7	0	0	21,9
2015-2019	0	0	9,5	15,6	23,8	29,3	32,0	30,0	24,0	16,9	0	0	22,6
2010-2020	0	0	9,1	15,7	23,6	29,2	31,2	29,3	23,6	16,7	0	0	22,3
Изменение количества осадков (в мм), метеорологическая станция Тахтакупир													
2010-2014	11,4	9,7	19,1	19,3	7,1	2,5	10,0	3,1	1,8	4,5	10,2	15,6	9,51
2015-2019	7,7	10,4	19,7	13,8	23,6	6,2	2,9	0,7	8,8	13,5	14,0	15,3	11,4
2010-2020	9,9	9,9	18,2	17,8	13,7	5,3	2,9	2,1	7,5	10,0	12,3	14,1	10,3
Изменение температуры воздуха (t°С в градусах), метеорологическая станция Нукус													
2010-2014	-4,7	-5,1	6,3	16,2	23,8	28,5	29,6	27,9	19,8	12,2	3,5	-1,7	13,0
2015-2019	-1,1	-0,2	7,4	10,0	22,0	28,0	30,9	26,8	20,2	11,4	5,5	-1,9	13,3
2010-2020	-2,0	-0,5	7,6	13,8	23,6	28,4	30,3	26,9	19,6	11,5	3,3	-3,4	13,3
Изменение количества осадков (в мм), метеорологическая станция Нукус													
2010-2014	8,8	5,7	20,6	15,0	2,0	0,4	3,1	2,7	0,5	2,3	9,5	9,5	6,7
2015-2019	6,1	13,5	17,7	18,3	14,8	3,7	2,9	3,8	10,4	14	14,8	10,8	10,9
2010-2020	7,2	9,5	18,1	17,8	9,1	1,7	3	3	4,4	7,5	11,5	9,5	8,5
Изменение температуры воздуха (t°С в градусах), метеорологическая станция Кунград													
2010-2014	-4,1	-3,5	5,0	15,7	23,4	27,7	28	26,9	19,5	11,3	2,84	-3,06	13,1
2015-2019	-2,0	1,1	6,4	14,1	22,0	27,3	30,0	25,8	19,5	10,4	1,84	-1,76	12,7
2010-2020	-6,2	-0,6	6,4	14,7	23,1	27,3	29,3	25,8	18,8	10,4	1,7	-4,5	12,2
Изменение количества осадков (в мм), метеорологическая станция Кунград													
2010-2014	11,9	11,0	15,8	14,6	2,7	8,3	0,2	6,2	0	4,8	10,7	10,2	8,8
2015-2019	7,4	11,1	17,2	17,2	30,9	6,5	4,7	5,4	5,4	9,9	19,6	12,4	12,3
2010-2020	10,0	12,7	13,5	17,2	14,9	4,9	1,8	3,9	1,8	4,9	10,5	7,5	8,0

При этом оценивалось изменение двух характеристик: среднемесячной температуры воздуха в градусах (t , °C) и среднемесячного количества осадков в мм (X). Полученные данные были рассмотрены как за отдельные периоды: 2010-2014 гг. и 2015-2020 гг., так и в целом за весь период 2010-2020 гг.

На метеостанции Тахиаташ среднемесячная величина температура воздуха в 2015-2019 гг. по сравнению с периодом 2010-2014 гг. повысилась на 0,5° C; на метестанции Тахтакупир-на 1,1° C, на метеостанции Нукус на 0,3 °C, и только на метеостанции Кунград она понизилась на 0,4 °C.

На метеостанции Тахиаташ среднемесячная величина осадков в 2015-2019 гг. по сравнению с периодом 2010-2014 гг. повысилась на 3,5 мм; на метеостанции Тахтакупир- на 0,3 мм, на метеостанции Нукус – на 4,2 мм и на метеостанции Кунград- на 3,5 мм.

Отмеченные изменения величин температуры воздуха за три периода: 2010-2014 гг.; 2015-2019 гг. и 2010-2020 гг. на указанных метеорологических станциях приведены на графиках на рис.1.

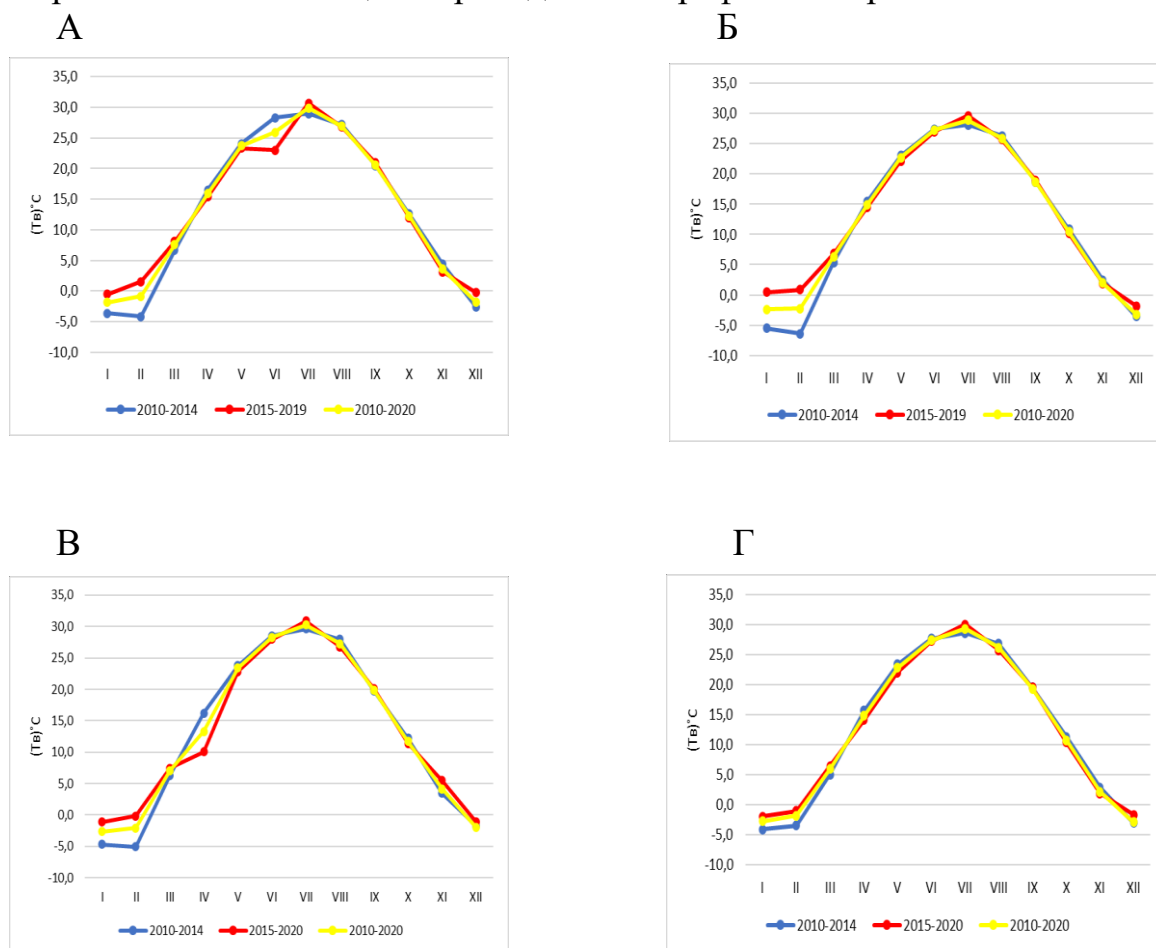


Рис.1. Внутригодовые изменения величин температур воздуха (t °C) за три периода: 2010-2014 гг. ; 2015-2019 гг. и 2010-2020 гг. на метеорологических станциях Тахиаташ(А), Тахтакупир(Б), Нукус(В) и Кунград(Г).

Заключение. Согласно данным Узгидромета, помещенных в ежегоднике «Государственный водный кадастр» в последние годы среднее годовое превышение ПДК в р.Амударья имеют сульфаты, медь, фенолы уже у створа Термез, у створа Саманбай ПДК превышают магний, медь, сульфаты, минерализация, а у створа Кызылджар количество ингредиентов, превышающих ПДК увеличивается до пяти: медь, магний, сульфаты, цинк, минерализация. Величина индекса загрязненности воды (ИЗВ) в среднем в створе Саманбай (Нукус) равна 1,22, а в створе Кызылджар- 1,43 т.е. качество воды р.Амударья соответствовало III классу умеренно загрязненных вод (величина ИЗВ от 1,0 до 2,5).

Согласно данным Специальной инспекции аналитического контроля СИАК в 2015-2023 гг. среди загрязняющих компонентов в речной воде ниже г. Тахиаташ определялись жесткость, величины XPK , BPK_5 , NH_4^+ , NO_2^- , Cl^- , SO_4^{2-} , Fe^{3+} и сухой остаток (использовали термин минерализация). На основе анализа многолетних данных можно сделать следующий вывод: вода р.Амударья является жесткой, редко превышает предельно допустимую концентрацию (ПДК) XPK ; BPK_5 также редко превышает ПДК, такая же картина наблюдается с содержанием ионов аммония (NH_4^+), ионов нитрита (NO_2^-), хлоридов (Cl^-), сульфатов (SO_4^{2-}), содержание железа (Fe^{3+}) практически всегда меньше ПДК, величина минерализации превышает ПДК чаще других ингредиентов.

Аналогичная картина динамики содержания перечисленных ингредиентов наблюдается и в воде каналов Дустлик, Суенли и Кегейли, только их содержание несколько увеличивается в нижних створах, расположенных ниже г. Нукус, г.Хожейли и г.Чимбай.

Было также замечено, что содержание многих ингредиентов было повышенным в 2021-2023 гг., что по видимому связано с маловодьем этих лет и высокой температурой воздуха;

-анализ изменения среднегодовых величин температуры воздуха на рассмотренных метеостанциях Республики Каракалпакстан за два периода 2010-2014 гг. и 2015-2019 гг. показал, что во втором периоде она несколько увеличилась по сравнению с первым периодом: на $0,5^{\circ}$ - $1,1^{\circ}$ C, увеличение температуры воздуха отмечается и в месяце с максимальными значениями по анализу данных за июль месяц.

Вклад авторов: Э.И.Чембарисов: научное руководство, методология, написание текста. А.И.Баллиев сбор и статистическая обработка данных, табличное представление результатов, проверка. Все авторы прочитали и согласны с подготовленной к публикации версией рукописи.

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НОВЫЕ МЕДИА: ГРАНИЦЫ И КУЛЬТУРА

Аннотация: Статья посвящена анализу влияния новых медиа на язык и коммуникацию. Автор рассматривает изменения в семиотике и антропологических аспектах медиа, выявляя новые тенденции и проблемы, связанные с возникновением новой медийной культуры.

Ключевые слова: медиатекст, коммуникативная культура, новые медиа, медиажанры.

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NEW MEDIA: BORDERS AND CULTURE

Resume: The article is devoted to the analysis of the influence of new media on language and communication. The author examines the changes in the semiotics and anthropological aspects of media, identifying new trends and problems associated with the emergence of a new media culture.

Keywords: media text, communicative culture, new media, media genres.

Взгляд на новые медиа как на инструменты социальных изменений поддерживает идею о том, что новые медиа уже давно превосходили печатные издания. Этого можно достичь, если сначала активно ответить на следующие вопросы: является ли представление (передача) информации в

электронной форме значительно лучше и качественнее, чем в печатной форме? Однозначного ответа на этот вопрос нет. Если традиционный носитель информации - печатная книга по-прежнему привлекателен и не кажется анахронизмом, гарантируя медленное и комфортное погружение в несколько подзабытый мир чтения, то на примере романа можно дать целенаправленный и практичный ответ. Быстрые, хищные новые медиа захлестнули нас в той или иной форме [1].

Исходя из этого посыла, можно сделать следующие выводы. Любой текст, подобный тому, что представлен в данной статье, сначала будет напечатан в электронном виде, а затем станет доступен достаточно большой аудитории после выхода журнала. Медиа как система коммуникации обладают в основном символическим характером. Через них передается огромное количество информации, люди выражают свои эмоции, взгляды, устанавливают отношения с окружающим миром, фиксируют различные моменты реальной, задуманной или воображаемой жизни. В общем смысле все это можно назвать знаками медиа. Однако стоит признать, что чаще всего медиа просто являются техническими средствами для передачи различных видов сообщений. Однако с развитием медиа в начале XXI века их разнообразие становится все более заметным: если ранее для нас медиа ассоциировались с функциями печатной прессы, радио, телевидения и т.д., то новые задачи, связанные с данным вопросом, нацелены на выявление социальной роли нового поколения медийных средств, а также на определение границ новой медиапарадигмы [2]. В последние десятилетия в научных кругах стало общепринятым различать традиционные средства и методы их представления от новых. Хотя термин «новые медиа» не всегда воспринимается однозначно, он, тем не менее, уже включает в себя размышления о современном медийном развитии, отражает потребность в новых терминологических обозначениях и учитывает различные технические новшества в области хранения, передачи и обработки информации.

С другой стороны, вопрос о том, что именно должно передаваться через медиа, утратил свою первостепенную значимость. Он стал частью более широкой дискуссии о культуре использования медиа как средства коммуникации. «Метафоры передачи» не всегда подходят для теории медиа, так как предполагают наличие отправителя и получателя. В условиях массовой информации мы сталкиваемся с избытком информации, и восприятие коммуникации становится для нас более важным, чем другие формы восприятия. Для современной культуры характерно, что восприятие коммуникации все больше заменяет восприятие мира. Иными словами, мы узнаем о мире через медиа, и то, как формируется это восприятие, проходя через медийные фильтры, влияет на процесс «производства отбора» в условиях заранее типизированной окружающей

среды. С момента публикации книги Герберта Маршалла Маклюэна «Понимание медиа» эта проблема остается актуальной [3].

Чтобы разобраться в происходящем в этой области, необходимо отказаться от распространенного и негативного отношения к технике, основанного на романтизации непосредственности. Наоборот, чем более технологичной становится коммуникация, тем более надежной она оказывается. Мы считаем, что успешная коммуникация заключается не в умении идти на компромисс, а в эффективной организации медийных каналов, охватывающих максимальное количество участников [4].

Таким образом, культурная суть новых медиа заключается в «способах и средствах (медиа), которые новые или модернизированные технологии предлагают для охвата, обработки, хранения и передачи информации, а также для доступа к ней». Хотя понятие «новые медиа» будет относительным для каждой эпохи, поскольку любые медиа когда-то были новыми. Индустрия новых медиа, тесно связанная с различными сегментами рынка, включая потребительский (разработка компьютерных игр, телевидение, радио, реклама и т.д.), активно развивается на платформе Интернета. Именно здесь происходит взаимодействие с потенциальными потребителями информации и клиентами, и эта индустрия успешно использует новые медиа, в первую очередь благодаря «интерактивному» характеру своих традиционных инструментов. Следует признать, что новые медиа все более активно претендуют на статус полноценной индустрии со своим собственным рынком, профессионалами и сегментацией [5].

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ПРОБЛЕМЫ И ПЕРСПЕКТИВЫ ВНЕДРЕНИЯ ТЕХНОЛОГИЙ ПЕРЕРАБОТКИ ОВОЩЕЙ С МИНЕРАЛЬНЫМИ ДОБАВКАМИ В УСЛОВИЯХ МОДЕРНИЗАЦИИ СЕЛЬСКОХОЗЯЙСТВЕННОГО ПРОИЗВОДСТВА УЗБЕКИСТАНА

Аннотация: В данной работе рассматриваются проблемы и перспективы внедрения технологий переработки овощей с применением минеральных добавок в условиях модернизации сельскохозяйственного производства Узбекистана. Анализируются основные аспекты использования минеральных добавок для улучшения качественных характеристик овощной продукции, а также их влияние на питательную ценность и сохранение полезных свойств при переработке. В статье представлена методика интегрированного подхода к переработке овощей с применением минеральных веществ, включающая этапы подбора добавок, разработки технологических схем и их внедрения в агропромышленные предприятия. Проведенный анализ позволяет выявить ключевые направления для повышения эффективности и конкурентоспособности сельскохозяйственного сектора, а также определить наиболее перспективные технологии для их адаптации в условиях Узбекистана.

Ключевые слова: овощи, добавки, технологии, переработка, производство, Узбекистан, методика, модернизация, эффективность, аграрный.

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PROBLEMS AND PROSPECTS OF IMPLEMENTING TECHNOLOGIES FOR PROCESSING VEGETABLES WITH MINERAL ADDITIVES IN THE CONDITIONS OF MODERNIZATION OF AGRICULTURAL PRODUCTION IN UZBEKISTAN

Abstract: This paper examines the problems and prospects for the introduction of vegetable processing technologies using mineral additives in the context of modernization of agricultural production in Uzbekistan. The main aspects of the use of mineral additives to improve the quality characteristics of

vegetable products, as well as their impact on the nutritional value and preservation of useful properties during processing are analyzed. The article presents a methodology for an integrated approach to vegetable processing using mineral substances, including the stages of selecting additives, developing process flow charts and their implementation in agro-industrial enterprises. The analysis allows us to identify key areas for improving the efficiency and competitiveness of the agricultural sector, as well as to determine the most promising technologies for their adaptation in the conditions of Uzbekistan.

Key words: *vegetables, additives, technologies, processing, production, Uzbekistan, methodology, modernization, efficiency, agricultural.*

Введение: В условиях модернизации сельскохозяйственного производства Узбекистана внедрение инновационных технологий переработки овощей становится важной задачей для повышения их качества и конкурентоспособности на внутреннем и внешнем рынках. Одним из перспективных направлений является использование минеральных добавок в процессах переработки овощной продукции, что позволяет не только улучшить органолептические свойства продуктов, но и повысить их питательную ценность. Внедрение таких технологий требует учета особенностей местного сельскохозяйственного производства и адаптации к современным экономическим и экологическим условиям. Основной проблемой внедрения технологий переработки овощей с минеральными добавками является недостаточная разработанность технологических процессов, соответствующих особенностям сельскохозяйственного производства Узбекистана. Отсутствие научно обоснованных методик и стандартов приводит к низкому уровню заинтересованности фермеров и переработчиков в использовании данных технологий. Более того, существующие методы переработки не всегда обеспечивают сохранение полезных свойств минеральных добавок в конечной продукции, что снижает их эффективность и привлекательность для потребителей. Для решения данной проблемы необходимо разработать и внедрить комплексные технологии переработки овощной продукции с использованием минеральных добавок, адаптированные под условия Узбекистана. Важным этапом станет проведение научных исследований для выявления оптимальных сочетаний минеральных добавок и способов их введения в процессы переработки. Также необходимо создать систему сертификации и контроля качества продукции с добавками, что повысит доверие потребителей и будет способствовать популяризации данной технологии среди сельхозпроизводителей.

Методология: Предлагаю изучить данную методику под названием "Интегрированная технология переработки овощной продукции с применением минеральных добавок". Она основана на комплексном подходе к использованию минеральных веществ, что позволяет повысить

питательную ценность и улучшить органолептические свойства конечной продукции, а также способствует сохранению полезных элементов в процессе переработки.

Методика включает следующие этапы:

На первом этапе проводится предварительное исследование состава овощной продукции, выращенной в различных регионах Узбекистана. Определяются основные параметры, такие как содержание витаминов, микро- и макроэлементов, а также органолептические показатели. Это позволяет выявить, какие именно минеральные добавки необходимо использовать для улучшения качественных характеристик перерабатываемых овощей.

Второй этап заключается в подборе и подготовке минеральных добавок. В зависимости от вида перерабатываемых овощей (томаты, огурцы, капуста и др.) и поставленных задач (повышение содержания определенных микроэлементов, улучшение вкусовых характеристик) выбираются соответствующие минеральные вещества. Эти добавки проходят предварительную очистку и активацию, что повышает их биодоступность и эффективность при использовании в технологии переработки.

Третий этап включает разработку технологических схем переработки овощей с использованием минеральных добавок. Здесь учитываются особенности местного сырья, климатические условия и доступные производственные мощности. Для каждого вида овощной продукции разрабатывается индивидуальная схема, которая предусматривает оптимальные способы введения минеральных добавок на различных стадиях переработки (сушка, консервирование, заморозка и т.д.).

На четвертом этапе проводится пилотное тестирование разработанных технологических схем на базе экспериментальных производственных линий. Оцениваются основные параметры качества конечной продукции, такие как содержание минеральных веществ, витамины, органолептические показатели и срок хранения. На основании полученных данных осуществляется корректировка технологических схем для достижения максимальной эффективности.

Пятый этап предусматривает внедрение разработанных технологий на производственных предприятиях и обучение персонала. Проводятся семинары и тренинги для специалистов агропромышленного комплекса, разрабатываются методические материалы и рекомендации по использованию минеральных добавок в технологии переработки овощной продукции.

Данная методика позволяет повысить качество и конкурентоспособность узбекской овощной продукции на внутреннем и внешнем рынках, а также создать дополнительные возможности для

диверсификации сельскохозяйственного производства и повышения его экономической эффективности.

Заключение: Внедрение технологий переработки овощной продукции с минеральными добавками в условиях Узбекистана представляет собой перспективное направление для повышения конкурентоспособности и качества сельскохозяйственной продукции. Разработка и адаптация научно обоснованных методик позволит улучшить экономические показатели агропромышленных предприятий и создать условия для устойчивого развития сельского хозяйства. Это требует активного взаимодействия между научными институтами, производственными предприятиями и органами управления для создания эффективной системы внедрения инноваций в аграрный сектор.

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СОВРЕМЕННЫЕ МЕТОДЫ ОБЕЗБОЛИВАНИЯ В СТОМАТОЛОГИЧЕСКОЙ ПРАКТИКЕ: АНАЛИЗ ЭФФЕКТИВНОСТИ И БЕЗОПАСНОСТИ

***Аннотация.** В статье представлен обзор современных методов обезболивания, применяемых в стоматологической практике, с акцентом на анализ их эффективности и безопасности. Рассматриваются новейшие подходы к местной и общей анестезии, их влияние на качество лечения и минимизацию рисков для пациентов. Оцениваются различные анестетики с точки зрения продолжительности действия, побочных эффектов и противопоказаний, а также рассматриваются перспективы внедрения инновационных технологий обезболивания. Проведен анализ клинических исследований и практического опыта применения современных анестезиологических методов в стоматологии.*

***Ключевые слова:** стоматология, обезболивание, эффективность, безопасность, анестезия, анестетики, побочные эффекты, инновации, клинические исследования.*

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MODERN METHODS OF PAIN RELIEF IN DENTAL PRACTICE: AN ANALYSIS OF EFFICIENCY AND SAFETY

***Abstract:** The article provides an overview of modern anesthesia methods used in dental practice, focusing on their effectiveness and safety. The latest approaches to local and general anesthesia, their impact on treatment quality, and risk minimization for patients are discussed. Various anesthetics are evaluated based on their duration of action, side effects, and contraindications. Additionally, the prospects for the introduction of innovative pain relief technologies are considered. An analysis of clinical studies and practical experience in the use of modern anesthetic methods in dentistry is conducted.*

***Keywords:** dentistry, anesthesia, effectiveness, safety, anesthetics, side effects, innovations, clinical studies.*

Введение. Современная стоматологическая практика требует применения эффективных и безопасных методов обезболивания для обеспечения комфорта пациентов и повышения качества лечения.

Анестезия играет ключевую роль в стоматологии, позволяя минимизировать болевые ощущения и стресс, которые часто сопровождают стоматологические процедуры. В последние годы произошел значительный прогресс в разработке и применении новых анестетиков и технологий обезболивания, что открыло возможности для более точного контроля за состоянием пациентов во время лечения.

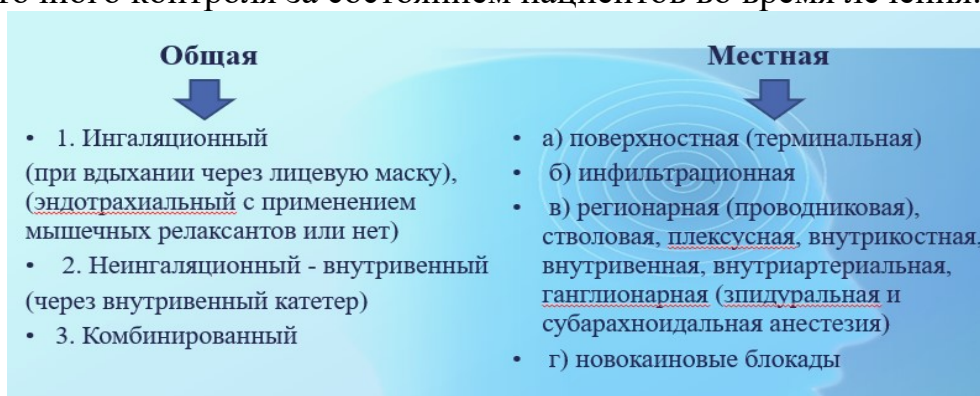


Рисунок 1. Классификация анестезии

Введение современных методов обезболивания учитывает индивидуальные особенности пациентов, снижает риск осложнений и улучшает качество стоматологических услуг. Однако с увеличением вариантов анестезии возникают вопросы безопасности, побочных эффектов и противопоказаний.

Цель данной статьи — проанализировать эффективность и безопасность современных методов обезболивания в стоматологической практике, оценить преимущества и ограничения различных подходов, а также рассмотреть перспективы дальнейшего развития в данной области.

Материалы и методы исследования. В ходе исследования были использованы данные клинических исследований, проведенных в период с 2018 по 2023 годы, касающиеся применения современных методов обезболивания в стоматологии. Анализировались как локальные анестетики, такие как артикаин и мепивакаин, так и новые методы седации и общая анестезия. Исследование включало сравнение показателей эффективности различных анестезирующих средств по таким параметрам, как продолжительность действия, быстрота наступления эффекта, побочные реакции и безопасность для пациентов с различными заболеваниями.

Методология включала сбор и анализ данных из научных публикаций, клинических отчетов и практического опыта стоматологических клиник.

Результаты. Исследование современных методов обезболивания, проведенное на базе стоматологических клиник Республики Узбекистан, выявило улучшение качества анестезии и снижение рисков для пациентов. Локальные анестетики, такие как артикаин и мепивакаин, широко

применяются в стоматологических клиниках страны и показывают высокую эффективность по сравнению с традиционными средствами.

Исследование охватывало 200 пациентов в различных стоматологических учреждениях Узбекистана. Результаты показывают, что артикаин обеспечивает более быстрое наступление эффекта и более длительное действие, что особенно важно при проведении сложных стоматологических операций.

Таблица 1. Сравнение эффективности локальных анестетиков (на основе данных из клиник Узбекистана)

Параметр	Артикаин	Мепивакаин	Лидокаин
Время наступления эффекта (мин)	2-3	3-5	5-7
Продолжительность действия (ч)	2-3	1.5-2	1-1.5
Частота побочных эффектов (%)	1.8	2.5	4.8

Артикаин продемонстрировал наилучшие результаты с точки зрения скорости и продолжительности анестезии, что снижает необходимость повторного введения препарата и улучшает общую переносимость процедуры у пациентов.

Таблица 2. Результаты применения методов седации в стоматологических клиниках Узбекистана

Метод обезболивания	Уровень комфорта пациентов (%)	Частота осложнений (%)
Ингаляционная седация (закись азота)	92	1.5
Общая анестезия	97	3.2

Применение ингаляционной седации в узбекских клиниках продемонстрировало высокие показатели удовлетворённости пациентов и низкий уровень осложнений. Общая анестезия использовалась в более сложных случаях, таких как хирургические вмешательства, и также показала высокую эффективность с приемлемым уровнем безопасности.

Данные исследования свидетельствуют о высокой эффективности современных методов обезболивания, применяемых в стоматологических клиниках Республики Узбекистан, что подтверждается положительными отзывами пациентов и низким уровнем побочных эффектов.

Заключение. Результаты исследования показали, что современные методы обезболивания, применяемые в стоматологической практике Республики Узбекистан, демонстрируют высокую эффективность и безопасность. Локальные анестетики, такие как артикаин, обеспечивают быстрое наступление эффекта, продолжительное действие и низкий уровень побочных реакций, что делает их предпочтительными для

использования в сложных стоматологических процедурах. Мепивакаин также показал хорошие результаты, хотя и уступает артикаину по ряду параметров.

Ингаляционная седация с закисью азота продемонстрировала высокий уровень комфорта пациентов при минимальных осложнениях, что подтверждает её эффективность для снижения тревожности и улучшения переносимости процедур. Общая анестезия, применяемая в более сложных случаях, также показала высокую безопасность при соблюдении протоколов.

Таким образом, использование современных анестетиков и методов седации способствует повышению качества стоматологической помощи и улучшению опыта пациентов в клиниках Узбекистана, что подтверждается данными клинических исследований и практической деятельностью медицинских учреждений.

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**АЛКАЛОИДЫ BERBERIS XV.
ИЗУЧЕНИЕ СТРОЕНИЯ НОВОГО АЛКАЛОИДА**

Аннотация. Из молодых побегов и листьев *berberis vulgaris* L. выделены N-метилдигидроберберин и 8-оксоберберубин, относящиеся к новому типу изохинолиновых алкалоидов. Химическими и спектральными методами установлено их строение.

Ключевые слова. Алкалоид, *B.vulgaris* L., ИК-спектр, бензилтетрагидроизохинолин, изохинолин, масс-спектре, баргустанин.

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**ALKALOIDS OF BERBERIS XV.
STUDY OF THE STRUCTURE OF A NEW ALKALOID**

Abstract. *N-methyldihydroberberine and 8-oxoberberubine were isolated from young twig and leaves of Berberis heteropod, aimed at new possibilities of isoquinoline alkaloids. Their structure was established by chemical and spectral methods.*

Keywords. *Alkaloid, B.vulgaris L., IR spectrum, benzyltetrahydroisoquino-line, isoquinoline, mass spectrum, bargustanin*

Из фенольной части суммы алкалоидов корней *B.vulgaris* L. выделен баргустанин (I) относящийся к новому типу изохинолиновых алкалоидов. Химическими и спектральными методами установлено его строение. Продолжая исследования алкалоидного состава корней *B.vulgaris* L. (I), собранных на Баргустанском хребте (Ставропольский край, Предгорный район), из фенольной части эфирной суммы выделили новое кристаллическое основание с т. пл. 193-194⁰, названное баргустанином. Баргустанин (I) оптически активное основание, состава C₂₉H₂₄N₂O₇, обладает фенольными свойствами.

В ИК-спектре проявляются полосы поглощения в области 3540 (ОН), при 1273 (асимметричные валентные колебания С-О-С связи), и при 840, 810, 750, 710 см⁻¹ (неплоские деформационные колебания ароматических колец). В масс-спектре отмечаются пики ионов с m/z 522 (0,3%), 381 (100%), 367 (44%), 191 (44%), 191,5 (11%), 192 (16%). Уф-спектр содержит

максимумы поглощения при 218 нм (плечо), 286 нм ($\lg \epsilon$ 4,85; 3,98), характерные для бензилтетрагидроизохинолинов /2/. Данные ЯМР-спектра ^1H и ^{13}C а также данные спектра ЯМР ^{13}C полученные в режиме DEPT.

По спектральным данным I является новым типом димерных изохинолиновых алкалоидов, состоящим из бензилтетрагидроизохинолина и простого тетрагидроизохинолина. Наличие максимального иона с m/z 381 в масс-спектре I свидетельствует о присутствии двух метоксильных, двух N-метильных групп, одной гидроксильной группы в кольцах A, B, A¹ и B¹, и эфирного мостика /3/. При метилировании I диазометаном получен три-O-метилловый эфир (II).

В масс-спектре II имеются слабый пик молекулярного иона с m/z 564 (0,2%) и максимальный пик иона с m/z 396. ЯМР ^1H II, снятый в CDCl_3 показывает наличие сигналов от пяти метоксильных групп при 3,81 м.д. (6H, C); 3,77 м.д. (6H, C) и 3,51 м.д. (3H, C). Расщеплением натрием в жидком аммиаке толуольного раствора II получили α -лауданозин (III) и корипаллин (IV), идентифицированные с подлинными образцами по ТСХ, т. пл. и спектральным данным. Образование IV при расщеплении натрием в жидком аммиаке показывает, что эфирный мостик в одной половине находится в положении 7¹, а одна из метоксильных групп занимает положение 6¹. Образование III свидетельствует о том, что при расщеплении происходит гидрогенолиз бензильного гидроксила (9,12), заместители в кольце в занимают положение 6,7, а в кольце C-11,12. Сигналы ароматического протонов в ЯМР ^1H соединения I при 6,46; 6,45; 6,67 отнесены к протонам при C-5, C-5¹, C-8¹ соответственно. Наличие ароматического протона при C-5 подтверждается еще ПМР-спектром II в котором наблюдается отсутствие сдвига в сильное поле ароматических протонов (4, 5, 6). На основании этого эфирный мостик в кольце в должен быть при C-8. В ПМР-спектре баргустанина не обнаруживается сигналов метоксильных групп в сильном поле, характерных для C-7 метоксильной группы бензилтетрагидроизохинолинов (4), бисбензилизохинолинов (5) и секобисбензилизохинолинов (6), следовательно, OCH_3 -группа в кольце в соединении I должна находиться у C-6. Это подтверждается ПМР-спектром соединения II, где проявляется сигнал при 3,51, м. д. характерный для метоксила при C-7 (4, 5). В ПМР-спектре I обнаруживаются однопротонные дублеты при 4,50 м.д. ($J_{\text{гем}}=5$ Гц) и 6,39 м.д. ($J_{\text{гем}}=5$ Гц), которые свидетельствуют о наличии бензильного гидроксила при C-15 углеродном атоме. По характеру сигналов $\text{C}_{15}\text{-H}$ и $\text{C}_{15}\text{-OH}$ можно судить о том, что $\text{C}_1\text{-H}$ и $\text{C}_{15}\text{-H}$ находятся в транс-положении, следовательно $\text{C}_1\text{-H}$ и $\text{C}_{15}\text{-OH}$ находятся в ГОШ. В ПМР-спектре I имеются сигналы ещё трех ароматических протонов, которые по мультиплетности отнесены к протонам при C-10, C-13, C-14. Данные ПМР-спектра I хорошо согласуются с данными ЯМР ^{13}C , а также с данными спектра, полученными в DEPT режиме: наличие сигналов при 60,51 и 67,13; 51,34

м. д., которые отнесены к углеродным атомам C₁, C₁₅ и C-11 соответственно.

Отнесения сигналов остальных углеродных атомов сделано на основании сравнения спектров аналогичных структур и фрагментов (6, 7, 8).

Таким образом, баргустанин является первым представителем нового типа димерных изохинолиновых алкалоидов.

Для хроматографирования применял и силикагель марки КСК. Индивидуальность полученных оснований проверяли на ТСХ в следующих системах растворителей: I. Хлороформ-метанол 9:1, 95:5,2. Хлороформ-метанол конц. HCl (50:50:0,1).

Температуру плавления определяли на блоке Кофлера и столике «Бозтиус». ИК-спектры записаны на приборе UR-20, таблетки с KBr. УФ-спектры снимали на спектрофотометре Hitachi в этаноле. Масс-спектры на приборе MX-1310, ЯМР-1H и ¹³C-записаны на приборе WH-360 МГц, AM-400 (Bruker), XL-200 (Varian).

Выделение Баргустанина

2,5 г фенольной части эфирной суммы (I), растирали с 3 г силикагеля (марки КСК) и поместили на колонку с силикагелем в соотношении суммы с сорбентом (1:40). При элюировании смесью хлороформ-метанол (96:4) выделили аромалин и индивидуальное основание (60мг), которое кристаллизуется из метанола с т.пл. 193-194⁰ С, оптически активное, (α) 20⁰/ D +114,2⁰ (C 0,3; CH₃OH):

ИК-спектр: KBr/мах. см⁻¹: 3540, 2940, 2850, 1610, 1275, 1210, 1080, 810, 840, 750, 710.

УФ-спектр: C₂H₅OH/мах нм: 218 (плечо), 286 (1 g 4,85; 3,98).

Масс-спектр: m/z (%): 522 (M⁺, 0,3), 381 (100), 368 (19), 367 (44), 191,5 (11), 191 (44), 192, (16).

Метилирование баргустанина (I)

60 мг I растворили в 10 мл абсолютного метанола и добавили избыток эфирного раствора дазометана. Смесь оставили на 3 суток. Затем растворитель удалили и остаток хроматографировали на колонке с силикагелем. При элюировании смесью хлороформ-метанол 98:2 получили 52 мг (II).

Масс-спектр: m/z (%): 564 (0,2 M⁺), 396 (100), 381 (37), 206 (41), 198,5 (12), 192 (18).

ПМР (200 МГц, CDCl₃): 3,81 (6H, C, 2OCH₃), 3,77 (6H, C, 2OCH₃), 3,51 (3H, C, OCH₃), 2,49 (3H, C, N-CH₃), 2,54 (3H, C, N-CH₃), 3,48 (2H, C, CH₂), 2,79-2,84 (4H, m, 2CH₂), 3,18-3,45 (4H, m, 2CH₂), 6,71; 6,48; 6,46 (1H, C, 3H), 6,76 (1H, J=1,5 Гц), 6,85 (1H, d, J=8,5 Гц), 7,63 (1H, d, J=8,5 Гц).

Расщепление II натрием в жидком аммиаке

В двугорлую колбу, снабженную мешалкой и капельной воронкой, залили 200 мл сухого жидкого аммиака и при перемешивании растворили

в нем 0,4 г металлического натрия. Затем из капельной воронки по каплям в течение 45 мин. Прибавили раствор 50 мг П в 20 мл абсолютного толуола.

Смесь перемешивали ещё 2 часа и оставили на ночь. После упаривания аммиака остаток разбавили 10 мл воды и нефенольные продукты расщепления извлекали эфиром (А), затем щелочной раствор насыщали NH_4Cl и извлекали эфиром фенольные продукты (Б).

Выделение d-лауданозина (III)

Нефенольные продукты расщепления (А) 23 мг, хроматографировали на колонке с силикагелем (5г), элюировали хлороформом и получили основание в виде масла, которое при стоянии закристаллизовалось (10 мг). Т.пл. $88-89^{\circ}$, йодметилат $218-219^{\circ}$, масс m/z 357 (M^+), 206 (100%), 151, (α) $20^{\circ}/\text{D} +49,3^{\circ}$ (О, I: CHCl_3). Полученное основание оказалось идентичным с подлинным образцом d-лауданозина /Ю/ по ТСХ, спектральным данным и отсутствию депрессии т. пл. пробы смешения.

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ЦЕНТРАЛЬНАЯ ВЕНОЗНАЯ КАТЕТЕРИЗАЦИЯ И ВСТРЕЧАЕМОЕ ОСЛОЖНЕНИЕ. СЛУЧАИ ИЗ ПРАКТИКИ

Аннотация. Несмотря на повсеместное применение, частое использование и наличие различных методик катетеризации центральных вен, остается довольно приличный список осложнений, которые могут и, к сожалению, приводят к неблагоприятным последствиям для больного или даже к смерти. Осложнения, связанные с пункцией и катетеризацией подключичной вены, по разным источникам составляют от 2,7 % до 11,2 % , при этом тяжёлые – до 1,2 % . Современные данные крайне скудны из-за отсутствия достоверной статистики. Условно осложнения венопункции и катетеризации можно разделить на механические и гнойно-септические.

Материал и методы. Проводилась катетеризация подключичной вены по Сельдингеру из подключичного доступа для проведения инфузионной терапии.

Результаты и заключение. При выполнении катетеризации подключичной вены возникло осложнение. Металлический проводник перфорировал вену, развернулся на 180° и завязался в узел, при этом цепляясь за нижний край ключицы за ломом, образовавшимся при попытке проведения дилататора. Проводник пришлось извлекать оперативным путем.

Ключевые слова: катетеризация подключичной вены; осложнение; проводник; подключичный катетер.

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CENTRAL VENOUS CATHETERIZATION AND THE COMPLICATION ENCOUNTERED. CASES FROM PRACTICE

Abstract. Despite the widespread use, frequent use and the availability of various methods of central venous catheterization, there remains a fairly decent

list of complications that can and, unfortunately, lead to adverse consequences for the patient or even death. Complications associated with puncture and catheterization of the subclavian vein, according to various sources, range from 2.7% to 11.2%, while severe - up to 1.2%. Modern data are extremely scarce due to the lack of reliable statistics. Conventionally, complications of venipuncture and catheterization can be divided into mechanical and purulent-septic. In spite of wide application and the existence of various methods of central vein catheterization, various complications do occur in performing this procedure.

Materials and methods. Using Seldinger technique we catheterized subclavian vein from the subclavian access in order to perform infusion therapy.

Results and conclusions. There was a complication while catheterizing this subclavian vein. The metal guide perforated the vein, hung 180 degrees turn, and got made into a knot, catching on the lower edge of the clavicle because of a fracture for med while we tried to pass in the dilator. The guide had to be extracted surgically.

Key words: *catheterization of the subclavian vein; complication; guide; subclavian catheter.*

Введение. Проведение интенсивной терапии, экстракорпоральных методов детоксикации, хронического и острого диализа, проведение длительной массивной инфузионной терапии требует адекватного венозного доступа. К сожалению, не всегда можно ограничиться катетеризацией периферической вены вследствие её изменений, либо в экстренных случаях, когда от времени обеспечения и адекватности венозного доступа напрямую зависит не только здоровье, но и жизнь больного. Поэтому проблема обеспечения венозного доступа попрежнему является актуальной. Несмотря на повсеместное применение, частое использование и наличие различных методик катетеризации центральных вен, остается довольно приличный список осложнений, которые могут и, к сожалению, приводят к неблагоприятным последствиям для больного или даже к смерти. Осложнения, связанные с пункцией и катетеризацией подключичной вены, по разным источникам составляют от 2,7 % до 11,2 % [1], при этом тяжёлые – до 1,2 % [1,3]. Современные данные крайне скудны из-за отсутствия достоверной статистики. Условно осложнения венопункции и катетеризации можно разделить на механические и гнойно-септические.

1. Механические осложнения включают:

1.1. Осложнения, связанные с венопункцией:

а) пункция подключичной артерии; встречается в 0,54,9 % случаев [2,4];

б) пневмоторакс 0,25 % [1,4], гемоторакс 0,4 0,6 % [2];

в) воздушная эмболия составляет около 0,35 % всех осложнений, особенно у больных с гиповолемией [1, 4];

г) повреждение грудного лимфатического протока возможно при левосторонней пункции [2];

д) повреждение плечевого сплетения 0,5 % случаев [1,3];

е) гематома в месте пункции, подкожная гематома отмечаются в 23 % случаев [1, 4];

ж) пункция трахеи, щитовидной железы, травмы других органов и тканей; встречается крайне редко, об этих осложнениях имеются единичные упоминания в литературе [1].

1.2. Осложнения, связанные с введением проводника и катетеризацией:

а) перфорация стенки подключичной вены, нижнего участка верхней полой вены, правого предсердия или правого желудочка с развитием тампонады сердца;

б) скручивание проводника, перегиб проводника в просвете вены. При неправильном введении проводника возможно завязывание катетера в узел [1]. Подобная ситуация требует вмешательства сосудистого хирурга. Также возможен перегиб проводника при проведении дилататора – данное осложнение довольно часто случается при вколе иглы непосредственно или недалеко от ключицы. После успешного проведения проводника при прохождении дилататора происходит перегиб проводника в мягких тканях, что зачастую делает невозможным проведение катетера по проводнику 0,51 % [4];

в) обрезание кончика проводника срезом иглы при использовании полимерных проводников многократно затачиваемых игл; в случае попадания фрагмента проводника в венозное русло тяжёлые тромбоэмболические осложнения неизбежны и неисправимы.

1.3. Осложнения, связанные с неправильным положением катетера:

а) возникновение аритмии;

б) перфорация стенки сердца, тампонада сердца.

2. Гнойносептические осложнения включают:

а) инфицирование раны в области установки катетера;

б) тромбофлебиты центральных вен;

в) нагноение гематом и кровоизлияний в ткани вплоть до абсцедирования и образования флегмон;

г) септицемия;

д) эндокардит.

Частота инфекций, вызванных сосудистыми катетерами, составляет в среднем 78 % [1, 2]. В нашей клинике произошел интересный клинический случай. Перед проведением планового оперативного вмешательства у пациентки Б. сосудистого отделения планировалась катетеризация подключичной вены по Сельдингеру из подключичного доступа для

проведения инфузионной терапии. Использовался набор B. Braun certofix mono S 420. В асептических условиях, после проведения инфильтрационной анестезии мягких тканей, была проведена пункция подключичной вены на границе средней и наружной третей ключицы, на 1 см ниже ключицы. После вкола игла продвигалась в направлении верхнего края грудино ключичного сочленения. Примерно на глубине 5 см в просвет иглы стала поступать венозная кровь. По игле был введен металлический проводник, ход проводника был свободный. После извлечения иглы, для расширения канала, попроводнику был введен дилататор. При проведении дилататора на расстоянии примерно 4 см возникло механическое препятствие. Попытка извлечь проводник вместе с дилататором ни к чему не привела. После консультации с заведующим отделением была проведена рентгеноскопия грудной клетки с помощью С дуги. Наблюдалась следующая картина: проводник был завязан узлом (рис. 1). Попытки извлечь проводник под контролем рентгеноскопии успехом неувенчались. Проводник был плотно фиксирован в области нижнего края ключицы заломом, который образовался, повидимому, при попытке проведения дилататора (отмечено стрелкой), причем определить, находится он в вене или нет, не представлялось возможным. Ввиду анатомических особенностей и тучности пациентки ультразвуковое исследование также не дало какихлибо дополнительных данных о положении проводника относительно вены. Так как не было получено ответа на вопрос, каким образом проводник располагается относительно вены, и попытка насильственного извлечения проводника могла привести к повреждению сосуда и развитию кровотечения, было принято решение об извлечении проводника оперативным путем. Оперативное вмешательство было выполнено в условиях ингаляционной анестезии севофлюраном. В ходе оперативного вмешательства выяснились следующие подробности: проводник цеплялся за нижний край ключицы заломом, образовавшимся при попытке проведения дилататора, далее входил в просвет вены, проходил насквозь, перфорируя противоположную стенку, разворачивался на 180 градусов, огибая подключичную вену с образованием петли и завязыванием его в узел. После удаления узла проводник был легко извлечен (рис. 2). Плановая операция была отложена, больная переведена в палату интенсивной терапии (ПИТ) для наблюдения. На следующий день в плановом порядке была катетеризирована подключичная вена слева без особенностей и технических сложностей. Можно предположить, что данное осложнение возникло вследствие неправильного выбора места вкола иглы, слишком близко к ключице, что привело к перегибу проводника сместившимся массивом тканей после извлечения иглы, чему способствовала и тучность больной. Закручивание проводника в узел произошло, повидимому, вследствие перфорации противоположной стенки сосуда и выраженности жировой клетчатки, что

не дало доктору ощущения сопротивления при проведении проводника. Чтобы избежать подобных осложнений, нужно тщательно выбирать место пункции с соблюдением расстояния до ключицы и направлять иглу сразу в сторону медиального края грудиноключичного сочленения, это позволит избежать перегиба проводника

в мышечном слое. Также, при проведении проводника в просвет вены, обращать внимание на наличие даже минимального сопротивления при его продвижении. Если возникают сомнения, нужно аккуратно извлечь проводник, уточнить положение иглы в просвете вены и попытаться повторно провести проводник. Если это не удастся, нужно провести повторную попытку пункции. Если же попытка извлечь проводник не удалась, не стоит пытаться расширить канал введением дилатора, это приведет к перегибу проводника и еще больше затруднит ситуацию. Необходимо провести рентгеноскопию или ультразвуковое исследование для определения положения проводника. Если и это не дает полной картины, ни

в коем случае нельзя пытаться извлечь проводник силой, так как это может привести к повреждению сосуда и развитию кровотечения. Гораздо безопаснее будет извлечь проводник оперативным путем.

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ЭФФЕКТИВНОСТЬ ПРИМЕНЕНИЯ АНТИРЕФЛЕКСИВНОЙ ЭНДОТРАХЕАЛЬНОЙ ТРУБКИ В ОТДЕЛЕНИИ НЕЙРОРЕАНИМАЦИИ РНЦЭМП АФ

Цель исследования: оценить эффективность применения антирефлексивной эндотрахеальной трубки при продленной искусственной вентиляции легких (ИВЛ) в отделении интенсивной терапии. **Дизайн исследования.** У 38-ми пациентов интенсивной терапии, находящихся на продленной ИВЛ, по данным объема минутной вентиляции легких и динамики уровня парциального напряжения углекислого газа крови ($PaCO_2$), а также оценки неврологического статуса (либо уровня седации), гемодинамики, температуры тела изучена эффективность применения антирефлексивной эндотрахеальной трубки. **Результаты исследования.** Проведение ИВЛ с помощью антирефлексивной эндотрахеальной трубки обеспечивает уменьшение раздражения в зоне контакта слизистой оболочки трахеи и надувной манжетки в результате возможности орошения слизистой оболочки раствором лидокаина. Использование антирефлексивной эндотрахеальной трубки обеспечивает респираторный комфорт пациенту и достоверно реже сопровождается гипервентиляцией.

Ключевые слова: антирефлексивная эндотрахеальная трубка, интубация трахеи, продленная искусственная вентиляция легких, слизистая трахеи.

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THE EFFECTIVENESS OF ANTIREFLEXIVE ENDOTRACHEAL TUBE USE IN THE NEUROSUSCITATION DEPARTMENT OF RNCAMP AF

The aim of the study was to evaluate the effectiveness of the use of an antireflexive endotracheal tube during prolonged artificial lung ventilation (ALV) in the intensive care unit. Study design. In 38 intensive care patients on prolonged mechanical ventilation, according to the volume of minute ventilation of the lungs and the dynamics of the level of partial tension of blood carbon dioxide (PaCO_2), as well as assessing the neurological status (or the level of sedation), hemodynamics, body temperature, the effectiveness of the use of antireflexive endotracheal tube. Research results. Conducting mechanical ventilation using an antireflexive endotracheal tube reduces irritation in the contact zone of the tracheal mucosa and the inflatable cuff as a result of the possibility of irrigating the mucosa with a solution of lidocaine. The use of an antireflexive endotracheal tube provides respiratory comfort to the patient and is significantly less often accompanied by hyperventilation.

Key words: antireflexive endotracheal tube, tracheal intubation, prolonged mechanical ventilation, tracheal mucosa.

Введение. Интубация трахеи — одна из наиболее частых манипуляций, выполняемых во время анестезии и в интенсивной терапии. Основной целью интубации трахеи является восстановление и поддержание проходимости верхних дыхательных путей. Первое описание введения человеку трубки в трахею для проведения вентиляции легких с помощью кожаных мехов принадлежит Парацельсу (1493–1541). Н. И. Пирогов (1847) с целью поддержания проходимости верхних дыхательных путей в эксперименте вводил трубку в просвет трахеи. В 1858 году этот эксперимент повторил Дж. Сноу. Интубационная трубка для наркоза впервые была применена 5 июля 1878 году шотландским хирургом У. Макьюеном. Поскольку местная анестезия тогда не применялась, введение интубационной трубки вызвало у пациента приступ сильного кашля. Однако после ингаляции паров хлороформа кашель прекратился, и операция прошла успешно. В 1919 году Айван Мейджил модифицировал интубационную трубку, сделав её из отрезка красного резинового шланга изогнутой и со скошенным срезом. Эта трубка, в дальнейшем получившая имя автора, применялась более 40 лет, пока не появились трубки, изготовленные из биологически инертных пластмасс. С именем Артура Гведела связано дальнейшее усовершенствование интубационных трубок использование раздуваемой манжетки. Гведел начал разработку интубационных трубок с манжетами для повышения безопасности эндотрахеального наркоза. Первые манжетки, которые приклеивались на трубки, изготавливались из каучука, презервативов, хирургических перчаток. После ряда экспериментов на животных Гведел пришел к выводу, что раздуваемая манжетка должна находиться ниже голосовых связок. Для более наглядной демонстрации достоинств трубки с манжетами А. Гведел, используя собственную любимую собаку, после анестезии и интубации

трахеи погрузил животное в аквариум с водой. Дыхание собаки осуществлялось через интубационную трубку. После окончания эксперимента собаку вытащили из аквариума и экстубировали. Чувствовало себя животное достаточно хорошо. После этой публичной демонстрации интубационные трубки с манжетами получили широкое распространение [1].

Несмотря на длительность применения интубации трахеи, как основного метода обеспечения проходимости дыхательных путей в клинической практике, надежной альтернативы ей так и не найдено. Интубация трахеи является сложной и ответственной манипуляцией, а трудности и опасности, которые её сопровождают, весьма разнообразны. В их число входят побочные эффекты, связанные с развитием рефлекторных патофизиологических реакций, вызванных раздражением слизистой гортани и трахеи интубационной трубкой [14]. Эти патофизиологические реакции могут иметь различную степень выраженности, а последствия их могут быть как незначительными, так и очень грозными, в зависимости от степени компенсаторных возможностей организма пациента [2, 12, 13]. Существует множество способов профилактики и устранения рефлекторных реакций. Среди них наиболее распространена медикаментозная профилактика (премедикация), различные методы местной анестезии слизистой оболочки гортани и трахеи, как наиболее эффективные и патогенетически обоснованные. К методам местной анестезии относятся применение ингаляторов и различных спреев, содержащих местный анестетик, посредством распыления *per os*; использование гидрофильных мазей, содержащих местные анестетики для смазывания манжетки эндотрахеальной трубки; местная анестезия после прокола перстне-щитовидной мембраны по методу «Bonica». У всех перечисленных методов имеется один общий недостаток — они не могут достаточно хорошо устранить рефлекторную импульсацию на протяжении длительного времени. Их эффективность ограничена сроком действия местного анестетика и, следовательно, ни один из них не может быть применен после интубации трахеи. Вместе с тем все эти методы имеют и собственные недостатки. Так, применение аэрозолей *per*

os не обеспечивает доставку необходимого количества местного анестетика в подсвязочное пространство. Обработка манжетки интубационной трубки мазями с местным анестетиком практически не даёт эффекта из-за замедления всасывания через слизистую оболочку трахеи. К тому же невозможно точно контролировать общую дозу введенного препарата. Метод «Bonica» инвазивен и может сопровождаться ранением пищевода и кровеносных сосудов, инфицированием в месте пункции и подлежащих тканях шеи [3]. Одним из эффективных методов решения данной проблемы явилось совершенствование моделей интубационных трубок. В 2001–2002 годах были разработаны и

запатентованы В. А. Перваком модели, использование которых позволяет вводить местные анестетики и другие препараты непосредственно в зону контакта пневматической манжетки и слизистой оболочки трахеи после её интубации. Предложенная эндотрахеальная трубка нового типа относится к антирефлексивной (изобретение № 2150300 от 10 июня 2000 года) [8]. И получила широкое практическое распространение, но не была лишена недостатков в результате чего автором была предложена новая конструкция герметизирующей манжетки для эндотрахеальной трубки (изобретение № 2219965 от 27 декабря 2003 года) [6]. Имеются диссертации и исследования, позволяющие дать клиническую оценку эффективности использования новой конструкции герметизирующей манжетки во время общей анестезии при проведении различных оперативных вмешательств [4, 5]. По данной теме опубликовано более 10-ти работ, в том числе и 2 международные публикации о заявках на изобретение [7, 9]. Однако в доступной литературе отсутствуют сведения об эффективности применения антирефлексивных эндотрахеальных трубок у пациентов, которым проводится продленная респираторная поддержка в условиях отделения реанимации и интенсивной терапии. Проведение искусственной вентиляции лёгких (ИВЛ) через эндотрахеальную трубку в отделении интенсивной терапии нередко осложняется рефлекторными реакциями на эндотрахеальную трубку. Наиболее часто рефлекторные реакции проявляются гипервентиляцией, артериальной гипертензией, тахикардией, двигательным возбуждением [10, 11]. Это определяет необходимость глубокой седации пациентов, даже с расстройствами сознания.

Применение антирефлексивной эндотрахеальной трубки, возможно, позволит контролировать эти реакции, не прибегая к дополнительной седации, обеспечит респираторный комфорт интубированных пациентов. Проверка этой гипотезы и была целью исследования.

Цель исследования: оценить эффективность применения антирефлексивной эндотрахеальной трубки при продленной ИВЛ в отделении интенсивной терапии.

Материалы и методы исследования. Дизайн исследования — двойное слепое проспективное, клиническое, рандомизированное. Обследовано 38 пациентов мужского пола, проходивших лечение в отделении анестезиологии и реанимации Городской клинической больницы № 2 г. Владивостока. Параметры исследовались в течение первых суток проведения ИВЛ. Критерии включения в исследование — пациенты с черепно-мозговой травмой: ушибом головного мозга легкой и средней степени, острым нарушением мозгового кровообращения (ОНМК); пациенты с сочетанной травмой, а также пациенты после длительных оперативных вмешательств различного рода, которым была показана продленная ИВЛ. Критерии исключения: уровень сознания

пациентов менее 12-ти баллов по шкале ком Глазго, либо R 2–4 по шкале Ramsay, сахарный диабет, отсутствие хронических обструктивных заболеваний легких в анамнезе, гипертермия, как возможная причина одышки и, как следствие, нарастание минутной вентиляции легких, физический статус класса ASA IV. Больные были случайным образом разделены на две группы, имеющие различия по типу применяемой эндотрахеальной трубки. Схема анестезиологического пособия и режимы ИВЛ по группам были идентичными. 20 человек составила опытная группа, в которой применялось орошение слизистой трахеи 1 мл 2 % раствора лидокаина каждые 60 мин. (Данная дозировка рекомендована В. А. Перваком — изобретателем антирефлексивной эндотрахеальной трубки. В научных работах имеются данные, что при использовании лидокаина в такой дозировке токсическая концентрация местного анестетика в плазме не достигается). 18 человек составила контрольная группа, в которой орошение слизистой трахеи растворами местных анестетиков не производилось. Общая характеристика групп представлена в таблице 1.

Общая характеристика групп (М ± m)

Показатели	Контрольная группа (n = 18)	Опытная группа (n = 20)
Возраст (лет), пол	66,5 ± 4,3	67,6 ± 5,1
Масса тела (кг)	74,2 ± 4,1	75,3 ± 3,8
Физический статус по ASA, %		
ASA II	50	45
ASA III	50	55
Черепно-мозговая травма	8	10
Сочетанная травма	3	2
ОНМК	2	3

В качестве критерия адекватности местной анестезии слизистой трахеи и отсутствия реакции на интубационную трубку использовался объём минутной вентиляции легких (МВЛ) и уровень парциального напряжения углекислого газа крови (PaCO₂). Нормальным уровнем МВЛ считается показатель 6–8 л/мин; нормальный уровень PaCO₂ — 40–45 мм рт. ст. Всем пациентам проводилась адекватная аналгезия и своевременная санация трахеобронхиального дерева. У всех пациентов температура тела была в пределах 36,0–36,9 °С. Каждые 6 часов осуществлялась оценка неврологического статуса (либо уровня седации), измерение артериального давления (АД), частоты сердечных сокращений (ЧСС), температуры тела, уровня МВЛ и PaCO₂. Уровень PaCO₂ измеряли аппаратом Radiometer ABL 800. Для математических вычислений полученных данных применяли метод статистической обработки с проверкой изменений в исследуемых группах по критерию Стьюдента. Все

полученные во время исследования математические данные подвержены компьютерной обработке на P4 Windows 7 с помощью программы Statistica for Windows в выражении $M \pm m$ и P, где M — среднеарифметическое, m — ошибка среднего числа, P — статистические различия по сравнению с контрольной группой.

Результаты исследований и их обсуждение. У всех пациентов регистрация параметров производилась 4 раза в сутки. Таким образом, за все время наблюдений в опытной группе (20 человек) количество измерений составило 80 ($n = 80$), в контрольной группе (18 человек) — 72 ($n = 72$). Как видно из табл. 1, в контрольной группе средний показатель $PaCO_2$ ($39,14 \pm 0,7$) был статистически ниже ($p < 0,05$), чем в опытной группе ($42,4 \pm 0,932$), т. е. пациенты, которым не применялась местная анестезия слизистой оболочки трахеи, пребывали в умеренной гипервентиляции. У пациентов опытной группы за все время наблюдения не отмечено случаев системных проявлений местного анестетика (лидокаина). Также наблюдалось статистически значимое ($p < 0,05$) увеличение МВЛ в контрольной группе по сравнению с опытной: $9,5 \pm 0,294$ и $8,07 \pm 0,2268$ л/мин соответственно (табл. 2).

Результаты исследования

Группы	Показатели			
	$PaCO_2$	МВЛ	АД ср. мм рт. ст.	ЧСС уд/мин
Опытная группа ($n = 80$)	$42,4 \pm 0,932^*$	$8,07 \pm 0,2268^*$	$96 \pm 0,24^*$	$84 \pm 0,32^*$
Контр. группа ($n = 80$)	$39,14 \pm 0,7$	$9,5 \pm 0,294$	$106 \pm 0,3$	$92 \pm 0,5$

Учитывая, что исходно пациенты в двух группах не имели различий в неврологическом статусе и уровне седации, можно сделать вывод о том, что орошение слизистой оболочки трахеи раствором местного анестетика позволяет добиться большего респираторного комфорта больных опытной группы

Выводы. 1. Появился опыт применения антирефлексивной эндотрахеальной трубки типа Pervak не только во время общей анестезии, но и в отделении реанимации и интенсивной терапии.

2. Проведение ИВЛ с помощью антирефлексивной эндотрахеальной трубки обеспечивает уменьшение раздражения в зоне контакта слизистой оболочки трахеи и надувной манжетки в результате возможности орошения слизистой оболочки раствором лидокаина.

3. Использование антирефлексивной эндотрахеальной трубки обеспечивает респираторный комфорт пациенту и достоверно реже сопровождается гипервентиляцией.

4. При использовании лидокаина в дозировке, рекомендованной изобретателем антирефлексивной эндотрахеальной трубки, не отмечалось системных проявлений действия местного анестетика.

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ПРОФИЛАКТИКА ГЕМОРРАГИЧЕСКОГО СИНДРОМА ПРИ КАТЕТЕРИЗАЦИИ АРТЕРИИ У БОЛЬНЫХ В ОТДЕЛЕНИИ НЕЙРОРЕАНИМАЦИИ РНЦЭМП АФ

***Аннотация.** Основными показаниями к катетеризации артерий в интенсивной терапии являются постоянное измерение АД, а также взятие образцов крови для исследования ее газового состава и кислотно-основного состояния. По данным многоцентрового исследования, необходимость в катетеризации артерий возникает в 41,4% случаев при тяжелом сепсисе и септическом шоке, в 20,2% при неясном волевическом статусе больного, в 28,4% при циркуляторной недостаточности, в 18,3% при острой дыхательной недостаточности, в 7,2% при почечной недостаточности и в 13,8% при хирургических вмешательствах. В последние годы наряду с измерением АД и исследованием образцов крови появилось еще одно показание к катетеризации артерий — функциональные гемодинамические параметры, анализируемые по пульсовой волне: вариация пульсовой волны, вариация систолического давления, непрерывное определение сердечного выброса.*

***Ключевые слова:** катетеризация артерий; тромбоцитопения; коагулопатия; геморрагические осложнения.*

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PREVENTION OF HEMORRHAGIC SYNDROME DURING ARTERIAL CATHETERIZATION IN PATIENTS IN THE NEURORESUSCITATION DEPARTMENT OF RSCAMH AF

***Annotation.** The main indications for arterial catheterization in intensive care are continuous measurement of BP, as well as blood sampling for the study of its gas composition and acid-base state. According to a multicenter study, the*

need for arterial catheterization occurs in 41.4% of cases with severe sepsis and septic shock, in 20.2% with unclear volemic status of the patient, in 28.4% with circulatory failure, in 18.3% with acute respiratory failure, in 7.2% with renal failure and in 13.8% with surgical interventions. In recent years, along with BP measurement and examination of blood samples, another indication for arterial catheterization has appeared - functional hemodynamic parameters analyzed by pulse wave: pulse wave variation, systolic pressure variation, continuous determination of cardiac output.

Keywords: *arterial catheterization; thrombocytopenia; coagulopathy; hemorrhagic complications.*

Введение. Катетеризация артерий является наиболее частой манипуляцией в отделениях интенсивной терапии, занимая 2-е место по частоте применения после катетеризации вен [1]. Первое упоминание о пункции артерии принадлежит английскому священнику S. Hales в 1714 г., а первое описание катетеризации артерии у людей сделано в 1856 г. [2]. В последующем установку радиального артериального катетера путем хирургического разреза описал S. Radner в Швеции в 1948 г. [2]. Постоянное интраоперационное измерение артериального давления (АД) через небольшой пластиковый катетер, установленный в плечевую артерию через металлическую иглу, впервые использовал L.H. Peterson в 1949 г. В 1951 г. впервые описана [2] катетеризация крупных артерий у людей с помощью полиэтиленовых катетеров, а уже в 1953 г. шведский радиолог S. Seldinger предложил технику катетеризации сосудов по струне, которая получила широкое распространение [3].

В настоящее время в США ежегодно устанавливается от 6 до 9 млн артериальных катетеров [4]. В отделениях интенсивной терапии США, Европы [2, 5, 6] артериальный катетер, как правило, установлен у каждого третьего больного.

Основными показаниями к катетеризации артерий в интенсивной терапии являются постоянное измерение АД, а также взятие образцов крови для исследования ее газового состава и кислотно-основного состояния. По данным многоцентрового исследования [7], необходимость в катетеризации артерий возникает в 41,4% случаев при тяжелом сепсисе и септическом шоке, в 20,2% при неясном волевическом статусе больного, в 28,4% при циркуляторной недостаточности, в 18,3% при острой дыхательной недостаточности, в 7,2% при почечной недостаточности и в 13,8% при хирургических вмешательствах. В последние годы наряду с измерением АД и исследованием образцов крови появилось еще одно показание к катетеризации артерий — функциональные гемодинамические параметры, анализируемые по пульсовой волне: вариация пульсовой волны, вариация систолического давления, непрерывное определение сердечного выброса [8, 9]. Эти

параметры позволяют выявить состояния гипо- или гиперволемии, предсказать ответ на инфузионную нагрузку.

Относительными противопоказаниями к катетеризации артерий являются тромбоцитопения и коагулопатия [2]. Тромбоцитопения считается одним из наиболее частых нарушений системы гемостаза, которое определяется у больных, находящихся в отделении реанимации и интенсивной терапии [10, 11]. По данным ряда авторов [12—14], частота возникновения тромбоцитопении варьирует от 15 до 60%. Нарушения коагуляционного звена гемостаза, такие как удлинение активированного частичного тромбопластинового времени (АЧТВ) или снижение протромбина по Квику, определяются у 14—28% больных отделения интенсивной терапии [15, 16].

В литературе крайне мало работ, которые оценивали бы безопасность катетеризации артерий у больных с нарушениями системы гемостаза.

Цель работы — изучить осложнения катетеризации артерий и факторы риска их развития у больных с тромбоцитопенией и коагулопатиями.

Материал и методы. В ретроспективное исследование включены все случаи катетеризации артерий у больных с заболеваниями системы крови, поступавших в отделение нейрореанимации РНЦЭМП АФ 2020 по 2023 г.

Для катетеризации бедренной артерии использовали катетер Certofix Mono 18G (B. Braun Melsungen AG, Германия). Катетеризация выполнялась по методу Сельдингера [17]. Место пункции бедренной артерии определяли по пульсации в проекции бедренной артерии в области бедренного треугольника, ниже паховой складки на 1—2 см.

Перед катетеризацией лучевой артерии предварительно проводили модифицированный тест Аллена с использованием пульсоксиметрии [18]. Далее кисть укладывали в положении ладонью вверх, разгибая в лучезапястном суставе. Определяли пульсацию на лучевой артерии у дистального конца лучевой кости. После этого обрабатывали эту область раствором антисептика и пунктировали кожу артериальной канюлей Floswitch tm (Becton Dickinson, Великобритания) 22 калибра срезом вверх, направляя иглу под углом 45° к поверхности кожи. В случае использования артериальной канюли Arteriofix®V (20G и 22G, B. Braun Melsungen AG, Германия) пункцию и катетеризацию артерии осуществляли по методике Сельдингера [17]. С 2012 г. все катетеризации артерий выполняли только под ультра-звуковым контролем (аппарат M-Turbo, SonoSite, США). Для этого использовали линейный датчик с частотой 5—10 МГц, стерильный гель. Для визуализации артерии выводили по ко-роткой оси.

У включенных в исследование больных регистрировали демографические показатели, нозологическую форму заболеваний системы крови, показания к катетеризации артерий, число попыток катетеризации, ранние и поздние осложнения. До катетеризации артерии определяли число тромбоцитов в периферической крови, АЧТВ, протромбин по Квику. При переливании концентратов тромбоцитов регистрировали число перелитых тромбоцитов, число тромбоцитов крови после трансфузии.

Данные ретроспективного исследования подвергали статистическому анализу и выражали в виде медианы, среднего $\pm$ стандартное отклонение. Достоверность различий определяли по z-критерию, непараметрическому тесту U Манна—Уитни. Различия считали достоверными при $p < 0,05$. Риски развития осложнений, связанных с катетеризацией артерий, определяли с помощью частотного и регрессионного анализа. Статистическая обработка данных проводилась с помощью программы Statistica (версия 6.0) [18].

Результаты исследования и их обсуждение. С 1996 по 2012 г. выполнены 562 катетеризации артерий (481 бедренная и 81 лучевая). В среднем ежегодно из 200 больных с заболеваниями системы крови, находящихся в критическом состоянии, у 40 выполняли катетеризации артерий. Среди больных, которым выполнялись катетеризации артерий, было 387 мужчин и 268 женщин. Возраст пациентов составлял от 19 до 77 лет (медиана возраста 48 лет).

Показанием для установки артериального катетера были необходимость инвазивного измерения АД, мониторинга параметров центральной гемодинамики, взятия образцов крови для исследования газового состава, кислотно-основного состояния при различных критических состояниях (табл. 1), а также у больных, которым предполагалось выполнить большие по объему операции или операции, которые могут сопровождаться массивной кровопотерей.

У 410 (73%) больных перед катетеризацией артерий выявлялась тромбоцитопения $1 \cdot 10^9$ — $150 \cdot 10^9/\text{л}$ (медиана $46 \cdot 10^9/\text{л}$). Уровень тромбоцитов менее $30 \cdot 10^9/\text{л}$ был у 25% больных.

Кроме тромбоцитопении у больных были нарушения коагуляционного гемостаза. У 298 (53%) больных АЧТВ было более 40 с (колебания 41—60 с, медиана 51 с; норма 30—35 с). У 317 (61%) больных выявлено снижение уровня протромбина по Квику $< 70\%$ (колебания 18—69%, медиана 44%; норма 70—120%).

У 5 больных гемофилией А отмечалось увеличение АЧТВ более 60 с. снижение активности фактора свертывания крови VIII от 4 до 17%. У 1 больного ингибиторной формой гемофилии А активность фактора VIII была $< 1\%$, АЧТВ — 120 с. У 2 больных гемофилией В отмечалось снижение активности фактора IX (3 и 6%). У больной с

болезнью Виллебранда перед катетеризацией артерии выявлено снижение активности фактора Виллебранда до 10%.

В 177 (27%) случаях перед катетеризацией отмечалось сочетание тромбоцитопении с нарушениями коагуляционного гемостаза (удлинение АЧТВ и/или снижение уровня протромбина по Квику). Катетеризация лучевой и бедренной артерий проводилась врачами, имеющими различный стаж и опыт работы.

С первой попытки катетеризация выполнена у 377 (67%) из 562 больных. Частота успешных катетеризаций с первой попытки лучевой и бедренной артерий составила 66 и 56% соответственно. Общее количество предпринятых попыток пункций лучевой и бедренной артерий статистически значимо не различалось. Технические сложности наблюдались чаще при катетеризации лучевой артерии, чем при бедренной (12% против 8,6%). При катетеризации лучевой артерии по сравнению с бедренной чаще возникали сложности при проведении проводника (6% против 2,9%) (см. табл. 2).

В 2020 г. выполнено 76 катетеризаций артерий под ультразвуковым контролем, из них 88% с первой попытки. В сравнении с 2021 г., когда с первой попытки катетеризация артерии была выполнена у 43 (62%) из 69 пациентов, применение ультразвукового контроля достоверно повысило эффективность катетеризаций артерий ($p < 0,001$).

Несмотря на часто выявляемые нарушения гемостаза, лишь у 118 (21%) из 562 больных перед катетеризацией проводилась коррекция выявленных нарушений. У остальных больных катетеризация артерий осуществлялась по экстренным показаниям, когда не было времени и возможности проводить гемостатическую терапию.

В 57(10,1%) из 562 случаев перед катетеризацией артерии выполнялись трансфузии концентратов тромбоцитов. Количество перелитых тромбоцитов составило от $1,5 \cdot 10^{11}$ до $8 \cdot 10^{11}$ (медиана $4,8 \cdot 10^{11}$). Число тромбоцитов крови перед трансфузиями концентратов тромбоцитов варьировало от $1 \cdot 10^9$ до $48 \cdot 10^9/\text{л}$ (медиана $25 \cdot 10^9/\text{л}$), после трансфузии — $27 \cdot 10^9$ — $101 \cdot 10^9/\text{л}$ (медиана $48 \cdot 10^9/\text{л}$).

У 20 (3,6%) больных выявлены нарушения коагуляционного гемостаза, и перед катетеризацией им выполняли трансфузию от 600 до 2100 мл (медиана 800 мл) свежезамороженной плазмы.

У 33 (6%) больных с сочетанными нарушениями гемостаза перед катетеризацией артерий проводили заместительную терапию концентратами тромбоцитов и свежезамороженной плазмой.

Семи больным гемофилией А и В катетеризацию артерий выполняли после введения факторов свертывания крови. Дозы факторов свертывания крови VIII и IX варьировали от 2000 до 3000 МЕ (в среднем 30 МЕ/кг). У больного с ингибиторной формой гемофилии А катетеризацию артерии

выполняли после введения рекомбинантного активированного фактора VII ("NovoSeven", Novo Nordisk, Дания) в дозе 120 мкг/кг.

Геморрагические осложнения после катетеризации артерий развились у 93 (16,5%) больных; наиболее частыми были кровоточивость из места пункции (у 48 больных), гематомы, объем которых не превышал 50 мл (у 42 больных). У 3 больных развилась массивная гематома мягких тканей бедра. Геморрагических осложнений было больше после катетеризации бедренной артерии, чем после лучевой (86 и 7 случаев соответственно, $p=0,06$).

Установлено, что факторами риска геморрагических осложнений были тромбоцитопения $< 30 \cdot 10^9/\text{л}$ (отношение шансов — 1,8; 95% доверительный интервал 1,04—3,12) и количество попыток пункции артерии более 1 (отношение шансов — 2,83; 95% доверительный интервал 1,68—4,77). Не обнаружено зависимости развития геморрагических осложнений от заболевания системы крови и критического синдрома.

Ишемические осложнения, возникшие после катетеризации артерий, выявлены у 21 (3,7%) больного: 13 (2,3%) случаев ишемических осложнений возникли после катетеризации лучевой артерии и 8 (1,4%) — после катетеризации бедренной артерии. У 19 (3,4%) больных были преходящие нарушения кровообращения, которые исчезали после удаления катетера, у 2 (0,3%) больных развился тромбоз артерий, приведший к недостаточности артериального кровообращения в конечности, потребовавшего выполнения тромбэктомии.

Во всех случаях возникновения ишемических осложнений у больных была тромбоцитопения от $5 \cdot 10^9$ до $137 \cdot 10^9/\text{л}$. Системная инфекция выявлена у 18 (86%) из 21 больного, включая 2 больных с артериальным тромбозом. У 5 больных ишемические осложнения возникали на фоне септического шока, низкого АД, применения вазопрессоров.

Несмотря на то что у 78% больных с заболеваниями системы крови перед катетеризацией артерий выявлялись выраженные нарушения в системе гемостаза, геморрагические осложнения возникали лишь у 16,5% больных. Факторами риска возникновения осложнений явилась не только тромбоцитопения $< 30 \cdot 10^9/\text{л}$, но и число попыток пункций артерий более 2.

По данным Е.М. Шулутко и соавт. [10], у больных с заболеваниями системы крови безопасным является уровень тромбоцитов перед катетеризацией вен более $30 \cdot 10^9/\text{л}$. Такой уровень тромбоцитов являлся достаточным для обеспечения гемостаза и при катетеризации артерий. При тромбоцитопении $< 30 \cdot 10^9/\text{л}$ частота геморрагических осложнений увеличивалась почти в 2 раза. У больных с числом тромбоцитов менее $30 \cdot 10^9/\text{л}$ перед пункцией

проводили заместительную трансфузию концентрата тромбоцитов, и достигался уровень тромбоцитов в среднем $48 \cdot 10^9/\text{л}$.

В отличие от катетеризации центральных вен при катетеризации артерий место пункции можно легко прижать, тем самым остановив кровотечение. Поэтому геморрагические осложнения катетеризации артерий не являются серьезными, угрожающими жизни, как при катетеризации центральных вен (гемоторакс при катетеризации подключичной вены, нарушение проходимости дыхательных путей при катетеризации внутренней яремной вены и т. д.) [10, 11]. Тем не менее в литературе описаны случаи массивных забрюшинных гематом при катетеризации бедренной артерии, образования обширных гематом с имбибцией грудной мышцы, мышц плечевого пояса после катетеризации плечевой артерии, развития компартмент-синдрома после катетеризации лучевой артерии [22—24].

У больных без заболеваний системы крови нарушения гемостаза часто встречаются при сепсисе и септическом шоке. Это происходит из-за того, что система гемостаза реагирует на сепсис активацией свертывания крови, снижением активности антикоагулянтов и фибринолитической активностью плазмы, отмечаются потребление тромбоцитов и их секвестрация, нарушение тромбоцитопоза [14, 15]. Хирургические и травматологические больные имеют выше риск развития тромбоцитопении и нарушений коагуляционного звена гемостаза, чем терапевтические [13, 14].

Число попыток пункции артерии как фактор геморрагических осложнений выделяют и другие авторы. P.F. Mansfield и соавт. показали, что те катетеризации, при которых выполнялись 2 попытки пункции сосуда и более, сочетались с частотой неудач 43% и частотой механических осложнений 24%. В нашем исследовании успешная катетеризация артерий с первой попытки была выполнена в 67% случаев. В работе других авторов [4] катетеризация артерий с первой попытки выполнялась в среднем в 70—80% случаев. Однако в этом исследовании нет данных об опыте врачей, выполнявших манипуляцию. В нашем исследовании катетеризацию артерий выполняли не только опытные, но и молодые врачи, клинические ординаторы. Другим фактором, влияющим на частоту успешной катетеризации артерий с первой попытки, явилось более частое (54% против 45%) выполнение в нашем исследовании по сравнению с другими авторами [4] этой манипуляции у больных с септическим шоком. У таких больных с низким АД трудно пальпировать артериальную пульсацию. Этим же можно объяснить большие технические сложности при катетеризации лучевой (25,2%) по сравнению с бедренной артерией (7%).

Для уменьшения неудач при пункции и катетеризации центральных сосудов рекомендуется выполнять процедуру под ультразвуковым

контролем и ограничить количество попыток до двух. О. Dudeck и соавт., исследуя катетеризации бедренной артерии у 116 реанимационных больных, заключили, что ультразвуковой контроль должен использоваться в тех случаях, когда не удается пальпировать или слабо пальпируется пульс на артерии, а также у больных с окружностью бедра более 60 см.

Рутинное использование ультразвукового контроля позволило повысить эффективность катетеризаций артерий и у больных с заболеваниями системы крови: число успешных катетеризаций с первой попытки выросло с 67 до 88%. По данным ряда исследований, при использовании ультразвукового контроля лучевая артерия была катетеризирована с первой попытки в 62% случаев, в то время как при использовании только пальпации — в 34%. В другом исследовании, проведенном у больных в критических состояниях, катетеризация лучевой артерии с первой попытки под ультразвуковым контролем выполнена в 87% случаев, а при использовании пальпации — в 50%.

Геморрагические осложнения в нашем исследовании возникали чаще при катетеризации бедренной артерии, чем лучевой (17,9% против 8,6%). Противоположные данные получили В.В. Scheer и соавт. в исследовании, проведенном у больных без заболеваний системы крови. Авторы выявили, что геморрагические осложнения встречались в 7,7% случаев катетеризаций бедренной и в 14,9% — лучевой артерии.

Ишемические осложнения встречались реже, чем геморрагические, которые мы выявили у 3,7% больных и которые чаще возникали после катетеризации лучевой, чем бедренной артерии (соответственно 2,3 и 1,4%). Важно, что эти осложнения возникали у больных с тромбоцитопенией, т. е. само по себе низкое число тромбоцитов крови не предотвращает ишемические осложнения. При установке катетера в артерию возможно развитие ишемических нарушений в конечности, сосудистого тромбоза, дистальной эмболии, проксимальной эмболии, сосудистого спазма. Образование тромба и развитие окклюзии артерии происходит из-за изменений в стенке сосуда, вызванных наличием катетера в сосуде. В большинстве случаев происходит реканализация тромба, однако процесс восстановления может длиться до 75 сут. С возрастанием диаметра катетера происходит уменьшение площади просвета сосуда, и вероятность тромботических осложнений повышается. Это может объяснить большую частоту в нашем исследовании ишемических осложнений при катетеризации лучевой артерии. Еще одним фактором риска ишемических осложнений является материал, из которого сделан артериальный катетер. В рандомизированном исследовании F.M. Davis и соавт. показали, что после катетеризации лучевой артерии катетерами из полипропилена частота артериальных тромбозов достигала 34%, в то время как при использовании катетеров, сделанных из тефлона, за этот же

период не было ни одного случая тромбоза. В нашем исследовании как для лучевой, так и бедренной артерии мы использовали катетеры из полиуретана, которые при катетеризации артерий являются менее тромбогенными, чем даже тefлоновые катетеры. Тромбоз бедренной артерии часто возникает при наличии заболеваний периферических сосудов, повторных попытках установки катетера в бедренную артерию, при длительном и чрезмерном надавливании на место пункции для предотвращения кровотечения после удаления катетера. Множественные пункции артерии в качестве фактора риска ишемических осложнений выделяют и другие авторы. В нашем исследовании не было статистически значимого различия в числе попыток пункции лучевой и бедренной артерий, однако максимальное количество попыток пункции лучевой артерии было больше, чем бедренной (соответственно 5 к 3). Другим возможным фактором риска тромботических осложнений является инфекция, которая приводит к дисбалансу в системе гемостаза. Мы выявили, что у 86% больных с ишемическими осложнениями был сепсис.

Таким образом, катетеризация артерий может выполняться у больных с нарушениями системы гемостаза. При катетеризации артерий уровень тромбоцитов менее $30 \cdot 10^9/\text{л}$ является показанием для трансфузии концентрата тромбоцитов. В случаях, когда нет возможности провести коррекцию выраженных нарушений системы гемостаза, методом выбора является катетеризация лучевой артерии. Для уменьшения геморрагических осложнений, а также для повышения эффективности катетеризации артерий необходимо ограничить количество попыток пункции артерии до двух и выполнять процедуру под ультразвуковым контролем. Ишемические осложнения могут возникать у больных с тромбоцитопенией преимущественно в тех случаях, когда имеется системная инфекция, шок.

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ИНТЕНСИВНАЯ ТЕРАПИЯ СЕПТИЧЕСКОГО ШОКА У ПАЦИЕНТА С ТЯЖЕЛОЙ ЧМТ ПРИ АВТОКАТАСТРОФЕ В ОТДЕЛЕНИИ НЕЙРОРЕАНИМАЦИИ РНЦЭМП АФ

Актуальность проблемы. В представленном клиническом наблюдении иллюстрируется роль скрининга маркеров воспаления и расширенного гемодинамического мониторинга в оптимизации интенсивной терапии пациента в остром периоде тяжелой черепно-мозговой травмы. Пациент поступил в отделение реанимации с диагнозом: острая тяжелая закрытая сочетанная черепно-мозговая травма. При поступлении уровень сознания оценивался по ШКГ 5 баллов. С первых суток пребывания в реанимации у пострадавшего отмечались гипертермия до 39°C, повышение С-реактивного белка, лейкоцитоз, рентгенологические признаки аспирационной пневмонии. На 2-е сутки для поддержания АД ср. не ниже 80 мм рт. ст. потребовалась инфузия норадреналина. На 10-е сутки состояние больного резко ухудшилось. Развилась гипертермия до 40,2°C, развилась сердечнососудистая недостаточность (на фоне вазопрессорной поддержки возникло резкое снижение АД до 49/20 мм рт. ст.). Начат расширенный гемодинамический мониторинг PiCCO (транспульмонарная термодилуция). Возникла необходимость ранней диагностики сепсиса. Стандартно используемые в работе отделения лабораторные исследования не соответствовали критериям септического шока. Отмечалось незначительное повышение CRP, а прокальцитонин был в пределах нормальных величин. Диагностический поиск был дополнен исследованием интерлейкинов (IL-6 и IL-2R) в плазме крови. Было выявлено значительное повышение их значений, что можно было расценивать как начальные проявления системной воспалительной реакции. В результате состояние пациента было расценено как септическое. Была расширена антибактериальная терапия, начата продленная вено-венозная гемофильтрация. На фоне проводимой терапии состояние пациента стабилизировалось, у пациента восстановилось сознание в виде открывания глаз, выполнения простых инструкций. К моменту выписки состояние пациента по шкале исходов Глазго оценивалось в 4 балла.

Ключевые слова: черепно-мозговая травма; гемодинамика; PiCCO мониторинг; сепсис; системный воспалительный; маркеры воспаления; интерлейкины; продленная веновенозная гемофильтрация

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INTENSIVE THERAPY OF SEPTIC SHOCK IN A PATIENT WITH SEVERE HMT IN A CAR ACCIDENT IN THE NEUROREANIMATION DEPARTMENT OF RSCAMH AF

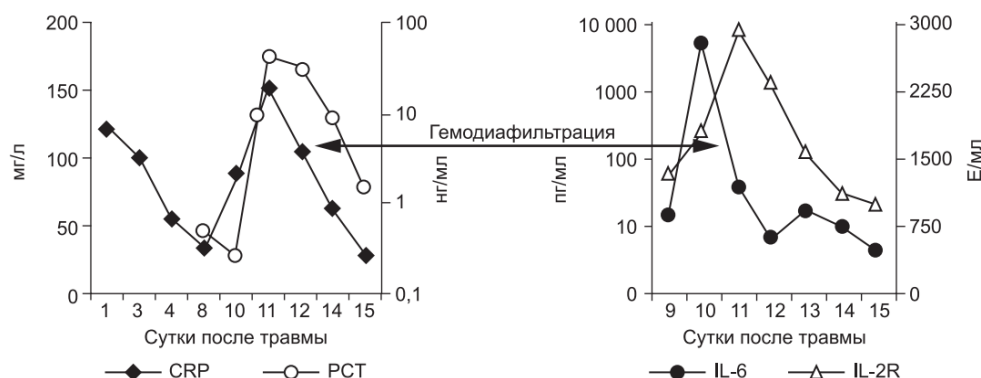
The urgency of the problem. The presented clinical observation illustrates the role of screening for inflammatory markers and advanced hemodynamic monitoring in optimizing the intensive care of a patient in the acute period of severe traumatic brain injury. The patient was admitted to the intensive care unit with a diagnosis of acute severe closed concomitant craniocerebral injury. At admission, the level of consciousness was assessed by GCS 5 points. From the first day of stay in the intensive care unit, the victim had hyperthermia up to 39°C, an increase in C-reactive protein, leukocytosis, radiological signs of aspiration pneumonia. On the 2nd day to maintain blood pressure cf. not lower than 80 mm Hg. Art. required an infusion of norepinephrine. On the 10th day the patient's condition deteriorated sharply. Hyperthermia developed up to 40.2°C, cardiovascular insufficiency developed (against the background of vasopressor support, there was a sharp decrease in blood pressure to 49/20 mm Hg). PiCCO (transpulmonary thermodilution) advanced hemodynamic monitoring has been started. There was a need for early diagnosis of sepsis. Laboratory tests routinely used in the work of the department did not meet the criteria for septic shock. There was a slight increase in CRP, and procalcitonin was within normal limits. The diagnostic search was supplemented by the study of interleukins (IL-6 and IL-2R) in blood plasma. A significant increase in their values was revealed, which could be regarded as the initial manifestations of a systemic inflammatory response. As a result, the patient's condition was regarded as septic. Antibacterial therapy was expanded, prolonged veno-venous hemofiltration was started. Against the background of the therapy, the patient's condition stabilized, the patient regained consciousness in the form of opening his eyes, following simple instructions. By the time of discharge, the patient's condition on the Glasgow Outcome Scale was estimated at 4 points.

***Key words:** traumatic brain injury; hemodynamics; PiCCO monitoring; sepsis; systemic inflammatory; inflammation markers; interleukins; prolonged venous hemofiltration.*

Введение. Снижение артериального давления (АД) является ведущим фактором вторичного повреждения головного мозга у пациентов с тяжелой черепно-мозговой травмой (ЧМТ). Артериальная гипотензия (АГ) у пациентов с повышенным внутричерепным давлением (ВЧД) приводит к снижению церебрального перфузионного давления (ЦПД), что может привести к вторичной ишемии мозга. АГ требует незамедлительной коррекции с учетом механизма ее развития (Potapov A.A., Udomphorn Yu.).

В представленном клиническом наблюдении, у пациента с тяжелой ЧМТ, осложнившейся септическим шоком, иллюстрируется роль расширенного гемодинамического мониторинга и скрининга маркеров воспаления в оптимизации интенсивной терапии (ИТ). Клиническое наблюдение. П а ц и е н т К., 42 года, поступил в отделение реанимации Института нейрохирургии с диагнозом: «острая тяжелая закрытая сочетанная черепно-мозговая травма, острая субдуральная гематома в правой лобно-теменно-височной области, ушиб головного мозга средней степени, травматическое субарахноидальное кровоизлияние, перелом чешуи височной кости слева; перелом левой ключицы. При поступлении уровень сознания оценивался по ШКГ 5 баллов. В ответ на болевой стимул отмечалось приведение в руках, разгибание в ногах, анизокория D> S, фотореакция вялая, кашлевой рефлекс угнетен. По данным компьютерной томографии головного мозга: справа в лобно-височно-теменной области определялась субдуральная гематома, срединные структуры смещены влево, желудочковая система и охватывающая цистерна компримированы. Также выявлялись признаки САК и перелом чешуи височной кости слева (рис. 1). Катетеризирована лучевая артерия, начат инвазивный мониторинг АД (монитор – Philips IntelliVue MP60). Системное АД без вазопрессорной и инотропной поддержки составляло: АД 145/88–160/90 мм рт. ст., ЧСС 69–85 в 1 мин. Дыхание аппаратное в режиме SIMV+PS, с параметрами вентиляции: tV – 0,7 л, RR – 14, PS – 14 mbar, PEEP – 7 mbar, FiO₂ – 0,6, обеспечивающими нормовентиляцию по данным КОС артериальной крови. При фибробронхоскопии – признаки перенесенной аспирации. После выполнения первичного диагностического поиска было принято решение о хирургическом вмешательстве и выполнена декомпрессивная трепанация черепа в правой лобно-теменно-височной области с удалением субдуральной гематомы. Операция была завершена установкой в преmotorной области справа паренхиматозного датчика фирмы Codman для монито-ринга ВЧД и контроля ЦПД (ЦПД = АД ср - ВЧД). В течение последующих 10 сут, на протяжении всего острого периода, отмечались неоднократные подъемы ВЧД, максимально до 27 мм рт. ст., которые

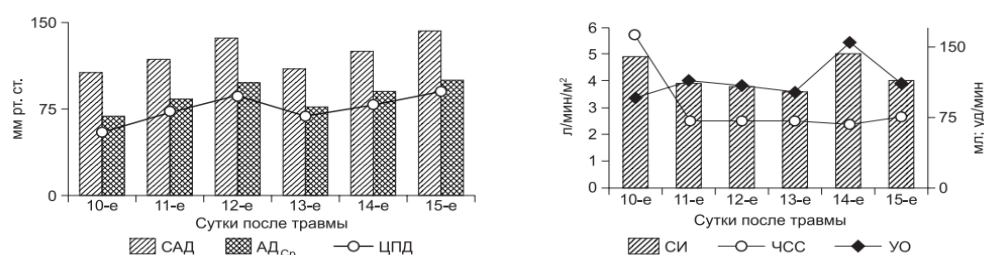
корректировали использованием гиперосмолярных растворов, углублением седации и обезболивания. С первых суток пребывания в институте у пострадавшего отмечались гипертермия до 39°C, повышение С-реактивного белка до 125 мг/л, лейкоцитоз $22,89 \cdot 10^9/\text{л}$ (норма $< 5 \text{ мг/л}$ и $4,0\text{--}10,0 \cdot 10^9/\text{л}$ соответственно) со сдвигом лейкоцитарной формулы влево, рентгенологические признаки аспирационной пневмонии (рис. 2). На 2-е сутки для поддержания АДср не ниже 80 мм рт. ст. потребовалась инфузия норадреналина в дозе 0,1–1,3 мкг/кг/мин. На фоне проводимой терапии к 9-м суткам отмечалась стабилизация состояния пациента, при сохраняющейся умеренной гипертермии, снизился С-реактивный белок до 33 мг/л; для поддержания гемодинамики требовались меньшие дозы норадреналина (0,22 мкг/кг/мин). На 10-е сутки состояние больного резко ухудшилось. Развилась гипертермия до 40,2 оС, выраженная десатурация капиллярной крови до 81–84%, при фракции кислорода во вдыхаемой смеси 100% (FiO_2 1,0). Развилась сердечно-сосудистая недостаточность: несмотря на продолжающуюся постоянную инфузию норадреналина возникло резкое снижение АД до 49/20 мм рт.ст. Для поддержания адекватного АД ср (80 мм рт. ст.) потребовалась комбинация симпатомиметиков: мезатон – 5,7 мкг/кг/мин и норадреналин в дозе 1,4 мкг/кг/мин. Также развилось нарушение деятельности желудочно-кишечного тракта: энтерально вводимая питательная смесь не усваивалась, сформировался парез кишечника. В этот период ауторегуляция мозгового кровотока была сохранна, поэтому на фоне артериальной гипотензии, снижения ЦПД, увеличилось кровенаполнение мозга, развилась внутричерепная гипертензия, с эпизодами подъема ВЧД до 40 мм рт. ст. В этой ситуации было необходимо провести дифференциальную диагностику между сепсисом, формированием диэнцефального синдрома, вторичной надпочечниковой недостаточностью, и первичным повреждением миокарда. Результаты ЭхоКГ не выявили перегрузку левых и правых отделов сердца, сократительная способность миокарда не нарушена. С целью расширения гемодинамического мониторинга была использована методика PiCCO, с помощью монитора Philips IntelliVue MP60, в который интегрированы соответствующие блоки и программы. Калибровка проводилась каждые 6–8 ч введением 15 мл изотонического раствора NaCl, охлажденного до 8°C.



1-рис.

Оценивали: показатели работы сердца – ударный объем (УО), сердечный вы-брос (СВ), сердечный индекс (СИ), общую фракцию изгнания (ОФИ); преднагрузку – ОПСС; волюметрические показатели – индекс общего конечно-диастолического объема сердца (ИОК-ДО), индекс внутригрудного объема крови (ИВГОК), индекс экстраваскулярной легочной жидкости (ИЭВЛЖ), индекс проницаемости легочных капилляров (ИПЛК), а также вариабельность ударного объема (ВУО) – как динамический показатель эффективности инфузионной терапии. Для оценки периферического кровотока использовался также индекс перфузии (ИП), который рассчитывается исходя из анализа плетизмографической волны. Дозы симпатомиметических препаратов подбирались с учетом данных, получаемых в результате расширенного мониторинга параметров системной гемодинамики. При исследовании гормонального профиля был исключен клинически значимый дефицит кортизола, тиреоидных гормонов, АКТГ в плазме крови. Стандартно используемые в работе отделения лабораторные исследования не соответствовали критериям септического шока.

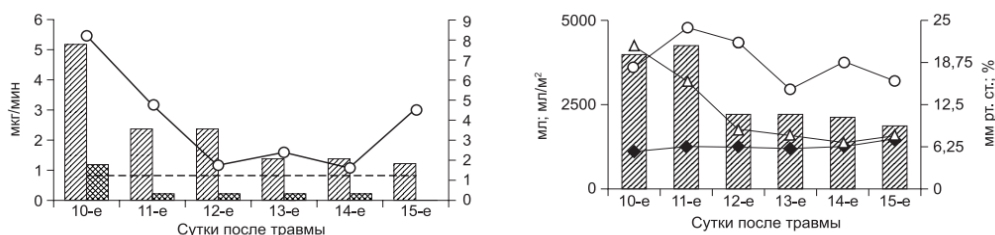
Так, отмечалось незначительное повышение CRP, а прокальцитонин (PCT) был в пределах нормальных величин, при умеренно выраженном лейкоцитозе ($13 \cdot 10^9/\text{л}$ без сдвига лейкоцитарной формулы влево). Диагностический поиск был дополнен исследованием интерлейкинов (IL-6 и IL-2R) в плазме крови. Было выявлено значительное повышение их значений > 6000 пг/мл и 2805 Е/мл (норма: 0,0–5,9 пг/мл и 158–623 Е/мл соответственно), что можно было расценивать как начальные проявления системной воспалительной реакции.



2-рис. Динамика маркеров воспаления

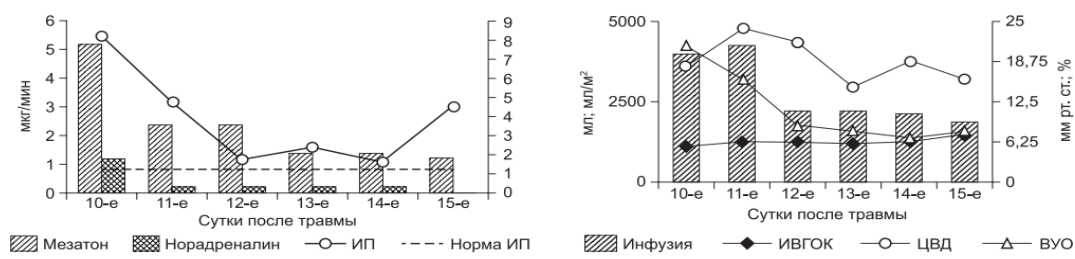
В результате состояние пациента было расценено как септическое. Была расширена антибактериальная терапия, начата продленная веновенозная гемофильтрация. Взяты биологические среды на микробиологический анализ (на 2-е сутки культивирования был выявлен рост грам(-) возбудителя в посевах крови). На фоне проводимой терапии состояние пациента стабилизировалось: удалось корректировать артериальную гипотензию, добиться необходимого ЦПД, что привело к нормализации ВЧД. В течение последующих двух суток, температура тела нормализовалась до 36°C, удалось уменьшить дозы симпатомиметиков в 2–3 раза, снизить FiO₂ с 1,0 до 0,6, у пациента восстановилось сознание в виде открывания глаз, выполнения простых инструкций. На момент перевода пациента из института в реабилитационный центр оценка по ШИГ – 4 балла. Обсуждение. В представленном клиническом наблюдении иллюстрируется роль скрининга маркеров воспаления и расширенного гемодинамического мониторинга в оптимизации ИТ пациента в остром периоде тяжелой ЧМТ. Бактериальные инфекции и сепсис являются основной причиной заболеваемости и смертности в ОРИТ (Bone R.C., Dellinger R.P.). Не вызывает сомнений тот факт, что высокая смертность от сепсиса во многом обусловлена его поздней диагностикой и неэффективным мониторингом проводимого лечения. Клинические и лабораторные признаки системной воспалительной реакции, такие как лихорадка, тахикардия, тахипноэ и лейкоцитоз, могут быть результатом неинфекционных причин. С этих позиций особый интерес представляет поиск надежных и ранних маркеров системной воспалительной реакции. Если сравнивать чувствительность таких маркеров септической реакции, как CRP(С-реактивный протеин), РСТ(прокальцитонин) и IL-6 (интерлейкин-6), то, по данным мировой литературы, большинство авторов ставят на первое место прокальцитонин, далее интерлейкины и затем С-реактивный белок (Luzzani A., Meisner M.). Но необходимо понимать, что в каждом конкретном случае нужно комплексно оценивать степень выраженности инфекционного процесса и его локализацию.

В литературе описаны случаи, когда концентрация РСТ не возрастала или возрастала в малой степени при тяжелых вирусных инфекциях или воспалительной реакции неинфекционной природы (Assicot M., Tang B.M.). Также доказано, что РСТ не определяется или его уровень очень низок при изолированной пневмонии, но чрезвычайно высок при пневмонии и сепсисе. Что касается IL-6, большинство авторов ставят его на второе место после РСТ по чувствительности и специфичности в диагностике сепсиса.



3-рис. Динамика давления и динамика СИ

В приведенном клиническом наблюдении на 10-е сутки состояние больного резко ухудшилось, развилась сердечно-сосудистая недостаточность, артериальная гипотензия, резистентная к стандартным дозам симпатомиметических препаратов в сочетании с выраженной устойчивой гипертермией. Артериальная гипотензия, снижение ЦПД сочетались с эпизодами подъема ВЧД до 40 мм рт. ст. В этой клинической ситуации была необходима экстренная дифференцировка между сепсисом, формированием диэнцефального синдрома, вторичной надпочечниковой недостаточностью и первичным повреждением миокарда. Представленный на рис. 3 график демонстрирует отсроченную реакцию CRPi PCT на манифестацию инфекционного процесса, их повышение отмечалось лишь через 48 ч от развития клиники септического шока, тогда как интерлейкины незамедлительно отреагировали на септицемию. График также демонстрирует эффективность гемодиализа в элиминации провоспалительных цитокинов из плазмы крови. При яркой клинической картине сепсиса не получено его подтверждения стандартными лабораторными методами (PCT, CRP, лейкоцитарная формула).



4-рис. Применение симпатомиметиков и инфузионная терапия

Диагностический поиск был незамедлительно дополнен исследованием интерлейкинов, что позволило сократить время до начала патогенетической терапии. У данного пациента именно IL-6 оказался наиболее быстрым и информативным показателем развития и выраженности септического процесса. Приводимое клиническое наблюдение наглядно демонстрирует необходимость всесторонней оценки инфекционного процесса. Все это говорит о необходимости проводить дальнейшие исследования по сравнению чувствительности различных маркеров системной воспалительной реакции и сепсиса. Необходимо отдельно остановиться на состоянии системной гемодинамики. Как видно

из графика на рис. 4, мы поддерживали систолическое и АД ср на достаточно высоких цифрах, что противоречит современным рекомендациям по терапии сепсиса. Тому есть свое объяснение. Последние международные рекомендации по ведению пациентов с тяжелой ЧМТ подчеркивают необходимость мониторинга АД и предупреждения артериальной гипотензии. При этом артериальной гипотензией считается снижение САД ниже 90 мм рт. ст. (рекомендации второго уровня). Там же приводятся данные демонстрирующие ухудшение результатов лечения при АД ср. ниже 80 мм рт. ст. (Guidelines for the management of severe traumatic brain injury. J. Neurotrauma. 2007; 24). Высокие цифры АД ср , обеспечивали ЦПД выше 60 мм рт. ст., что было необходимо для поддержания адекватного объемного мозгового кровотока у пациента в остром периоде тяжелой ЧМТ, осложненной отеком мозга. Как же поддерживались необходимые параметры системной гемодинамики в анализируемом клиническом наблюдении? Адекватность терапии, направленной на поддержание необходимого АД, обеспечивалась расширенным гемодинамическим мониторингом PiCCO (транспульмонарная термодилуция). График демонстрирует динамику СИ (рис. 5). В течение первых суток септического шока нормальный уровень СИ поддерживался за счет выраженной тахикардии (ЧСС до 167 в 1 мин) при низком УО – 87,6 мл. На фоне проводимой терапии мы добились нормализации сердечного ритма 80–83 уд/мин, при этом СИ поддерживался уже за счет адекватного УО – 160 мл. Одним из методов поддержания необходимого АД ср было применение симпатомиметиков (рис. 6). В приводимом клиническом наблюдении требовалось сочетание двух препаратов мезатон (фенилэфрин) и норадреналин в высоких дозировках. Безопасность применения вазопрессоров контролировалась двумя показателями гемодинамики ОПСС и ИП. Из графика видно, что применение высоких доз симпатомиметиков не приводило к нарушению периферической циркуляции крови. Так, на начальном этапе при применении мезатона и норадреналина в дозировке 5,7 и 1,4 мкг/кг/мин соответственно выявлялись относительно низкие цифры ОПСС (830 DS_m2/см⁵) и высокий показатель ИП – 8. В дальнейшем в процессе терапии комбинацией симпатомиметиков ИОПСС не превышал физиологической границы (2000 DS_m2/см⁵), а ИП не был ниже 1,2. Другим важным компонентом поддержания адекватных показателей системной гемодинамики является инфузионная терапия. При выборе тактики увеличения либо снижения темпа инфузионной терапии мы ориентировались на статические (ЦВД, ИВГОК) и динамические (ВУО) показатели волемии (рис. 7). На представленном графике видно, что с первых дней сепсиса статические показатели волемии были выше принятых нормальных значений, однако мы повышали темп и объем инфузионной терапии, ориентируясь на динамический показатель

волемии. Как указывалось выше, у пациентов с тяжелой ЧМТ критическим моментом является предупреждение артериальной гипотензии. В обсуждаемом клиническом наблюдении для поддержания адекватного АД при развитии септического шока было необходимо использовать два симпатомиметика: норадреналин и мезатон. В настоящее время так и не сложилось однозначного отношения к выбору симпатомиметических препаратов для коррекции артериальной гипотензии у пациентов с тяжелым сепсисом. Несмотря на то что в «Руководстве по ведению пациентов с тяжелым сепсисом и септическим шоком» препаратами выбора считаются допамин и норадреналин, ряд авторов получили достаточно противоречивые результаты при использовании этих препаратов (Surviving Sepsis Campaign guidelines for management of severe sepsis and septic shock. Crit. Care Med. 2004; 32). Так, Azarov N. выявили связь между применением допамина и увеличением смертности при септическом шоке. De Backer D. соавт. не нашли никаких существенных различий в летальности между пациентами, получавшими допамин и норадреналин, однако отметили большее число побочных эффектов при применении допамина. Gaurav Jain и D.K. Singh показали, что мезатон сопоставим с норадреналином в коррекции гемодинамических и метаболических нарушений при сепсисе. Shenoy и со-авт., проведя метаанализ применения допамина и норадреналина у пациентов с тяжелым сепсисом, пришли к выводу, что при наличии тех или иных гемодинамических преимуществ каждого нельзя говорить о превосходстве одного симпатомиметика над другим. В приведенном клиническом наблюдении выбор препарата основывался на данных расширенного мониторинга и выявлении причины снижения АД. Было выявлено, что у пациента на фоне сохраненной сократительной способности миокарда (адекватная фракция изгнания и высокие цифры ВОУ) отмечался вазопаралич (низкое ОПСС и высокий показатель ИП). Для нормализации этих показателей было необходимо применять комбинацию мезатона с норадреналином. Высокие дозы этих препаратов применяли, используя ОПСС и ИП как критерии безопасности проводимой вазопрессорной терапии. Это позволило избежать выраженной вазоконстрикции и нарушения периферического кровотока. Необходимо отдельно остановиться на ИП. Этот показатель, достаточно широко обсуждаемый в англоязычной литературе, незаслуженно, на наш взгляд, обделен вниманием отечественными авторами. ИП рассчитывается исходя из анализа плетизмографической волны. Она состоит из двух компонентов обозначаемых как DC и AC. DC – это непугирующийся компонент плетизмографического сигнала (от венозной и нециркулирующей артериальной крови), а AC – пугирующийся компонент пугисовой волны (от пугирующей артериальной крови). ИП рассчитывается как $AC/DC \cdot 100\%$, и автоматически выводится на большинство прикроватных

мониторов (Shelley К.Н.). Высокие показатели этого индекса говорят о вазодилатации, а низкие о выраженной вазоконстрикции, в том числе и при избыточном применении симпатомиметиков, либо в сочетании с выраженной гиповолемией (Shelley К.Н.). ИП позволяет не только диагностировать нарушение микроциркуляции конечностей, но и прогнозировать нарушение спланхнического кровотока (Hummler Н.Д., Mowafi Н.А.). Таким образом, данные расширенного гемодинамического мониторинга, мониторинга периферического кровообращения позволили использовать у пациента К., с тяжелой ЧМТ, осложненной септическим шоком, высокие дозы вазопрессоров для поддержания адекватного ЦПД без нарушения микроциркуляции и развития полиорганной недостаточности.

Заключение. Дополненный исследованием интерлейкинов стандартный скрининг маркеров воспаления в сочетании с расширенным гемодинамическим мониторингом способствовали своевременному проведению патогенетической терапии с учетом индивидуальных характеристик гемодинамического профиля у пациента с тяжелой черепно-мозговой травмой, осложненной септическим шоком. Проведенная терапия обеспечила адекватную церебральную перфузию без ущерба для микроциркуляции во внутренних органах, что позволило добиться регресса неврологической симптоматики и избежать развития полиорганной недостаточности.

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ИСПОЛЬЗОВАНИЕ НОВЫЕ МАНЕКЕНЫ ДЛЯ СЕРДЕЧНО- ЛЕГОЧНОЙ РЕАНИМАЦИИ В РЕАНИМАЦИОННОМ ОТДЕЛЕНИЕ ДЛЯ ОБУЧЕНИЕ ВРАЧ ОРДИНАТОРОВ

Использование тренажеров и имитаторов стало неотъемлемой частью медицинского образования, подготовки кадров, а также научных исследований. Обучение с помощью тренажеров в настоящее время принято во многих различных областях медицины, выходящих за пределы анестезиологии. Манекены-тренажеры и симуляторы являются лишь инструментами для эффективного обучения. Образование, обучение, подготовка и общая компетентность обучающихся имеют первостепенное значение. Необходимо понимание владения и поддержания врачами независимо от специальности навыков по базовой сердечно-легочной реанимации. Обучение практическим навыкам современной сердечно-легочной реанимации стало одной из важнейших составляющих обучения различных категорий учащихся системы последипломного образования.

***Ключевые слова:** инновации, образование, муляжи, манекены, имитаторы.*

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USE OF NEW MANIKINS FOR CARDIOPULMONARY RESUSCITATION IN THE INTENSIVE CARE UNIT FOR TRAINING MEDICAL RESIDENTS

The use of medical dummies has become an integral part of medical education, training and research. Simulation-based training is now accepted in many different fields of medicine besides anesthesiology. Simulation mannequins and simulators are just tools for effective training. Education,

training and general competence of instructors are of great importance. It is necessary for physicians and specialists, to understand the significance of regular training of their basic cardiopulmonary resuscitation skills. Practical skills in training up-to-date CPR has become one of the most important components in training ovarious categories of students in postgraduate education.

Key words: *innovations, education, dummies, mannequins, simulators*

В авиации обучение пилотов происходит преимущественно с использованием современных тренажеров (симуляторов-манекенов), которые также применяются для оценки или контроля практических навыков. В подготовке пилотов симуляционный тренинг шел рука об руку с развитием авиационной техники. Так, симуляционное медицинское обучение в период новейшей истории опиралось на успехи симуляционного тренинга в других отраслях, связанных с риском для жизни практического обучения в реальных условиях, прежде всего в авиации [5]. Возможность обучения врачей с использованием инновационных технологий симуляционного обучения является одновременно и реалиями сегодняшнего образовательного процесса, и перспективным направлением [1]. Одним из главных направлений в сфере высшего медицинского образования является необходимость значительного усиления практического аспекта подготовки будущих врачей при сохранении должного уровня теоретических знаний [4]. Анестезиология-реаниматология – это наука о жизнеобеспечении, вплоть до временного замещения (протезирования) жизненно важных функций при критических состояниях, и специальность со значимой мануальной составляющей. Каждый анестезиолог-реаниматолог должен обладать широким набором практических навыков и умений. Врачи всех специальностей и прежде всего анестезиологи-реаниматологи должны владеть практическими навыками по сердечно-легочной реанимации (СЛР). Современная тактика СЛР является предметом международных стандартов, всецело основанных на принципах доказательной медицины и пересматриваемых в США и Европе один раз в пять лет («Guidelines АНА/АСС on CPR», ноябрь 2015 года; полный текст опубликован в журналах «Circulation» и «Resuscitation») [2]. Авторитетные международные рекомендации разрабатываются совместно экспертами Американской ассоциации кардиологов и Европейского совета по реанимации. Рекомендации по СЛР опираются на регулярно проводимые за рубежом научные исследования в этой области, формирующие современные подходы к технике СЛР. В подготовке международных рекомендаций по СЛР 2015 года принимали участие 250 экспертов из 39 стран, был привлечен Международный согласительный комитет по реанимации (The International Liaison Committee on Resuscitation, ILCOR)

[3]. Процедура экспертных оценок проходила по новым протоколам и стандартам системных анализов, предложенным ILCOR. Использована новая система классификации для классов рекомендаций и уровней доказательности. Можно спасти людей с внезапной остановкой кровообращения или потерей сознания в общественном месте или далеко за городом, если кто то быстро окажет первую помощь для поддержания жизни, а затем вызовет машину «скорой помощи». Многие жизни могли бы быть спасены, если бы первый человек (очевидец), пришедший на помощь, владел приемами СЛР. Раннее начало реанимации и ранняя дефибрилляция (в пределах 1–2 минут) могут повысить выживаемость до 60% и более. Принципы СЛР нельзя изучать только теоретически, они обязательно должны быть подкреплены практическими навыками. Успех оживления зависит именно от технической (практической) составляющей СЛР. С этой целью для обучения практическим навыкам применяются специальные манекены тренажеры, позволяющие имитировать весь процесс проведения СЛР. В 1960 году American Heart Association запустила программу повышения квалификации по СЛР для врачей (обучение непрямому массажу сердца (НМС), дыханию «рот ко рту», наружной дефибрилляции) и первые обучающие курсы для широкой публики. Истоки современной СЛР исходят от Петера Сафара (Peter Safar), заведующего анестезиологией городской больницы г. Балтимора (США), который разработал принципы (азбуку) СЛР и для мнемонического запоминания разбил процесс на три этапа (ABC):

А (Airway) – дыхательные пути;

В (Breathing) – дыхание;

С (Chest compressions) – массаж грудной клетки (НМС).

В 1957 г. Петер Сафар опубликовал книгу «ABC of Resuscitation», где подробно изложил основы СЛР, что буквально перевернуло представления о принципах оказания неотложной помощи. Его работа привлекла всемирное внимание, в том числе и в Норвегии [4]. По настоящее время во всем мире, в том числе и у нас в России, Петер Сафар считается основоположником теоретических и практических основ современной СЛР, сформировавшим концепцию СЛР, а его «азбука» (методика СЛР), дошедшая до рубежа веков, осталась практически неизменной (с 2010 года – САВ). Врач, не знающий азбуки Сафара, не может считать себя полностью «грамотным», сколько бы вузовских дипломов ни имелось на его счету. Но залогом успеха СЛР является овладение необходимыми практическими навыками. Именно предприниматель Асмунд Лаэрдал, воодушевленный рассказом о новейшем медицинском открытии своего знакомого, норвежского доктора Бьорну Лин-ду (Bjorn Lind), изготовил первый опытный образец манекена для отработки одного из элементов СЛР – приемов искусственного дыхания. Пособие было представлено медицинской общественности. В

1960 году изобретатель СЛР Петер Сафар дал изделию высокую оценку. В дальнейшем по его предложению в манекен была встроена пружина, имитирующая сопротивление грудной клетки, что позволило отрабатывать полный цикл навыков СЛР. Поскольку лицо манекена было изготовлено с гипсового слепка лица неизвестной французской девушки, утонувшей в реке Сене в XIX веке, манекен получил торговое название «Ресаски Энн» (англ. Resusci Anne – «Оживленная Анна»). Реаниматологи в шутку называют Ресаски Энн «самой часто целуемой девушкой всех времен». В соответствии с международными стандартами по проведению СЛР 2010-го и 2015 годов модифицирован основной практический алгоритм (азбука) базовой СЛР Петера Сафара взрослым, пострадавшим от остановки сердца. Он заключается в отказе от первичной дыхательной реанимации (проведения искусственного дыхания). Необученные непрофессиональные спасатели или простые очевидцы внезапной остановки сердца, произошедшей на улице или в госпитале, должны проводить СЛР без искусственных вдохов, следуя методике «Hands only» – «только руки» под руководством диспетчера или самостоятельно не менее 10 минут. Считается, что именно при такой новой последовательности оживления, сокращающей время до первого компрессионного нажатия, большее количество пострадавших от внезапной остановки кровообращения получают помощь от случайных свидетелей. Важнейшей в триаде А (Airway), В (Breathing) и С (Compressions) является циркуляция (С). Кислород содержится в крови в адекватных количествах как минимум первые десять минут после внезапной остановки сердца. Искусственная циркуляция обеспечивает транспорт этого кислорода, и не наблюдается снижения выживаемости при проведении СЛР посредством только компрессий грудной клетки. Даже полная окклюзия верхних дыхательных путей первые 6 минут не ухудшает выживаемости, если проводится непрямой массаж сердца. Кроме того, если обученный непрофессиональный реаниматор умеет делать искусственное дыхание, он должен чередовать компрессионные сжатия с искусственным дыханием в соотношении 30:2. Эффективность реанимационных мероприятий в большей степени зависит от правильной техники их проведения. Сделать эту технику безукоризненной можно исключительно в процессе практического освоения комплекса СЛР с использованием специальных обучающих устройств – манекенов.

Характеристика используемых методов обучения. Обучение современной СЛР предполагает теоретическую подготовку в виде лекций и семинарских занятий и овладение практическими навыками на манекенах-имитаторах пациента. Манекены-имитаторы пациента – сложные механические полно ростовые модели человека, снабженные электронными устройствами, которые дают оценку правильности выполнения манипуляции (например, подача звукового и светового

сигнала при надлежащем выполнении СЛР). Практическое занятие на манекенах Resusci Anne – это углубленное изучение раздела общей реаниматологии, протоколов диагностики и реанимации, возможность овладеть практическими навыками, направленными на обеспечение проходимости верхних дыхательных путей, многократной отработки на высококласном манекене навыков проведения СЛР в различных клинических условиях возникновения терминального состояния: асистолия, электромеханическая диссоциация, фибрилляция желудочков. Приобретение указанных навыков обучающимися (студентами, интернами/ординаторами, слушателями, населением) способствует развитию клинического мышления и оптимизирует тактику в экстремальных ситуациях. По нашему мнению, наилучшими образцами для обучения СЛР являются тренажеры и манекены фирмы «Laerdal» (Норвегия), используемые для отработки навыков СЛР в Центре манипуляционных навыков Андиганский государственный медицинском институте:

1. торс для практики интубации;
2. тренажер реанимации с интерактивным имитатором аритмии;
3. тренажер реанимации «Resusci Anne Skill Reporting, Laerdal»;
4. педиатрический тренажер жизнеобеспечения.

Обучение и тренинг СЛР проводятся в специально оснащенной учебной комнате центра манипуляционных навыков. Преподаватель излагает и демонстрирует методику проведения СЛР на манекене в соответствии с действующими последними современными стандартами СЛР 2018 года. Обучающегося просят выполнить 5 циклов базовой СЛР на манекене тренажере Resusci Anne Skill Reporting, Laerdal. Манекен заранее укладывается на кушетке или на полу (соблюдение правила «твердой поверхности»). Проведение СЛР двумя участниками способствует не только улучшению практических навыков СЛР, но и формированию навыков работы в команде. Во время выполнения манипуляций происходит непрерывная инструментальная и визуальная оценка качества работы обучающегося.

Компьютерная система контроля и регистрации навыков Laerdal для обучающихся имеет неоспоримые преимущества:

- обучающиеся могут совершенствовать свои навыки СЛР при помощи визуальных кривых выполнения действий и хронометрии важных реанимационных действий в режиме реального времени;
- после завершения выполнения задания графическое и цифровое заключения можно использовать для сравнения индивидуальной работы обучающегося с рекомендациями.

Особенности манекенов Resusci Anne:

1. реалистичная анатомия, включая наклон головы, выведение подбородка, глубину и силу сжатия грудной клетки;

2. датчик показывает правильное расположение рук;
3. система вентиляции обеспечивает соответствующую экскурсию грудной клетки при ИВЛ методом «рот ко рту» или с помощью маски и мешка Амбу;
4. беспроводная связь с Sim Pad Skill Reporter с помощью программного обеспечения Skill Reporter;
5. проводная связь со Skill Guide;
6. возможность моделировать различное сопротивление грудной клетки: жесткое, приблизительно 60 кг, среднее – примерно 45 кг и малое – примерно 30 кг.

Работа на манекенах позволяет:

1. обеспечить проходимость верхних дыхательных путей (тройной прием Сафара);
2. проводить ИВЛ методом «рот ко рту» и с помощью мешка Амбу;
3. проводить непрямой массаж сердца;
4. определять эффективность СЛР;
5. оценивать результаты выполнения;
6. осуществлять обратную связь обучающегося с преподавателем;
7. осуществлять мониторинг ЭКГ;
8. проводить электрическую дефибрилляцию.

Диагностика практических навыков включает в себя оценку выполнения НМС, искусственной вентиляции легких простейшими экспираторными методами: «рот ко рту», «рот к носу» или мешком Амбу. Эффективность выполнения НМС включает в себя подсчет частоты компрессий грудной клетки в минуту, определение требуемой глубины компрессий, способ поиска идеального места расположения рук при проведении компрессий, полное расправление грудной клетки или недопущение остаточной компрессии во время проведения компрессий, подсчет количества компрессий в цикле, измерение интервала между циклами компрессий инструментально с помощью имеющегося манекена Resuscі Anne. Также во время проведения непрямого массажа сердца визуально оценивается положение обучающегося относительно манекена, количество смещений рук на область ребер, количество смещений рук выше места компрессий, метод выполнения компрессий (пальцами, одной/двумя руками), степень соприкосновения рук с грудной клеткой пациента. Инструментальная оценка вентиляции легких с помощью манекена Resuscі Anne заключается в контроле необходимого объема вентиляции, времени проведения вентиляции, подсчете количества вдуваний в цикле. Визуальная оценка включает метод проведения вентиляции, способ открытия и поддержания проходимости дыхательных путей, закрывание носа во время вдуваний, определение амплитуды экскурсии грудной клетки, количества попыток вдуваний, а также положение рук на голове пациента во время вдуваний. Таким образом,

манекен Resusci Anne имеет четкие анатомические ориентиры и реалистичные ощущения компрессии/вентиляции при обучении правильной технике выполнения СЛР. Критерии оценки освоения практических умений

1. «Зачтено» – обучающийся демонстрирует мануальные навыки СЛР взрослому пациенту в конкретной ситуации при работе в команде; допускает некоторые неточности (малосущественные ошибки), которые самостоятельно обнаруживает и быстро исправляет; анализирует результаты собственных действий.

2. «Не зачтено» – не владеет техникой выполнения СЛР или делает грубые ошибки при ее выполнении, не знает особенностей СЛР взрослого пациента, не может самостоятельно исправить ошибки. Обучение основам СЛР включает просмотр учебного видеофильма по основам СЛР «СЛР для граждан» (30 минут), тематических видеороликов по технике СЛР, решение ситуационных задач и процедуру тестирования, что, безусловно, способствует закреплению полученных теоретических знаний и практических навыков по проведению СЛР. Заключение Таким образом, в последнее время растет понимание того, что традиционных методов обучения специальности «анестезиология-реаниматология» и соответствующим практическим навыкам становится недостаточно. Компьютерные симуляторы и манекены играют важную роль в заполнении пропасти между теорией и практикой и должны стать неотъемлемой частью обучения. Особенно это очевидно при обучении СЛР. Компьютерные симуляторы и манекены тренажеры различных уровней сложности позволяют приобрести навыки и изучить алгоритм действий в различных ситуациях в безопасных условиях для пациента и обучающегося. Обучение с использованием такой инновационной технологии требует проверки знаний и их контроля, который должен осуществляться либо электронными методами, либо опытными преподавателями клиницистами. Однако необходимо понимать и тот факт, что компьютерное обучение лишь дополняет, а отнюдь не заменяет клиническое обучение врача.

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ЦИТОКИНОВЫЙ ПРОФИЛЬ У ПАЦИЕНТОВ С ТРОМБОЭМБОЛИЕЙ ЛЁГОЧНОЙ АРТЕРИИ

Аннотация. В статье представлены результаты исследования уровней провоспалительных цитокинов у пациентов с тромбоэмболией лёгочной артерии (ТЭЛА). Цитокиновый профиль больных с ТЭЛА характеризуется высокими значениями спонтанной и митоген-индуцированной продукции интерлейкинов ИЛ-6 и ИЛ-8. Выявленные изменения статистически значимо отличают пациентов с ТЭЛА от пациентов со сходными заболеваниями по клиническим проявлениям (группа пациентов с неподтверждённой ТЭЛА) и от здоровых доноров. Существуют положительные корреляционные связи между уровнем ИЛ-8 и уровнями тропонина и NT pro BNP, косвенно свидетельствующие о возможной роли данного интерлейкина при развитии неблагоприятных вариантов течения ТЭЛА. На основании оценок с помощью критерия шансов высокие уровни ИЛ-6 и ИЛ-8 ассоциируются с риском развития ТЭЛА. Данные факты обосновывают дальнейшую разработку диагностических и лечебных подходов, учитывающих изменения показателей цитокинового профиля (ИЛ-6 и ИЛ-8) у больных при подозрении на ТЭЛА.

Материал и методы. В исследование были включены 128 пациентов, поступивших в отделение рентгенодиагностики ГБУЗ РХ «Республиканский научный центр экстренной медицинской помощи Андижанской филиал» за период с 2019 по 2023 годы с предварительным диагнозом ТЭЛА. Из них в 53 случаях диагноз ТЭЛА при проведении КТ-ангиопульмонографии подтвердился, а в 75 случаях диагноз ТЭЛА был отвергнут. Возраст больных варьировался от 23 до 89 лет и в среднем составил 59 (46–70) лет. Всем пациентам с целью подтверждения диагноза было осуществлено комплексное клинико-диагностическое исследование, включающее определение Д-димера, тропонинов, проведены диагностические тесты на риск смерти, а также СКТ-ангиопульмонография для выявления прямых признаков ТЭЛА: тромбоэмболов при контрастировании сосудов малого круга.

Результаты исследования. СКТ-ангиопульмонография в настоящее время является эффективным неинвазивным методом диагностики ТЭЛА, ввиду того что данный метод способен обеспечить достоверную визуализацию тромбоэмболов в сосудах малого круга, что расценивается как прямой признак ТЭЛА. Данный метод обладает высокими

показателями диагностической эффективности (97–100 %) в диагностике ТЭЛА. Мы использовали данные СКТ-ангиопульмонографии в качестве верификации диагноза ТЭЛА. Всего за период с 01.01.2009 г. по 30.11.2013 г. было обследовано 128 пациентов с подозрением на ТЭЛА.

Заключение. Цитокиновый профиль больных ТЭЛА характеризуется высокими значениями спонтанной и митоген-индуцированной продукции интерлейкинов ИЛ-6 и ИЛ-8. Обнаруженные изменения статистически значимо отличают пациентов с ТЭЛА от пациентов с заболеваниями, сходными с ТЭЛА по клиническим проявлениям (группа пациентов с неподтверждённой ТЭЛА), и от здоровых доноров.

Ключевые слова: ТЭЛА, интерлейкины, СКТ-ангиопульмонография, донор, тропонин, D-димер.

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CYTOKINE PROFILE IN PATIENTS WITH PULMONARY ARTERY THROMBOEMBOLISM

Annotation. The article presents the results of the study of proinflammatory cytokine levels in patients with pulmonary embolism (TELA). The cytokine profile of patients with TELA is characterized by high values of spontaneous and mitogen-induced production of interleukins IL-6 and IL-8. The revealed changes statistically significantly distinguish patients with TELA from patients with similar diseases by clinical manifestations (group of patients with unconfirmed TELA) and from healthy donors. There are positive correlations between IL-8 level and troponin and NT pro BNP levels, indirectly indicating a possible role of this interleukin in the development of unfavorable variants of TELA course. On the basis of odds criterion estimates, high levels of IL-6 and IL-8 are associated with the risk of TELA development. These facts justify further development of diagnostic and therapeutic approaches that take into account changes in cytokine profile (IL-6 and IL-8) in patients with suspected TELA.

Material and methods. The study included 128 patients admitted to the radiology department of the Republic Scientific Center Aid Medical Help Andijan Branch in the period from 2019 to 2023 with a preliminary diagnosis of TELA. Of these, in 53 cases the diagnosis of TELA was confirmed by CT-angiopulmonography, and in 75 cases the diagnosis of TELA was rejected. The age of the patients ranged from 23 to 89 years and averaged 59 (46-70) years. In order to confirm the diagnosis, all patients underwent a comprehensive clinical and diagnostic study including determination of D-dimer, troponins,

diagnostic tests for the risk of death, as well as CT-angiopulmonography to detect direct signs of TELA: thromboemboli during contrasting of small circle vessels.

Study results. SCT-angiopulmonography is currently an effective non-invasive method of TELA diagnostics due to the fact that this method is able to provide reliable visualization of thromboemboli in small circle vessels, which is considered as a direct sign of TELA. This method has high diagnostic efficiency (97-100%) in the diagnosis of TELA. We used the data of SCT-angiopulmonography as verification of TELA diagnosis. A total of 128 patients with suspected TELA were examined from 01.01.2019 to 30.11.2023.

Conclusion. Cytokine profile of TELA patients is characterized by high values of spontaneous and mitogen-induced production of interleukins IL-6 and IL-8. The detected changes statistically significantly distinguish patients with TELA from patients with diseases similar to TELA in clinical manifestations (group of patients with unconfirmed TELA) and from healthy donors.

Key words: TELA, interleukins, SCT-angiopulmonography, donor, troponin, D-dimer.

Введение. В статье представлены результаты исследования уровней провоспалительных цитокинов у пациентов с тромбоэмболией лёгочной артерии (ТЭЛА). Цитокиновый профиль больных с ТЭЛА характеризуется высокими значениями спонтанной и митоген-индуцированной продукции интерлейкинов ИЛ-6 и ИЛ-8. Выявленные изменения статистически значимо отличают пациентов с ТЭЛА от пациентов со сходными заболеваниями по клиническим проявлениям (группа пациентов с неподтверждённой ТЭЛА) и от здоровых доноров. Существуют положительные корреляционные связи между уровнем ИЛ-8 и уровнями тропонина и NT pro BNP, косвенно свидетельствующие о возможной роли данного интерлейкина при развитии неблагоприятных вариантов течения ТЭЛА. На основании оценок с помощью критерия шансов высокие уровни ИЛ-6 и ИЛ-8 ассоциируются с риском развития ТЭЛА. Данные факты обосновывают дальнейшую разработку диагностических и лечебных подходов, учитывающих изменения показателей цитокинового профиля (ИЛ-6 и ИЛ-8) у больных при подозрении на ТЭЛА.

Результаты исследования. Анализ частоты встречаемости клинических данных в группах пациентов с ТЭЛА и среди пациентов с неподтверждённой ТЭЛА не выявил статистически значимых отличий (табл. 1). Группы с диагностированной ТЭЛА и без ТЭЛА были сопоставимы почти по всем жалобам, однако достоверно различались по наличию боли в грудной клетке ($p = 0,62$), сердцебиения ($p = 1$), слабости ($p = 0,89$) и отёков ($p = 0,88$). Результаты изменения гемостаза крови, приведённые в таблице 2, показывают, что исследуемые группы не различались по показателям АЧТВ, ПТВ, ПТИ, фибриногену и МНО, за

исключением показателя ТВ (для группы с «ТЭЛА+» (Ме 18,5 (16,9–22,9 %)), для группы «ТЭЛА-» (17,8 (17,3–19,7 %)), где $p = 0,762$. Наблюдалось повышение АЧТВ с «ТЭЛА+» (Ме 38,7 (34,1–47,0 %)) и с «ТЭЛА-» (Ме 40,0 (21,9–52,0 %)) и незначительное повышение фибриногена с «ТЭЛА+» (Ме 4,7 (3,6–5,8 %)) и с «ТЭЛА-» (Ме 4,2 (3,4–6,0 %)). Показатель ТВ был выше нормы лишь у одной из групп – с «ТЭЛА+» (Ме 18,5 (16,9–22,9 %)). Рост данных лабораторных показателей возможен в результате приёма препаратов группы антикоагулянтов, так как средний возраст пациентов составил 58 лет, не исключаются хронические заболевания сердечно-сосудистой системы, при которых приём препаратов является жизненно важным. Показатели ПТИ, МНО, ПТВ у большинства пациентов обеих групп соответствуют норме

Таблица 1

Частота встречаемости жалоб пациента

Жалобы	ТЭЛА+ n = 51	ТЭЛА- n = 67	p*
Одышка	42 (82 %)	57 (85 %)	0,14
Боли в грудной клетке	28 (55 %)	24 (36 %)	0,62
Кашель	25 (49 %)	35 (52 %)	0,24
Кровохарканье	7 (14 %)	6 (9 %)	0,26
Сердцебиение	8 (16 %)	8 (12 %)	1
Слабость	18 (35 %)	19 (28 %)	0,89
Отеки	16 (31 %)	17 (25 %)	0,88
Всего 128			

Примечания: *p – уровень статистической значимости (< 0,5).

Таблица 2

Результаты оценки показателей гемостаза при подозрении на ТЭЛА

Показатели	ТЭЛА+	ТЭЛА-	Норма	p
АЧТВ	38,7 (34,1–47,0 %)	40,0 (21,9–52,0 %)	24–35 сек.	0,479
ТВ	18,5 (16,9–22,9 %)	17,8 (17,3–19,7 %)	11–17,8 сек.	0,762
ПТВ	15,0 (12,5–18,7 %)	12,8 (10,9–19,1 %)	11–16 сек.	0,148
ПТИ	84 (70,6–105,0 %)	96,8 (78,4–121,8 %)	70–100 %	0,102
Фибриноген	4,7 (3,6–5,8 %)	4,2 (3,4–6,0 %)	2–4 г/л	0,412
МНО	1,2 (1,0–1,6 %)	1,0 (0,9–1,1 %)	0,85–1,35	□0,001

Примечания: *p – уровень статистической значимости (< 0,5).

Уровень Д-димера является отрицательным прогностическим критерием в диагностике ТЭЛА. Считается, что если уровень Д-димера не выше 0,5 мкг/мл, то диагноз отвергают с точностью до 99 % [13]. В исследовании при сравнении уровней Д-димера выявлено, что в группе «ТЭЛА+» показатели статистически значимо выше, чем в группе с неподтверждённой ТЭЛА (табл. 3). При этом в группе без ТЭЛА частота выявления повышенного уровня Д-димера составила 24 % (4/17) и отличалась статистически незначимо от аналогичного показателя в группе с ТЭЛА 19 % (11/57) ($p = 0,65$). Уровень тропонина был низким во всех

исследуемых группах, но наибольшее его значение было в группе «ТЭЛА-». По нашему мнению, это может быть связано с тем, что в группе «ТЭЛА-» наблюдались случаи с хронической сердечной недостаточностью ($n = 5$), инфарктом миокарда ($n = 2$). У пациентов с подозрением на ТЭЛА средние значения NTproBNP были статистически значимо выше, чем в группе контроля. Наиболее высокий уровень показателя NTproBNP наблюдался также у пациентов с неподтверждённой ТЭЛА. Высокие значения данного показателя ассоциированы с высоким риском неблагоприятного исхода при сердечно-сосудистых заболеваниях. Это является, по нашему мнению, наиболее вероятным объяснением полученных в исследуемых группах значениях данного показателя.

Таблица 4

Уровень спонтанной продукции цитокинов клетками цельной крови в обследуемых группах

Показатели	ТЭЛА+	ТЭЛА-	P*	Контроль	P ₁	P ₂
ИЛ-1	12	14,94 (0,46–283,90)	0,630	не определялся	–	–
ИЛ-6	355,92 (107,05–383,59)	245,33 (75,6–303,24)	0,037	8,29 (2,20–169,15)	0,010	0,015
ИЛ-8	388, (315,20–779,87)	333,52 (174,89–362,99)	0,043	30,68 (25,50–84,46)	0,008	0,007
ФНО-α	16,93 (3,17–167,57)	88,26 (3,17–133,17)	0,915	12,25 (7,73–42,58)	0,711	0,697

Примечания: p* – уровень статистической значимости ($< 0,05$).

p₁ – уровень статистической значимости больных с подтвержденным диагнозом ТЭЛА и группы контроля.

p₂ – уровень статистической значимости больных с неподтвержденным диагнозом ТЭЛА и группы контроля.

индуцированной продукции цитокинов у больных с подозрением на ТЭЛА и здоровых доноров (табл. 4, 5).

Анализ уровней спонтанной продукции цитокинов клетками цельной крови в обследуемых группах (табл. 3) показал, что уровень ИЛ-1 и ФНО-α в группах с подтверждённой и неподтверждённой ТЭЛА отличался статистически незначимо. Выявлены статистически значимые отличия в средних значениях уровней спонтанной продук- 49 ции ИЛ-6 и ИЛ-8 у пациентов с подозрением на ТЭЛА по сравнению со здоровыми донорами, при этом у больных с подтверждённой ТЭЛА уровни данных показателей статистически значимо выше, чем у пациентов без ТЭЛА.

Таблица 5

Уровень индуцированной продукции цитокинов клетками цельной крови в обследуемых группах

Показатели	ТЭЛА+	ТЭЛА-	p*	Контроль	p ₁	p ₂
ИЛ-1β	240,26 (37,61-269,13)	46,00 (0,00-261,78)	0,282	не определялся	–	–
ИЛ-6	352,34 (233,96-415,25)	267,32 (198,37-356,78)	0,047	17,22 (0,00-381,29)	0,011	1,000
ИЛ-8	397,59 (304,16-857,46)	312,61 (274,07-334,70)	0,045	68,11 (13,39-94,37)	0,087	0,436
ФНО α	97,84 (9,99-276,66)	224,05 (3,17-258,26)	0,533	15,47 (9,40-335,77)	0,646	0,617

Примечания: p* – уровень статистической значимости (< 0,05).

p₁ – уровень статистической значимости больных с подтвержденным диагнозом ТЭЛА и группой контроля.

p₂ – уровень статистической значимости больных с неподтвержденным диагнозом ТЭЛА и группой контроля.

Корреляционный анализ взаимосвязей уровня цитокинов данных диагностических тестов вероятности и неблагоприятного исхода установил положительные статистически значимые корреляционные связи между уровнем ИЛ-8 и уровнями тропонина и NTproBNP (табл. 6).

Таблица 6

Результаты корреляционного анализа между уровнями цитокинов и данными диагностических тестов для определения вероятности и неблагоприятного прогноза ТЭЛА

Показатели	Д-димер	Тропонин	NTproBNP
ИЛ-6	r = 0,004 p = 0,951	r = 0,106 p = 0,16	r = 0,097 p = 0,198
ИЛ-8	r = 0,107 p = 0,056	r = 0,165 p = 0,028	r = 0,341 p < 0,001

Таким образом, нами получены данные, указывающие на возможную роль ИЛ-6 и ИЛ-8 в патогенезе ТЭЛА. В связи с этим мы провели оценку риска развития ТЭЛА в зависимости от уровней данных цитокинов с помощью критерия отношения шансов. В качестве пороговых уровней ИЛ-6 и ИЛ-8 использовали нижний и верхний квартили показателей спонтанной продукции данных цитокинов. Результаты данного анализа представлены в таблице 7. Нами установлено, что высокие значения ИЛ-6 и ФНО-α ассоциируются с риском развития ТЭЛА (OR = 8,5 и 1,81 соответственно). Возможно, ИЛ-8 также играет роль в повышении риска развития ТЭЛА (OR = 2).

Таблица 7

Риск развития ТЭЛА в зависимости от уровня ИЛ-6, ИЛ-8, ФНО-α при спонтанной продукции цитокинов

Показатель	Частота выявления ТЭЛА			ОШ	95 % ДИ
	ниже 25-перцентиля	выше 75-перцентиля	p		
ИЛ-6	1 %	24 %	0,004	8,5	(2,76–9,35)
ИЛ-8	8 %	27 %	0,032	2	(1,36–2,56)
ФНО-α				1,81	(1,24–2,76)

Таким образом, нами установлены факты, свидетельствующие о роли ИЛ-6 и ИЛ-8 в патогенезе ТЭЛА. Выявлено специфичное для ТЭЛА повышение показателей спонтанной и митоген-индуцированной продукции ИЛ-6 и ИЛ-8, которое отличает пациентов с ТЭЛА не только от группы здоровых доноров, но и от группы па-

Таким образом, нами установлены факты, свидетельствующие о роли ИЛ-6 и ИЛ-8 в патогенезе ТЭЛА. Выявлено специфичное для ТЭЛА повышение показателей спонтанной и митоген-индуцированной продукции ИЛ-6 и ИЛ-8, которое отличает пациентов с ТЭЛА не только от группы здоровых доноров, но и от группы пациентов, у которых комплексное клинико-диагностическое исследование не подтвердило подозрение на ТЭЛА. Установлено наличие положительных корреляционных связей между уровнем ИЛ-8 и результатами диагностических тестов, отражающих риск смерти при сердечно-сосудистых заболеваниях, в том числе и при ТЭЛА. Высокие уровни ИЛ-6 и ИЛ-8 ассоциируются с риском развития ТЭЛА ($OR = 8,5$ и $OR = 2$ соответственно). Выявленные факты нуждаются в дальнейшем уточнении и подтверждении. Требуется более тщательная оценка диагностических возможностей определения уровней ИЛ-6 и ИЛ-8 при подтверждении ТЭЛА и оценка необходимости терапевтической коррекции уровня цитокинов у данной категории больных.

Заключение. Цитокиновый профиль больных ТЭЛА характеризуется высокими значениями спонтанной и митоген-индуцированной продукции интерлейкинов ИЛ-6 и ИЛ-8. Обнаруженные изменения статистически значимо отличают пациентов с ТЭЛА от пациентов с заболеваниями, сходными с ТЭЛА по клиническим проявлениям (группа пациентов с неподтверждённой ТЭЛА), и от здоровых доноров. Существуют положительные корреляционные связи между уровнем ИЛ-8 и уровнями тропонина и NTproBNP, косвенно свидетельствующие о возможной роли данного интерлейкина при развитии неблагоприятных вариантов течения ТЭЛА. На основании оценок с помощью критерия шансов высокие уровни ИЛ-6 и ИЛ-8 ассоциируются с риском развития ТЭЛА. Выявленные факты обосновывают дальнейшую разработку диагностических и лечебных подходов, учитывающих изменения показателей цитокинового профиля (ИЛ-6 и ИЛ-8) у больных при подозрении на ТЭЛА.

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ПРОВЕРКА КАЧЕСТВА КЛАСТЕРОВ С ПОМОЩЬЮ СИЛУЭТНОГО АНАЛИЗА

В данной статье рассматривается использование силуэтного анализа для оценки качества кластеров, полученных с помощью двух методов кластеризации: K-modes и иерархической кластеризации. Работа включает в себя сравнение результатов различных методов кластеризации и выбор наиболее подходящего из них на основе силуэтного анализа. Проведенный анализ демонстрирует, что иерархическая кластеризация обеспечивает более высокое качество сегментации данных по сравнению с методом K-modes, особенно при большом количестве кластеров. В статье также рассматриваются практические рекомендации по применению данных методов и силуэтного анализа для задач кластеризации в областях, таких как маркетинг и социальные науки.

Ключевые слова. Кластеризация, K-modes, иерархическая кластеризация, силуэтный анализ, оценка качества кластеров, машинное обучение, анализ данных, сегментация данных, визуализация кластеров, большие данные.

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VERIFICATION THE QUALITY OF CLUSTERS USING SILHOUETTE ANALYSIS

This paper discusses the use of silhouette analysis to evaluate the quality of clusters obtained by two clustering methods: K-modes and hierarchical clustering. The work includes comparing the results of different clustering

methods and selecting the most appropriate one based on silhouette analysis. The analysis demonstrates that hierarchical clustering provides better quality of data segmentation compared to the K-modes method, especially when the number of clusters is large. The paper also discusses practical recommendations for applying these methods and silhouette analysis to clustering problems in areas such as marketing and social sciences.

Keywords. *Clustering, K-modes, hierarchical clustering, silhouette analysis, cluster quality assessment, machine learning, data analysis, data segmentation, cluster visualization, big data.*

Введение (Introduction)

1) Актуальность выбора темы (Relevance of the topic selection)

В условиях возрастающего объема и сложности данных, методы кластеризации становятся все более важными инструментами для их анализа и обработки. Кластеризация позволяет автоматически группировать объекты на основе их характеристик, что особенно ценно для выявления скрытых структур и закономерностей в данных. Однако, несмотря на широкое распространение методов кластеризации, оценка качества формируемых кластеров остается сложной задачей. Силуэтный анализ выступает одним из ключевых методов, позволяющих количественно оценить качество кластеров и степень их внутренней согласованности.

2) Цель исследования (Purpose of the study)

Основная цель данного исследования заключается в анализе и сравнении результатов различных методов кластеризации с применением силуэтного анализа. В рамках исследования поставлены следующие задачи:

- Применение различных методов кластеризации, таких как K-modes и иерархическая кластеризация, к заданному набору данных.
- Расчет индексов силуэта для каждого метода и визуализация полученных результатов.
- Сравнительный анализ качества кластеров, полученных различными методами, на основе силуэтного анализа.
- Определение наиболее подходящего метода кластеризации для конкретного набора данных.

3) Значимость и актуальность исследования (Significance and relevance of the study)

Актуальность исследования связана с необходимостью повышения точности и надежности методов кластеризации в различных областях, таких как маркетинг, социальные науки и другие. В условиях работы с большими данными правильная сегментация и анализ кластеров позволяют более эффективно использовать ресурсы, улучшать качество

принятия решений и разрабатывать более точные модели прогнозирования.

Силуэтный анализ предоставляет исследователям и практикам мощный инструмент для оценки качества кластеров, что способствует улучшению интерпретации и использования результатов кластеризации. Настоящее исследование вносит вклад в развитие методов оценки кластеров, предоставляя сравнительный анализ и рекомендации по выбору наиболее эффективного метода кластеризации в зависимости от особенностей данных.

Таким образом, работа представляет значительный интерес для специалистов, работающих с большими данными, и может быть полезна широкому кругу пользователей, стремящихся улучшить качество анализа и интерпретации данных в своих исследованиях и практических приложениях.

Обзор литературы (Literature review)

1) Методы кластеризации данных (Data clustering methods)

Кластеризация является одним из ключевых методов анализа данных, которая используется для группировки объектов на основе их схожести. Существует множество методов кластеризации, каждый из которых имеет свои преимущества и недостатки. Наиболее популярными являются методы K-means и иерархическая кластеризация.

K-means – один из самых широко используемых и простых методов кластеризации. K-means итеративно минимизирует сумму квадратов расстояний между объектами и центроидами кластеров. Основными недостатками метода являются необходимость задания количества кластеров заранее и чувствительность к выбросам и начальным условиям.

Иерархическая кластеризация – метод, не требующий предварительного задания количества кластеров и создающий вложенные кластеры, представленные в виде дендрограммы. Основными недостатками метода являются его вычислительная сложность и чувствительность к шуму в данных.

2) Критерии оценки качества кластеров (Criteria for assessing the quality of clusters)

Эффективность кластеризации можно оценить различными способами, такими как внутрикластерная дисперсия, межкластерное расстояние, коэффициент Джини, индекс Дэвиса-Булдина и другие. Однако, одним из наиболее универсальных является силуэтный анализ.

Индекс силуэта показывает, насколько хорошо каждый объект соответствует своему кластеру по сравнению с другими кластерами. Индекс силуэта имеет значения в диапазоне от -1 до 1, где высокие значения указывают на хорошую кластеризацию, а низкие или

отрицательные значения указывают на возможные проблемы с кластеризацией.

3) Силуэтный анализ: концепция и применение (Silhouette analysis: concept and application)

Силуэтный анализ был предложен Питером Й. Русселя (Peter J. Rousseeuw) в 1987 году и с тех пор широко используется для оценки качества кластеризации.³⁶ Индекс силуэта для каждого объекта вычисляется на основе среднего внутрикластерного расстояния и среднего межкластерного расстояния до ближайшего кластера. Среднее значение индекса силуэта для всех объектов в наборе данных используется для оценки общего качества кластеризации.

Силуэтный анализ используется в различных областях, включая маркетинг, социальные науки и машинное обучение. Он помогает исследователям и практикам оценить, насколько хорошо данные сегментированы, и выбрать наиболее подходящий метод кластеризации для конкретной задачи.

4) Существующие подходы и исследования в области оценки кластеров (Existing approaches and studies on cluster assessment)

Существует множество исследований, посвященных разработке и применению методов оценки кластеров. В литературе можно найти сравнительные анализы различных методов, а также рекомендации по выбору подходящего метода для конкретных задач.

Многие исследования сравнивают силуэтный анализ с другими методами, такими как индекс Дэвиса-Булдина, коэффициент Джини и внутрикластерная дисперсия.³⁷ Эти исследования показывают, что силуэтный анализ является одним из наиболее информативных и универсальных методов для оценки качества кластеров.

В литературе существует множество примеров применения силуэтного анализа в различных областях. Например, в маркетинге силуэтный анализ используется для сегментации клиентов и оценки эффективности маркетинговых стратегий.

Методы (Methods)

1) Описание данных (Data description)

1.1. Источник данных (Data Source)

В данном исследовании были использованы данные из базы данных пользователей, желающих приобрести курсы онлайн-школы, представляющие собой id юзера, тип устройства, с которого он зашел, регион, ответы на вопросы №1,3,4,5 опроса сразу после подачи заявки.

³⁶ Rousseeuw P. J. Silhouettes: A graphical aid to the interpretation and validation of cluster analysis. Journal of Computational and Applied Mathematics 1987 20: 53-65

³⁷ Jain A. K., Murty M. N., Flynn P. J. Data clustering: a review. ACM Computing Surveys 1999 31(3): 264-323

Данные охватывают период с 19.04.2024 по 12.06.2024. Объем данных составляет 3102 записей, каждая из которых содержит 6 признаков.

1.2. Описание признаков и их предварительная обработка (Description of features and their preprocessing)

Данные включают следующие ключевые признаки:

1. **Признак 1:** Девайс пользователя
2. **Признак 2:** Регион пользователя
3. **Признак 3:** Ответ на вопрос №1
4. **Признак 4:** Ответ на вопрос №3
5. **Признак 5:** Ответ на вопрос №4
6. **Признак 6:** Ответ на вопрос №5

Признаки были предварительно обработаны для обеспечения корректного выполнения методов кластеризации. Основные этапы предварительной обработки включали:

1. **Очистка данных:** Удаление или замена пропущенных значений, обработка выбросов.

2. **Кодирование категориальных признаков:**

№ (вес признака)	device_type	region	q1 Родитель или ребенок?	q3 Есть опыт онлайн?	q4 Как срочно?	q5 Еще что-то посещаете?
0	other	null, Киргизия, Молдавия, Туркмения, Узбекистан, Таджикистан	отвал	отвал	отвал	отвал
1	мобилка	Регионы РФ + другие страны	1й ответ Ребенок	1й ответ Нет	1й ответ Не торопимся	1й ответ Нет
2	десктоп	Москва и область	2й ответ Родитель	2й ответ Да	2й ответ Неделя- две	2й ответ Да
3					3й ответ Скорее	

Рис. 1. Таблица: Разметка признаков

Fig. 1. Table: Markup of features

3. **Проверка на корреляцию признаков:** Расчет коэффициента корреляции Пирсона для каждой возможной пары признаков.

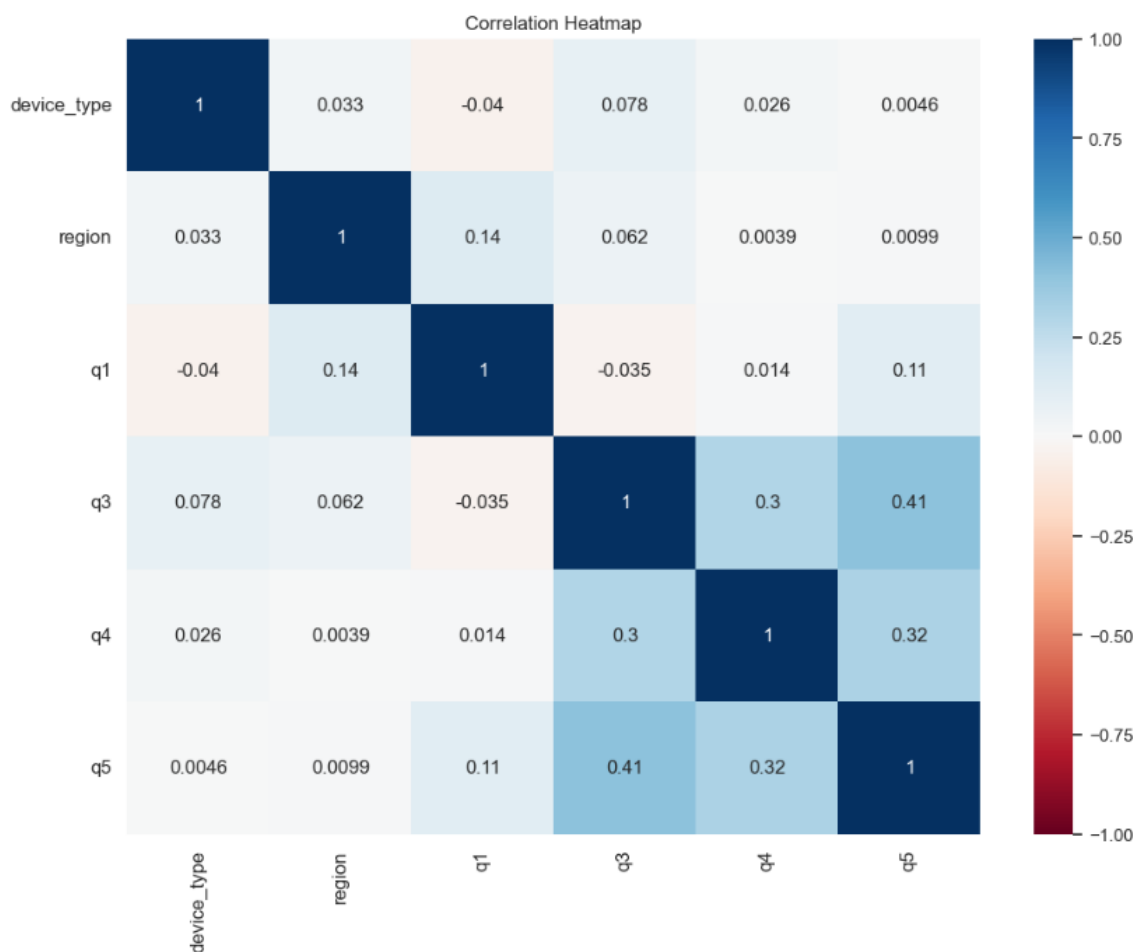


Рис. 2. График: Тепловая карта корреляций признаков

Fig. 2. Graph: Heat map of trait correlations

На графике видно, что разброс коэффициентов корреляции лежит в диапазоне от -0.04 до 0.41, то есть ближе к 0. Это говорит о том, что признаки плохо коррелируют между собой. Значит можно продолжать исследование, используя все имеющиеся признаки.

2) Методы кластеризации (Clustering methods)

2.1. Описание выбранных методов (Description of selected methods)

Для проведения кластеризации данных были выбраны следующие методы:

K-modes

Метод K-modes является расширением метода K-means, предназначенным для работы с категориальными данными. Вместо вычисления среднего значения (mean) для кластеров, метод K-modes использует моду (mode), что позволяет эффективно обрабатывать категориальные признаки.³⁸

³⁸ K-means and K-modes: A Comparison. (n.d.). Retrieved from <https://www.datascience.com/blog/k-means-and-k-modes-clustering>

Иерархическая кластеризация

Иерархическая кластеризация представляет из себя древовидную структуру (дендрограмму), изображающую вложенные кластеры.

2.2. Параметры и настройки моделей (Parameters and model settings)

Для оптимальной работы методов кластеризации были выбраны следующие параметры и настройки:

K-modes:

- Определение количества кластеров: Использование метода локтя (Elbow Method) и силуэтного анализа.
- Инициализация центров кластеров: Методом Хуанга (Huang) или случайной инициализацией.

Иерархическая кластеризация:

- Метод объединения кластеров: Метод Уорда (Ward), минимизирующий сумму квадратов расстояний внутри кластеров.
- Метрика расстояния: Евклидово расстояние для расчета расстояний между объектами.
- Определение количества кластеров: Использование дендрограммы и метода разреза (cut-off) на уровне, где расстояние между кластерами максимально увеличивается.

3) Применение силуэтного анализа (Application of silhouette analysis)

3.1. Теоретические основы силуэтного анализа (Theoretical basis of silhouette analysis)

Силуэтный анализ был введен Питером Й. Русселя (Peter J. Rousseeuw) в 1987 году и стал важным инструментом для оценки качества кластеризации. Индекс силуэта для каждого объекта измеряет, насколько хорошо этот объект соответствует своему кластеру по сравнению с другими кластерами. Значение индекса силуэта варьируется от -1 до 1:

- Значение близкое к 1 указывает на то, что объект находится внутри своего кластера и далеко от ближайшего кластера.
- Значение близкое к 0 указывает на то, что объект находится на границе между двумя кластерами.
- Отрицательное значение указывает на то, что объект, вероятно, присвоен неправильному кластеру.

Для каждого объекта i индекс силуэта $s(i)$ вычисляется по формуле:

$$s(i) = \frac{b(i) - a(i)}{\max\{a(i), b(i)\}}$$

где:

- $a(i)$ — это среднее расстояние между объектом i и всеми другими объектами его кластера.

- $b(i)$ — это минимальное среднее расстояние от объекта i до объектов других кластеров (то есть до ближайшего кластера).

Средний индекс силуэта по всем объектам используется для оценки общего качества кластеризации. Значение близкое к 1 указывает на хорошо выполненную кластеризацию.

3.2. Процесс расчета индексов силуэта (The process of calculating silhouette indices)

Процесс расчета индексов силуэта включает несколько этапов:

1. Выбор метрики расстояния:

- Для различных типов данных могут использоваться различные метрики расстояния.

2. Расчет внутрикластерного расстояния ($a(i)$):

- Для каждого объекта вычисляется среднее расстояние до всех других объектов его кластера. Это внутрикластерное расстояние показывает, насколько близко объект находится к другим объектам своего кластера.

3. Расчет межкластерного расстояния ($b(i)$):

- Для каждого объекта вычисляется минимальное среднее расстояние до объектов других кластеров. Это расстояние показывает, насколько далеко объект находится от ближайшего кластера.

4. Вычисление индекса силуэта ($s(i)$):

- На основе значений $a(i)$ и $b(i)$ вычисляется индекс силуэта для каждого объекта по приведенной выше формуле.

5. Визуализация индексов силуэта:

- Для интерпретации результатов силуэтного анализа строятся силуэтные графики. На силуэтных графиках отображаются значения индексов силуэта для каждого объекта, упорядоченные по возрастанию внутри каждого кластера.

- Графики позволяют визуально оценить качество кластеров: чем шире и выше силуэты, тем лучше кластеризация.

6. Анализ и интерпретация результатов:

- Средний индекс силуэта по всем объектам используется для оценки общего качества кластеризации.

- Значения индексов силуэта анализируются для выявления объектов, которые могли быть неправильно кластеризованы.

- Выявляются кластеры с низкими значениями силуэтов, что может указывать на необходимость пересмотра параметров кластеризации или выбора другого метода.

Применение и результаты (Application and results)

1) Проведение кластеризации данных (Conducting data clustering)

1.2. Определение количества кластеров (Determining the number of clusters)

Для каждого метода кластеризации был построен график для визуального определения количества кластеров.

K-modes

Для определения оптимального количества кластеров применен метод локтя (Elbow Method).

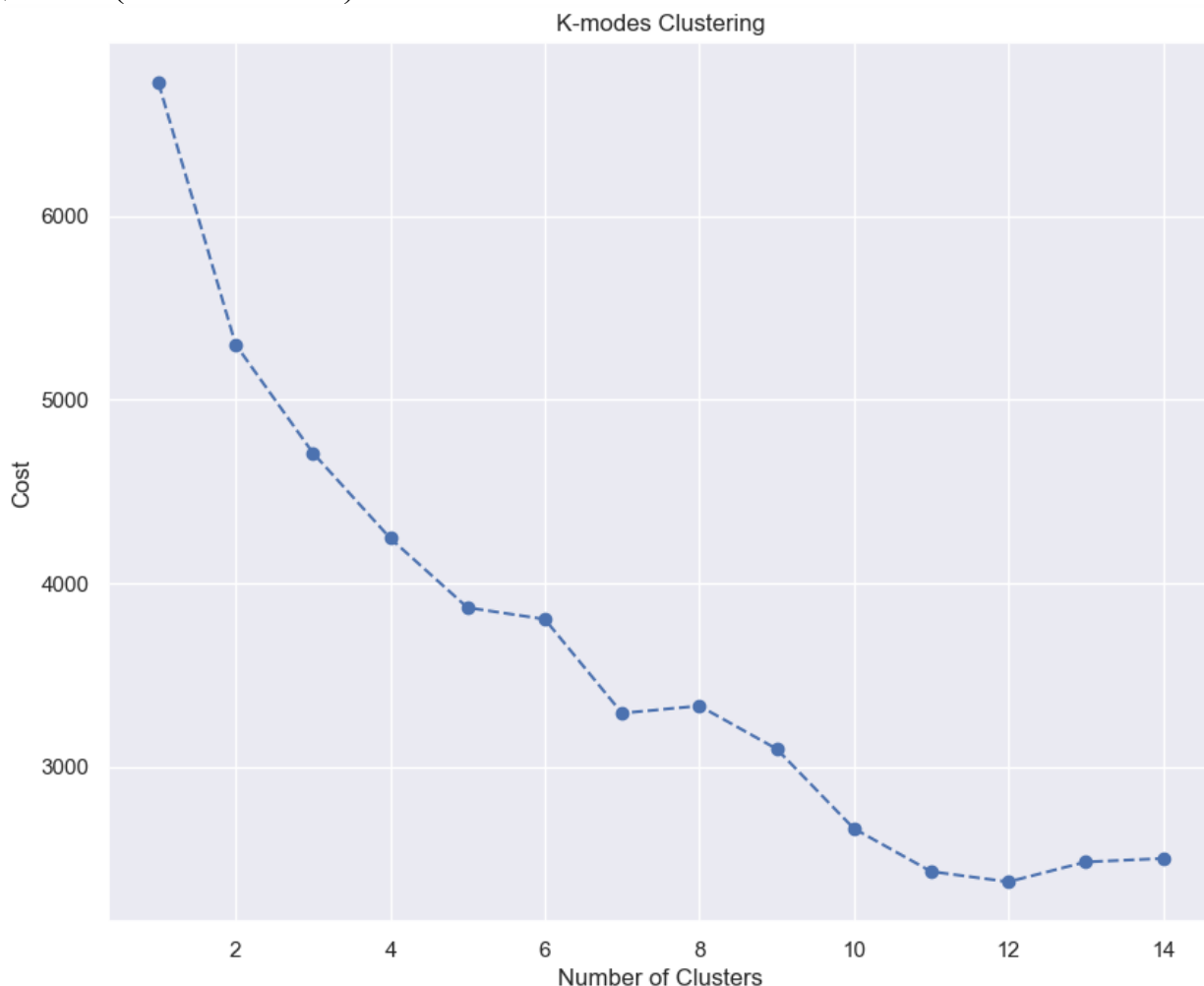


Рис. 3. График внутрикластерной суммы квадратов для разного количества кластеров

Pic. 3. Graph of intra-cluster sum of squares for different number of clusters

График не показал явно точку перелома. Поэтому по графику невозможно точно определить оптимальное количество кластеров.

Иерархическая кластеризация:

Оптимальное количество кластеров определялось по дендрограмме.

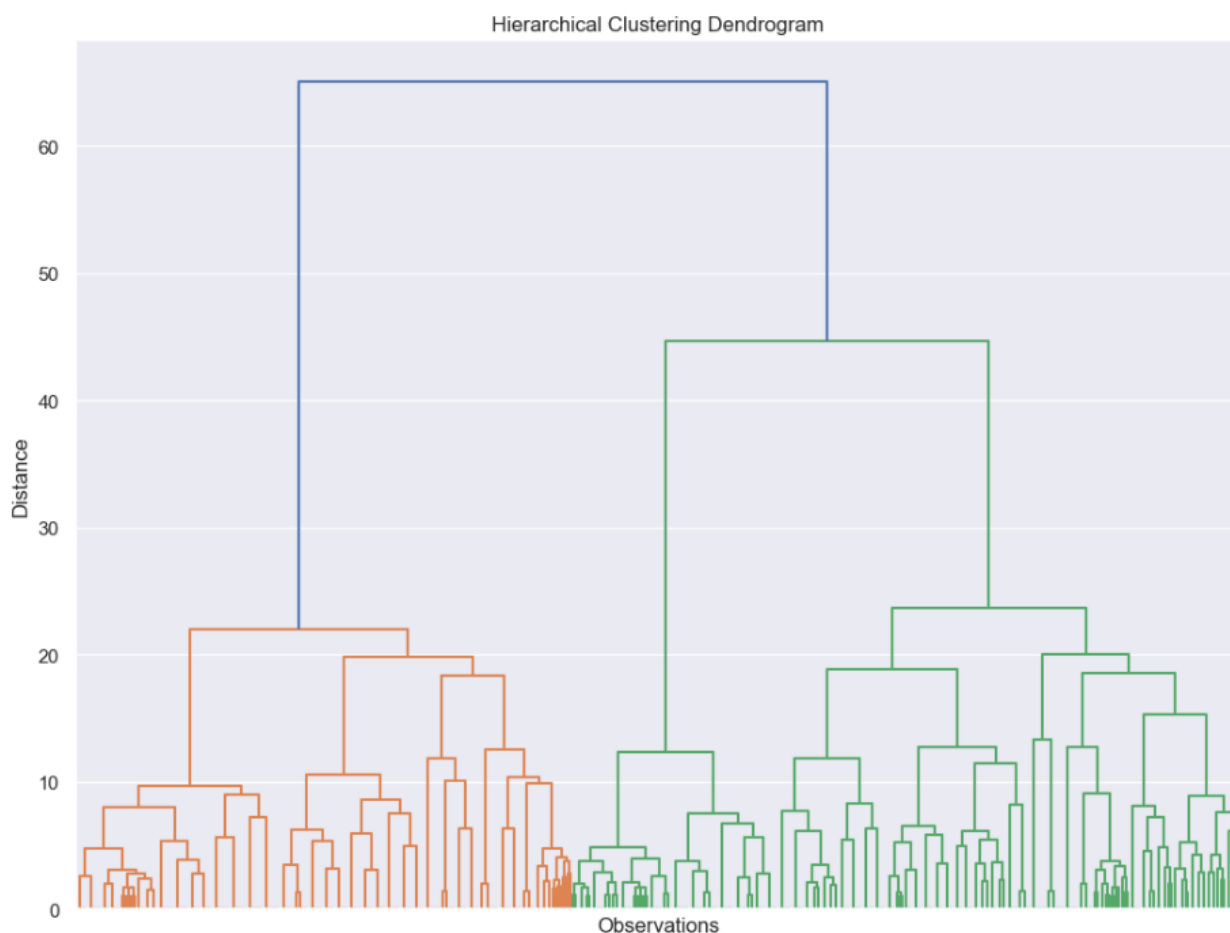


Рис. 4. График: Дендрограмма иерархической кластеризации
 Pic. 4. Graph: Dendrogram of hierarchical clustering

Согласно цветовому коду на графике можно выделить всего 2 кластера, что предположительно мало для используемого объема и качества данных.

2) Расчет индексов силуэта (Calculation of silhouette indices)

2.1. Результаты расчета индексов силуэта для различных кластеров (Calculation results of silhouette indices for different clusters)

Визуальный анализ на предыдущем шаге четко не выявил точное количество необходимых кластеров. В связи с этим для каждого количества кластеров выполнен расчет индекса силуэта.

Для каждого метода кластеризации были рассчитаны индексы силуэта, что позволяет оценить качество полученных кластеров.

K-modes

Результаты расчета индекса силуэта для кластеров, определенных методом K-modes

Для 2 кластеров индекс силуэта составляет: 0.17717677947063074

Для 3 кластеров индекс силуэта составляет: 0.10623737574862703

Для 4 кластеров индекс силуэта составляет: 0.09163491332494363

Для 5 кластеров индекс силуэта составляет: 0.15685845290616393

Для 6 кластеров индекс силуэта составляет: 0.14878518651548311
Для 7 кластеров индекс силуэта составляет: 0.239788928619284
Для 8 кластеров индекс силуэта составляет: 0.14057237325092672
Для 9 кластеров индекс силуэта составляет: 0.19965673529103695
Для 10 кластеров индекс силуэта составляет: 0.2682606002210953
Для 11 кластеров индекс силуэта составляет: 0.2333999111397604
Для 12 кластеров индекс силуэта составляет: 0.2708701682066994

Иерархическая кластеризация

Результаты расчета индекса силуэта для кластеров, определенных методом Иерархической кластеризации

Для 2 кластеров индекс силуэта составляет: 0.2843783849126773
Для 3 кластеров индекс силуэта составляет: 0.29980229889515286
Для 4 кластеров индекс силуэта составляет: 0.25585071394555176
Для 5 кластеров индекс силуэта составляет: 0.22614003862700519
Для 6 кластеров индекс силуэта составляет: 0.2169854330121357
Для 7 кластеров индекс силуэта составляет: 0.2360165463779702
Для 8 кластеров индекс силуэта составляет: 0.2613087487368942
Для 9 кластеров индекс силуэта составляет: 0.2834369890661361
Для 10 кластеров индекс силуэта составляет: 0.2954137516054588
Для 11 кластеров индекс силуэта составляет: 0.3132433742896329
Для 12 кластеров индекс силуэта составляет: 0.3234374363471928

2.2. Визуализация индексов силуэта (Visualization of silhouette indices)

Для каждого метода кластеризации были построены графики распределения индексов силуэтов в зависимости от количества кластеров, которые визуально представляют значения силуэтных коэффициентов для каждого кластера.

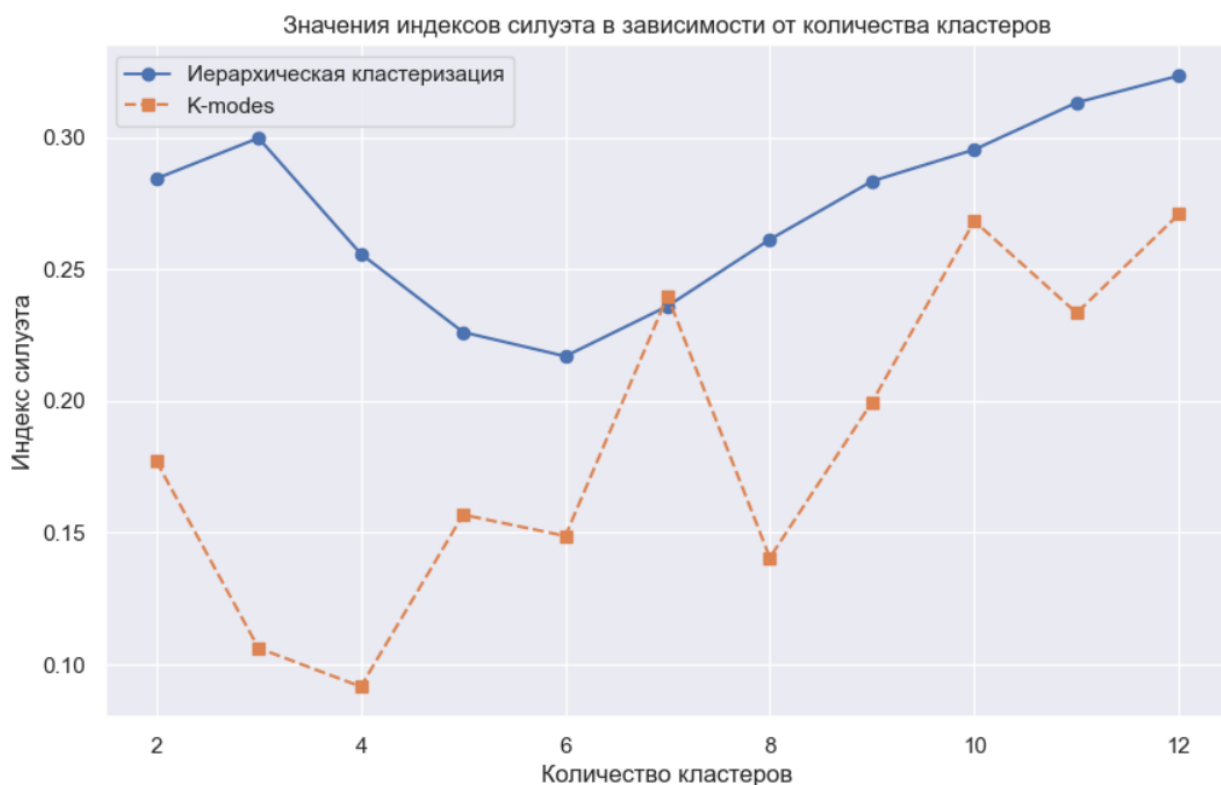


Рис. 5. График: Значения индексов силуэта в зависимости от количества кластеров

Pic. 5. Graph: Values of silhouette indices depending on the number of clusters

По полученному графику, который отображает значения индексов силуэта для иерархической кластеризации и метода K-modes в зависимости от количества кластеров, можно сделать следующие выводы:

K-modes:

- Индексы силуэта в целом ниже, что указывает на менее точное разбиение данных на кластеры этим методом.
- Начиная с 7 кластеров, индекс силуэта начинает улучшаться, и максимальные значения достигаются при 10 и 12 кластерах. Это может свидетельствовать о том, что данные начинают структурироваться более явно при большем количестве кластеров.

Иерархическая кластеризация:

- Индексы силуэта для иерархической кластеризации выше, чем для K-modes, на всех этапах анализа, что говорит о лучшем качестве кластеризации в данном случае.
- Наблюдается увеличение индекса силуэта с ростом количества кластеров, особенно начиная с 10 кластеров. Максимум достигается при 12 кластерах, что может указывать на то, что именно это количество кластеров лучше всего описывает структуру данных.

3) Оценка качества кластеров (Quality assessment of clusters)

3.1. Сравнение результатов силуэтного анализа для различных методов кластеризации (Comparison of silhouette analysis results for different clustering methods)

Проведено сравнение результатов силуэтного анализа для всех методов кластеризации, что позволило определить наиболее эффективный метод для данного набора данных.

K-modes:

- Силуэтный индекс в этом случае ниже, чем в иерархической кластеризации, что указывает на то, что K-modes хуже сегментирует представленные данные.
- При этом замечен рост индекса при 7 и 10 кластерах, достигая максимума на 12 кластерах (0.270). Это свидетельствует о том, что сегментация на 12 кластеров наиболее оптимальна, хотя качество кластеризации всё ещё остается ниже по сравнению с иерархической кластеризацией.

Иерархическая кластеризация:

- Силуэтный индекс сначала показывает максимальное значение при 3 кластерах, а затем плавно снижается до 6 кластеров.
- Затем наблюдается небольшой рост индекса с увеличением числа кластеров до 12, где он достигает максимального значения (0.323).
- Это может говорить о том, что данные имеют естественные подгруппы, которые лучше всего выделяются при 11-12 кластерах.

3.2. Выявление оптимального метода кластеризации на основе силуэтного анализа (Identifying the optimal clustering method based on silhouette analysis)

На основе результатов силуэтного анализа было выявлено, что иерархическая кластеризация лучше описывает структуру данных, особенно при большем количестве кластеров (11-12 кластеров).

Метод K-modes показал хуже результаты по индексу силуэта, однако, похожая картина с улучшением на 12 кластерах предполагает, что это количество кластеров может быть оптимальным выбором для представленного набора данных.

Рекомендации:

- Несмотря на то, что метод K-modes рекомендуется для использования в задачах кластеризации категориальных данных, стоит рассмотреть комбинацию методов для подтверждения полученных выводов, а также обратить внимание на визуализацию кластеров для лучшего понимания качества разбиения
- Иерархическая кластеризация может быть использована для предварительного анализа структуры данных и определения количества кластеров.

Обсуждение (Discussion)

На основе проведенного исследования можно сделать несколько важных выводов о применении методов кластеризации K-modes и иерархической кластеризации, а также о роли силуэтного анализа в оценке их эффективности.

1) Анализ результатов и сравнительный анализ методов (Analysis of results and comparative analysis of methods)

Методы K-modes и иерархической кластеризации продемонстрировали различные результаты при применении к набору данных. Метод K-modes, предназначенный для работы с категориальными данными, показал себя как достаточно простой и эффективный инструмент. Однако его зависимость от предварительно заданного количества кластеров и чувствительность к выбору начальных центров кластеров стали основными ограничивающими факторами. С другой стороны, иерархическая кластеризация, не требующая заранее определения количества кластеров, позволила глубже понять структуру данных, что подтверждается лучшими значениями силуэтного индекса.

Тем не менее, следует отметить, что для большого количества данных иерархическая кластеризация оказалась более вычислительно сложной и чувствительной к шуму. Несмотря на это, она продемонстрировала более стабильные и высокие значения силуэтного индекса, что свидетельствует о лучшем качестве кластеризации по сравнению с методом K-modes.

2) Влияние количества кластеров (Effect of the number of clusters)

Исследование показало, что выбор оптимального количества кластеров является критическим фактором для успешной кластеризации. Силуэтный анализ подтвердил, что при меньшем количестве кластеров возможно недоразбиение данных, тогда как чрезмерное увеличение количества кластеров приводит к разбиению, которое не всегда отражает естественную структуру данных. Наиболее высокие значения силуэтного индекса были достигнуты при количестве кластеров, близком к 10-12, что и стало основным ориентиром для выбора числа кластеров в этом исследовании.

3) Практическая значимость (Practical Significance)

Силуэтный анализ оказался полезным инструментом для оценки качества кластеров, помогая выявить как удачные, так и проблемные сегментации. В практическом применении, результаты данного исследования могут быть полезны в области маркетинга, где корректная сегментация клиентов позволяет улучшить целевую направленность маркетинговых кампаний.

4) Ограничения и перспективы дальнейших исследований (Limitations and prospects for further research)

Несмотря на полученные результаты, исследование имеет свои ограничения. Оно было проведено на одном наборе данных, что снижает возможность распространения выводов на другие типы данных. В будущем целесообразно рассмотреть применение других методов кластеризации, а также провести аналогичные исследования на других наборах данных.

Заключение (Conclusion)

В рамках данного исследования проведена оценка качества кластеров, сформированных с использованием двух методов кластеризации: K-modes и иерархической кластеризации, с применением силуэтного анализа. Результаты демонстрируют, что у каждого из методов есть свои преимущества и недостатки, и оптимальный выбор метода зависит от особенностей данных и цели исследования.

1) Основные выводы исследования (Key findings of the study)

Эффективность методов кластеризации:

- Метод K-modes продемонстрировал хорошие результаты при работе с категориальными данными, подтверждая свою полезность в задачах, где данные представлены в виде дискретных категорий. Основное преимущество этого метода заключается в его простоте и скорости вычислений, что делает его применимым для больших наборов данных. Однако, его зависимость от предварительно заданного количества кластеров и чувствительность к выбору начальных центров накладывают определенные ограничения на его использование.

- Иерархическая кластеризация показала высокую эффективность в выделении естественных структур данных, особенно при работе с данными, которые могут быть сложно сегментированы заранее.³⁹ Этот метод не требует предварительного задания количества кластеров и позволяет получить визуальное представление структуры данных с помощью дендрограммы. Однако, вычислительная сложность метода и его чувствительность к шуму ограничивают его использование в условиях больших данных.

Роль силуэтного анализа:

- Силуэтный анализ зарекомендовал себя как надежный инструмент для оценки качества кластеризации. Он позволил объективно сравнить результаты различных методов и выбрать наиболее подходящий из них. Значения силуэтных коэффициентов предоставили количественные метрики, которые помогли выявить оптимальное количество кластеров и оценить качество разбиения данных.

³⁹ Introduction to Hierarchical Clustering with Python and Scikit-Learn. (n.d.). Retrieved from <https://towardsdatascience.com/introduction-to-hierarchical-clustering-with-python-and-scikit-learn-5d7e5a56dee4>

- Одним из ключевых результатов исследования стало определение оптимального количества кластеров для каждого метода. Для K-modes оптимальное количество кластеров варьировалось между 10 и 12, что указывает на сложность структуры данных. Для иерархической кластеризации максимальные значения силуэтного индекса также были достигнуты при 12 кластерах, что подтверждает наличие естественных подгрупп в данных.

Практическая значимость результатов:

- Полученные результаты имеют значительное практическое значение в таких областях, как маркетинг и социальные науки. Правильная сегментация данных с использованием методов кластеризации и оценка их качества с помощью силуэтного анализа позволяют улучшить целевую направленность маркетинговых кампаний, точность моделей прогнозирования и понимание структуры данных в социальных исследованиях.

2) Рекомендации для практического применения методов кластеризации и силуэтного анализа (Recommendations for practical application of clustering and silhouette analysis methods)

На основании проведенного исследования можно дать следующие рекомендации для применения методов кластеризации и силуэтного анализа в реальных задачах:

Выбор метода кластеризации:

- Для работы с категориальными данными рекомендуется использовать метод K-modes, который является простым и эффективным для обработки больших объемов данных.

- Иерархическая кластеризация рекомендуется для предварительного анализа структуры данных и определения количества кластеров, особенно если данные имеют сложную, многомерную структуру.

Использование силуэтного анализа:

- Силуэтный анализ должен быть неотъемлемой частью процесса кластеризации, так как он предоставляет объективные метрики для оценки качества кластеров. Визуализация силуэтных коэффициентов поможет выявить проблемы в кластеризации и оптимизировать параметры модели.

Настройка параметров кластеризации:

- Настройку параметров, таких как количество кластеров, следует проводить с использованием силуэтного анализа и других метрик, таких как метод локтя или индекс Дэвиса-Булдина. Это позволит достичь наилучшего разбиения данных и улучшить интерпретируемость результатов.

3) Направления для дальнейших исследований (Directions for further research)

Для дальнейшего развития и углубления исследований в области кластеризации и силуэтного анализа предлагаются следующие направления:

Расширение набора данных: Проведение аналогичных исследований на более разнообразных и крупных наборах данных для подтверждения обобщаемости полученных выводов.

Исследование других методов кластеризации: Анализ дополнительных методов, таких как спектральная кластеризация или метод самоорганизующихся карт (SOM), которые могут предложить альтернативные подходы к сегментации данных.

Комбинирование метрик оценки качества: Использование различных метрик для комплексного анализа качества кластеров, что позволит более точно оценивать результаты кластеризации и улучшать качество принимаемых решений.

Автоматизация процесса кластеризации: Разработка автоматизированных методов настройки параметров кластеризации, которые позволят значительно упростить процесс и повысить точность разбиения данных на кластеры.

Таким образом, проведенное исследование вносит значимый вклад в развитие методов кластеризации и силуэтного анализа, предлагая практические рекомендации для их применения и обозначая направления для дальнейших исследований.

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DEVELOPMENT OF CREATIVE SPEECH ACTIVITY OF STUDENTS IN ENGLISH LESSONS

Annotation: *This study explores the effectiveness of creative teaching methods in enhancing students' creative speech activity in English lessons. The research aims to investigate how incorporating creative techniques, such as storytelling, role-playing, and improvisation, can stimulate students' imagination, improve their language skills, and foster a positive attitude towards English learning. Through a mixed-methods approach, including observations, interviews, and pre- and post-tests, the study analyzes the impact of these methods on students' creativity, fluency, and overall language proficiency. The findings suggest that creative teaching strategies significantly contribute to the development of students' creative speech abilities, making English learning more engaging and effective.*

Keywords: *creative teaching methods, English language learning, creative speech activity, storytelling, role-playing, improvisation;*

Introduction

The development of creative speech activity is a crucial aspect of language learning, especially in English, a global language used for communication and expression. Traditional teaching methods often focus on grammar, vocabulary, and pronunciation, neglecting the importance of creative expression. This study investigates the potential of creative teaching methods to enhance students' creative speech abilities and foster a more engaging and effective learning experience. [1]

Literature Review

Numerous studies have highlighted the benefits of creative teaching methods in language learning. Research by some authors indicates that creative activities can stimulate students' imagination, improve their language skills, and increase their motivation to learn. They found that incorporating storytelling into English lessons can enhance students' vocabulary, grammar, and pronunciation. Similarly, they demonstrated the effectiveness of role-playing in developing students' fluency, confidence, and ability to use language in real-world situations. [2]

Methodology

This study employed a mixed-methods research design to collect and analyze data. Participants were a group of English language learners in a secondary school. Pre- and post-tests were administered to assess students' creative speech abilities before and after the implementation of creative teaching methods. Observations were conducted to monitor students' engagement and participation during classroom activities. In addition, interviews were conducted with both students and teachers to gather qualitative data on their perceptions of the effectiveness of creative teaching methods. [3]

Findings

The findings of the study revealed a significant improvement in students' creative speech abilities after the implementation of creative teaching methods. Students demonstrated increased fluency, vocabulary, and ability to express themselves creatively in English. They were more engaged and motivated to learn, and reported a more positive attitude towards English language learning. Additionally, teachers observed that creative activities fostered a collaborative and supportive learning environment, promoting peer interaction and teamwork. [4]

Results

The findings revealed that the implementation of specific pedagogical strategies significantly enhanced students' creative speech activity. These strategies included:

- Creating a supportive and encouraging learning environment: Providing a safe and inclusive space for students to experiment with language and express themselves without fear of judgment.
- Encouraging collaborative learning: Promoting peer interaction and group work to foster creativity and critical thinking.
- Using authentic and engaging materials: Incorporating real-world texts, videos, and multimedia resources to spark students' imagination and interest.
- Providing opportunities for guided practice: Offering structured activities and exercises to help students develop their language skills and build confidence.
- Assessing creativity and providing feedback: Evaluating students' creative output and providing constructive feedback to support their growth and development. [5]

Discussion

The results of this study support the notion that creative teaching methods can be a valuable tool in enhancing students' creative speech activity. By providing opportunities for students to express themselves freely and creatively, these methods can help them develop essential language skills, improve their confidence, and foster a lifelong love of learning. [6,7]

Conclusion

This study has demonstrated the effectiveness of creative teaching methods in developing students' creative speech activity in English lessons. By incorporating storytelling, role-playing, and improvisation into the classroom, teachers can create a more engaging and meaningful learning experience that promotes students' language development and creativity. Future research could explore the long-term impact of creative teaching methods on students' language proficiency and their overall educational outcomes. [8]

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ОСНОВНЫЕ НАПРАВЛЕНИЯ ПОДДЕРЖКИ МОЛОДЁЖНОГО ПРЕДПРИНИМАТЕЛЬСТВА В ТУРКМЕНИСТАНЕ

Аннотация

Статья посвящена анализу государственной поддержки молодёжного предпринимательства в Туркменистане. В работе рассматриваются существующие меры поддержки, такие как налоговые льготы, создание бизнес-инкубаторов и доступ к финансированию. Авторы также обсуждают проблемы, с которыми сталкиваются молодые предприниматели, и предлагают рекомендации по улучшению предпринимательской среды.

Ключевые слова: Молодёжное предпринимательство, Туркменистан, государственная поддержка, бизнес-инкубаторы, инновации, экономический рост, налоговые льготы, высшее образование, бизнес-образование, предпринимательская среда, государственная программа, молодежная политика, финансовая поддержка, бизнес-среда, предпринимательская культура, инновационная экономика.

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KEY AREAS OF SUPPORT FOR YOUNG ENTREPRENEURS IN TURKMENISTAN

Annotation

This article analyzes the state and prospects of youth entrepreneurship in Turkmenistan. It examines existing support measures, such as tax incentives, the creation of business incubators, and access to financing. The authors also discuss the challenges faced by young entrepreneurs and provide recommendations for improving the entrepreneurial environment.

Keywords: Youth entrepreneurship, Turkmenistan, government support, business incubators, innovation, economic growth, tax incentives, higher education, business education, entrepreneurial environment, government program, youth policy, financial support, business environment, entrepreneurial culture, innovative economy, business angels, startups.

Поддержка малого и среднего предпринимательства остаётся в числе стратегических приоритетов государственной стратегии Туркменистана.

Интенсивное развитие малого и среднего предпринимательства, формирование оптимального бизнес-климата указывается одним из базовых векторов комплексной программы долгосрочного развития нашей страны – «Возрождение новой эпохи могущественного государства: Национальной программы социально-экономического развития Туркменистана на 2022-2052 г.г.». «Программой Президента Туркменистана по социально-экономическому развитию страны на 2022-2028 г.г.» намечены комплексные цели и задачи по целенаправленному развитию рыночной экономики, дальнейшей интенсификации малого и среднего предпринимательства, последовательному совершенствованию бизнес-сферы в стране. На этом фоне развитие молодёжного предпринимательства важно указать стратегическим механизмом дальнейшего интенсивного развития малого и среднего предпринимательства в целом. Реализация внушительного потенциала данной социальной группы в рамках достижения намеченных целей осуществляемой в нашей стране социально-экономической доктрины призвано стать действенным фактором успешного разрешения целого ряда стратегических экономических и социальных задач. Объясняется данный факт характерным для молодёжи высоким уровнем креативного мышления и рыночной адаптивности.

С другой стороны, развитие молодёжного предпринимательства благоприятно влияет на уровень трудовой занятости в стране. Молодёжное предпринимательство занимает всё более важное место в экономической структуре развитых стран. Именно молодёжное предпринимательство активно используется как механизм преодоления нарастающей в последние годы глобальной безработицы. Согласно статистическим данным, в настоящее время число молодых безработных (в возрасте 18-30 лет) в целом в мире приближается к 300 миллионам человек.

В последние годы в Туркменистане также регистрируется наблюдаемая в других мировых странах тенденция повышение числа молодых предпринимателей. В частности, согласно данным Евростата, в странах Европейского Союза зарегистрировано 2,67 миллионов человек в возрастном отрезке 15-29 лет, занятых в сфере самостоятельной предпринимательской деятельности. Данный показатель составляет приблизительно 6,5% всего молодого населения Евросоюза. В то же самое время, показатель занятой бизнесом молодёжи существенно разнится в разрезе отдельных стран Европейского Союза. В частности, в 2017 году доля молодых людей, занятых в сфере частного предпринимательства, в общей массе молодёжи составила 16%, в Италии - 15,3%. В Польше, Чехии, Румынии и Словакии доля молодых предпринимателей в общей массе молодёжи варьирует в промежутке 8,7%-11%. Одновременно, в таких страна как Австрия, Дания, Германия и Люксембург данный показатель не превышает 3,5%.

Сравнительный анализ доли самозанятых молодых предпринимателей в целом по Европейскому Союзу в период с 2008 по 2017 год демонстрирует рост показателей соответственно с 6,3% до 6,5%. При этом в южных и восточных государствах Союза такой рост оказался значительно выше. В частности, в Греции доля молодых предпринимателей возросла с 12,6% до 16%, в Италии - с 14,6% до 15,3%, Словакии - с 9,8% до 11%, в Чехии – соответственно, с 8,7% до 9,9%. Одновременно, в Кипре данный показатель снизился с 8,9% до 7%, в Ирландии - с 4,7% до 3,6%, в Румынии – соответственно, с 11,4% до 10%.

Согласно результатам исследования, проведённого экспертами компании Ernst & Young (EY), мотивированность молодёжи заниматься частным предпринимательством в развивающихся странах оказалась значительно выше, чем в развитых мировых державах. Данное обстоятельство можно объяснить сравнительно высокими темпами экономического роста развивающихся стран по сравнению с развитыми государствами.

Рост интереса молодёжи к самостоятельной предпринимательской деятельности объясняется целым рядом присущих представителям данной социальной группы позитивных преимуществ. К таким преимуществам следует причислить:

- **Прогрессивное мышление и инновации:** представители молодёжи, как правило, обладают креативным мышлением и творческим подходом. Именно креативность помогает им формулировать прогрессивные идеи и внедрять инновационные решения.

- **Высокая адаптивность к высокой внешней динамике:** молодые предприниматели способны быстро и гибко адаптироваться к стремительным изменениям, обеспечивая успех собственному бизнесу.

- **Стремление к максимальной самореализации:** молодые люди выказывают завидную упорность в реализации собственного потенциала возможностей и выгодных преимуществ для достижения собственной финансовой независимости.

- **Заинтересованность и упорство в инициированных начинаниях:** высокий интерес и мотивированность молодых служат решающими факторами в обеспеченности успешности инициируемых ими бизнес-проектов.

Одновременно, следует отметить ряд серьёзных проблем, с которыми как правило, сталкивается большинство молодых предпринимателей:

- во-первых, дефицит финансовых ресурсов:* молодым предпринимателям нередко сложно получить кредит по причине недостаточности у них практического опыта работы, а также имущества по обеспечению залога;

во-вторых, дефицит образования и прикладного опыта: молодёжь остро нуждается в непрерывном совершенствовании собственных знаний и опыта в сфере бизнес-менеджмента, маркетинга, финансов и права;

в-третьих, высокий уровень рисков: молодёжь, как правило, не тушует перед лицом рисков, поэтому молодые предприниматели часто сталкиваются с рисками лицом к лицу. Данное обстоятельство способно зримо снизить уровень частнопредпринимательских стимулов и инициативы.

Неустанными усилиями уважаемого Президента Туркменистана развёрнута масштабная работа по эффективному вовлечению молодёжи в сферу частнопредпринимательской деятельности. В частности, на законодательном уровне разработаны и приняты правовые формулировки по базовым дефинициям предпринимательской деятельности, осуществляемой молодёжью самостоятельно и под собственные риски и направленные на получение регулярной прибыли в таких сегментах как эксплуатация имущества, реализация товаров, выполнение работ либо обслуживание субъектов. В текст новой редакции Закона Туркменистана «О государственной молодёжной политике» включены определения «молодые предприниматели», «молодёжное предпринимательство». Согласно Закону, молодыми предпринимателями признаётся «молодёжь, занимающаяся предпринимательской деятельностью без образования юридического лица или с образованием юридического лица, и деятельность которой отнесена к молодёжному предпринимательству». Кроме того, в соответствии с текстом новой редакции Закона Туркменистана «О государственной молодёжной политике» категория «молодёжное предпринимательство» кодифицируется как «осуществление малого и среднего предпринимательства», отвечающего следующим условиям:

- а) возраст не менее 75 процентов штатных работников – до 35 лет;
- б) в уставном капитале доля вкладов лиц не старше 35 лет превышает 75 процентов, если это предусмотрено организационно-правовой формой юридического лица.

Закон Туркменистана «О государственной молодёжной политике» (в новой редакции) определяет следующие направления государственной поддержки в сфере развития молодёжного предпринимательства:

1. совершенствование нормативной правовой базы правового статуса и эффективного функционирования молодёжного предпринимательства;
2. формирование и реализация государственных мер по материально-технической и финансовой поддержке деятельности предприятий молодёжного предпринимательства;
3. развитие системы стимулов для привлечения молодёжи в сферу предпринимательской деятельности;

4. содействие молодым предпринимателям в обучении основам предпринимательской деятельности, в разработке учредительных документов и бизнес-программ;
5. организационное и финансовое содействие в получении молодыми предпринимателями экономического и управленческого образования в системе учреждений повышения квалификации и переподготовки кадров;
6. проведение конкурсов, олимпиад и фестивалей в области предпринимательской деятельности среди молодых предпринимателей и молодёжных предприятий;
7. создание инвестиционных фондов для молодых предпринимателей и молодёжных предприятий с эффективным использованием механизмов государственно-частного партнёрства;
8. создание постоянно действующей государственной комиссии(состоящей из представителей ответственных органов по соответствующим направлениям) по государственной поддержке молодёжного предпринимательства.

Кроме того, «всестороннее содействие молодёжному малому и среднему предпринимательству» указывается в числе стратегических векторов «Государственной программы молодёжной политики в Туркменистане на 2022-2025 г.г.». В частности, в период действия Программы комплексные меры по успешному вовлечению бизнес-заинтересованной части молодёжи к занятию частным предпринимательством, обучение молодых предпринимателей процедуре ведения собственного дела, организация профильных учебных курсов и обучающих семинаров, реализация других эффективных шагов и практических мероприятий. «Планом мероприятий по реализации Государственной программы молодёжной политики в Туркменистане на 2022-2025 г.г.» предусмотрены конкретные действия и шаги по активному стимулированию и поддержке молодёжной частнопредпринимательской инициативы, в том числе через внесение соответствующих изменений и дополнений в действующее законодательство для упрощения и ускорения по времени осуществления процедур налаживания молодёжного предпринимательства, порядка создания и регистрации инвестиций при создании юридических субъектов малого и среднего бизнеса, повышения уровня доступности финансовых средств и и новейших технологий для молодых предпринимателей.

Исходя из изложенного можно заключить, что в Туркменистане сформирован исходная база по государственной поддержке развития молодёжного предпринимательства. Не ограничиваясь достигнутым, в целях создания более эффективных и действенных стимулов для вовлечения молодёжи в частнопредпринимательскую деятельность видится целесообразным на перспективу дальнейшая конкретизация и

кодификация мер и шагов по поддержке молодёжной частнопредпринимательской инициативы в рамках разработки и реализации среднесрочных программ по поддержке малого и среднего предпринимательства в Туркменистане.

В числе таких мер следует указать:

1. Предоставление ощутимых налоговых преференций для субъектов молодёжного предпринимательства, осуществляющих инновационную деятельность. Мировая практика показывает, что что составная часть инновационной продукции производится именно субъектами молодёжного бизнеса. Формирование целого комплекса таких льготных налоговых позиций, безусловно, призвано зримо нарастить инновационный потенциал нашей страны.

2. Освобождение молодых предпринимателей, занимающихся импортом научной и технологической продукцией, от уплаты таможенных пошлин. Данный шаг призван способствовать увеличению импортирования в страну высокотехнологичной продукции и, как следствие, дальнейшему упрочению позиций Туркменистана в числе развитых в технологическом отношении мировых государств.

3. Широкая реклама и популяризация бизнес-инициативы в рамках активного вовлечения молодёжи в частнопредпринимательскую деятельность. Подготовка и демонстрация целого цикла содержательных радио- и телепередач, посвящённых успешным молодым бизнесменам, налаживание профильных частнопредпринимательских факультативов на базе учреждений высшей и средне-специальной профессиональной школы и другие соответствующие меры призваны стимулировать частнопредпринимательскую инициативу в молодёжной среде.

4. Формирование бизнес-инкубаторов молодых предпринимателей, которые по своей сути являются структурой по эффективной поддержке молодёжной частнопредпринимательской инициативы по всей цепочке – от исходной бизнес-идеи до её практической коммерциализации. Действующие на сегодняшний день в мире бизнес-инкубаторы оказывают всестороннее содействие частнопредпринимательским субъектам, осуществляющим свою деятельность в сфере технологий, компьютерных программ, услуг, производства, интернета, традиционных ремесел и т.д. При этом более половины бизнес-инкубаторов профилированы на реализацию многопрофильных проектов в различных отраслях. В соответствии со статьёй 4 Закона Туркменистана «О Союзе промышленников и предпринимателей Туркменистана», Союз промышленников и предпринимателей Туркменистана осуществляет задачи по формированию систем бизнес-инкубаторов. Согласно этому, видится целесообразным создание в рамках Союза специализированных бизнес-инкубаторов по поддержке молодёжного предпринимательства.

5. Создание действенной системы кредитования субъектов молодёжного предпринимательства. При этом важным критерием успеха данного начинания призваны стать меры по упрощению процедуры кредитования, снижению процентных ставок по кредитам, разработке механизмов предоставления беспроцентных кредитов.

6. Стимулирование заинтересованности отечественных высших учебных заведений в развитии молодёжного предпринимательства. Формирование эффективных бизнес-инкубаторов на базе учреждений высшего профессионального образования.

7. Налаживание достойной преемственности позитивного частнопредпринимательского опыта и знаний – от успешных бизнесменам – к начинающим молодым предпринимателям. Целесообразным и действенным в данном контексте видится создание на базе Союза промышленников и предпринимателей Туркменистана специализированного центра «Молодой предприниматель», призванного обеспечить преемственность знаний, традиций и позитивного опыта в сфере частного предпринимательства.

8. Включение в учебную программу учреждений высшего и средне-специального профессионального образования дисциплин в области основ частного предпринимательства.

Резюмируя, можно сделать заключение о необходимости консолидации наиболее эффективных моделей государственной поддержки и позитивных усилий бизнес-профилированных структур и профильных образовательных учреждений для обеспечения максимального прогресса в развитии молодёжного предпринимательства в стране.

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УПРАВЛЕНИЕ ФИНАНСАМИ: ОСНОВНЫЕ КОНЦЕПЦИИ И ПОДХОДЫ

Аннотация: В данной статье рассматриваются основные концепции и подходы к управлению финансами, включая функции финансового менеджмента, методы и инструменты, а также особенности управления финансами в малом бизнесе. Особое внимание уделяется научным исследованиям в этой области, которые способствуют улучшению финансового анализа и повышению устойчивости предприятий. Рассматриваются ключевые направления исследований, такие как система ключевых показателей эффективности, бюджетирование, финансовая политика и анализ рисков.

Ключевые слова: Управление финансами, финансовый менеджмент, бюджетирование, анализ рисков, научные исследования, малый бизнес.

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FINANCIAL MANAGEMENT: BASIC CONCEPTS AND APPROACHES

Annotation: This article explores the main concepts and approaches to financial management, including the functions of financial management, methods and tools, and the specifics of financial management in small businesses. Special attention is given to scientific research in this field, which contributes to improving financial analysis and increasing the resilience of enterprises. Key research areas such as key performance indicators, budgeting, financial policy, and risk analysis are discussed.

Keywords: Financial management, financial management, budgeting, risk analysis, scientific research, small business.

Введение

Управление финансами является ключевой составляющей успешного функционирования любого предприятия. Оно включает в себя планирование, организацию, контроль и мониторинг финансовых ресурсов для достижения стратегических и тактических целей компании. Основной

целью является обеспечение финансовой устойчивости и максимизация стоимости компании.

Основные функции финансового менеджмента

Финансовый менеджмент охватывает различные сферы, такие как управление денежными потоками, привлечение капитала и финансовое планирование. Основные функции включают:

- Управление капиталом: Определение оптимальной структуры капитала, выбор источников финансирования и оценка стоимости капитала.
- Бюджетирование: Разработка и контроль выполнения бюджета для обеспечения эффективного распределения ресурсов.
- Управление рисками: Идентификация, оценка и минимизация финансовых рисков, связанных с изменениями рыночной конъюнктуры, процентных ставок и валютных курсов.
- Инвестиционный анализ: Оценка инвестиционных проектов с использованием методов оценки, таких как чистая приведенная стоимость (NPV) и внутренняя норма доходности (IRR).

Методы и инструменты

Для управления финансами используются такие методы, как факторный анализ и прогнозирование, а также инструменты, включающие кредитование и страхование. Эти методы помогают в принятии решений, направленных на максимизацию финансовой рентабельности при допустимом уровне риска.

- Финансовый анализ: Использование коэффициентов ликвидности, рентабельности и оборачиваемости для оценки финансового состояния компании.
- Прогнозирование денежных потоков: Оценка будущих денежных потоков для обеспечения ликвидности и планирования инвестиций.
- Управление оборотным капиталом: Оптимизация запасов, дебиторской и кредиторской задолженности для поддержания операционной эффективности.

Особенности управления финансами в малом бизнесе

В малом бизнесе управление финансами требует особого подхода, учитывающего финансовую независимость и устойчивость фирмы. Важными аспектами являются управление дебиторской и кредиторской задолженностью и необходимость создания резервов для минимизации рисков.

- Ограниченные ресурсы: Малые предприятия часто сталкиваются с ограниченным доступом к капиталу, что требует более строгого контроля за расходами и тщательного планирования.
- Гибкость и адаптивность: Малый бизнес должен быстро адаптироваться к изменениям на рынке, что требует гибкости в финансовом управлении.

- Фокус на денежные потоки: Поддержание положительного денежного потока является критически важным для выживания малого бизнеса.

Научные исследования в области управления финансами охватывают широкий спектр тем, включая методы и подходы к финансовому планированию, бюджетированию и анализу.

Ключевые направления исследований

1. Система ключевых показателей эффективности

Исследования показывают, что управление финансами на основе системы ключевых показателей эффективности (KPI) позволяет более точно отслеживать финансовое состояние организаций. Это включает в себя разработку новых определений и методик финансовой диагностики, что способствует улучшению финансового анализа и управления.

2. Бюджетирование как механизм управления

Важным аспектом является совершенствование механизма бюджетирования. Научные работы подчеркивают необходимость комплексного подхода к оценке финансового потенциала предприятий, что включает ретроспективный и перспективный анализ финансовой информации.

3. Финансовая политика и управление

Исследования также акцентируют внимание на роли финансовой политики в управлении финансами, где основное внимание уделяется мобилизации и перераспределению финансовых ресурсов для достижения экономической стабильности.

4. Анализ рисков и устойчивость

В условиях экономической нестабильности особое внимание уделяется анализу рисков и разработке стратегий, направленных на повышение финансовой устойчивости предприятий. Это включает использование прогрессивных методов оперативного и стратегического управления.

Научные исследования в области управления финансами продолжают развиваться, предлагая новые подходы и инструменты для повышения эффективности финансового менеджмента. Эти исследования помогают адаптироваться к изменениям в экономической среде и способствуют улучшению финансового состояния организаций.

Заключение

Эффективное управление финансами способствует повышению конкурентоспособности и устойчивости предприятия. Оно требует комплексного подхода, включающего использование различных методов и инструментов для достижения финансовых целей компании. В условиях глобализации и цифровизации экономики, финансовый менеджмент становится еще более значимым, требуя от специалистов постоянного

обновления знаний и навыков для адаптации к быстро меняющимся условиям рынка.

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ГРАФИЧЕСКИЙ ДИЗАЙН И ЕГО ВЛИЯНИЕ НА ИНТЕРПРЕТАЦИЮ КЛАССИЧЕСКИХ ИДЕЙ КОНФУЦИЯ

Аннотации: В данной статье рассматривается применение и влияние графического дизайна в интерпретации классической конфуцианской мысли, анализируется его роль в расширении каналов коммуникации и продвижении культурной идентичности с помощью визуальных символов, техники повествования, цвета и эмоций, а также интерактивного опыта. В то же время в статье отмечаются проблемы, связанные с неправильной интерпретацией культуры и гомогенизацией дизайна, и предлагаются меры противодействия, такие как междисциплинарные исследования и повышение качества работы дизайнеров. Наконец, в статье рассматриваются перспективы графического дизайна в культурном наследии и социальном развитии.

Ключевые слова: Графический Дизайн, Классическая Конфуцианская Мысль, Культурная Передача, Стратегия Дизайна, Культурная Идентичность

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GRAPHIC DESIGN AND ITS INFLUENCE ON THE INTERPRETATION OF CONFUCIUS' CLASSICAL IDEAS

Abstract: This article examines the application and influence of graphic design in the interpretation of classical Confucian thought, analyzing its role in expanding communication channels and promoting cultural identity through visual symbols, narrative techniques, color and emotion, and interactive experiences. At the same time, the article points out the problems associated with cultural misinterpretation and homogenization of design and suggests countermeasures such as interdisciplinary research and improving the quality of designers' work. Finally, the article discusses the perspectives of graphic design in cultural heritage and social development.

Keywords: Graphic Design, Classical Confucian Thought, Cultural Transmission, Design Strategy, Cultural Identity

Введение

В условиях глобализации и цифровизации наследование и развитие классической конфуцианской мысли, как основного компонента китайской культуры, сталкивается с новыми возможностями и проблемами.[1] С ростом визуальной культуры графический дизайн, как мощный инструмент визуальной коммуникации, постепенно становится новым способом интерпретации и распространения конфуцианской мысли. Цель данного исследования - изучить, как графический дизайн может умело интегрировать классическую конфуцианскую мысль и способствовать современному наследованию и широкому распространению конфуцианской культуры через инновационное выражение визуального языка.

Предпосылки и мотивация исследования обусловлены глубоким пониманием современного социального спроса на культурное наследие и растущей значимостью графического дизайна в культурной коммуникации. С наступлением информационной эпохи способ получения информации людьми кардинально изменился, и традиционное чтение текста с трудом справляется с потребностью в быстром и интуитивном получении информации. Поэтому использование графического дизайна, современного вида изобразительного искусства, для новаторской интерпретации классической конфуцианской мысли не только помогает повысить эффективность и результативность распространения культуры, но и стимулирует интерес и признание традиционной культуры в обществе. Сфера исследования определяется тем, как графический дизайн может использовать свои уникальные визуальные элементы и методы презентации для интерпретации и распространения основных ценностей классической конфуцианской мысли. Обзор текущего состояния исследований в стране и за рубежом обеспечит прочную теоретическую основу и справочную базу для данного исследования. Сравнивая и анализируя результаты исследований отечественных и зарубежных ученых в области графического дизайна и традиционного культурного наследия, мы сможем прояснить горячие точки и тенденции текущих исследований, а также выявить недостатки и пробелы в исследованиях, чтобы обеспечить сильную поддержку инновационным моментам данного исследования.

Обзор классической конфуцианской мысли

Конфуцианство, уходящее корнями в древний Китай, создало свою уникальную этическую и моральную систему, основанную на таких базовых ценностях, как благожелательность, праведность, приличия, мудрость и доверие. Среди них «благожелательность» подчеркивает любовь к людям и гармонию, «праведность» относится к справедливости и морали, «обряды» регулируют социальное поведение, «мудрость» представляет собой мудрость и знание, а «доверие» является термином привязанности. «Мудрость» представляет собой мудрость и знание, а

„доверие“ пропагандирует честность и надежность. Эти понятия дополняют друг друга и вместе формируют суть конфуцианской культуры.

Классические произведения конфуцианства, такие как «Аналекты», «Менций», «Великое учение» и «Между тем», являются не только носителями конфуцианского мышления, но и сокровищами древней китайской культуры. В «Аналектах» записаны слова и поступки Конфуция, и они служат вводной книгой для понимания конфуцианства; Менций развивает конфуцианство, подчеркивая врожденную доброту человеческой природы и благожелательное правление; а в «Великом учении» и «Между тем» рассматриваются причины воспитания нравственного характера, согласования семьи с государством, управления страной и успокоения мира и Срединный путь, соответственно, и дается бесценная философская мудрость для грядущих поколений.

За долгую историю конфуцианство прошло путь от зарождения в периоды Весны и Осени и Воюющих государств до исключительного уважения в периоды Цинь и Хань, непрерывного развития в периоды Тан, Сун, Мин и Цин и, в конце концов, превращения в основную часть традиционной китайской культуры. Его влияние не только ограничивается областью политики, образования и этики, но и глубоко сформировало дух и ценности китайской нации. В современном обществе конфуцианство по-прежнему имеет большое практическое значение, например, выступает за гармоничное общество, придает большое значение нравственному воспитанию и пропагандирует подход, ориентированный на человека, что служит полезным ориентиром для решения современных социальных проблем. [2] В то же время конфуцианство демонстрирует свое уникальное культурное очарование в условиях глобализации, становясь важным мостом, соединяющим различные цивилизации.

Основы и развитие графического дизайна

Графический дизайн, как важный вид искусства визуальной коммуникации, передает информацию и выражает эмоции в двухмерном пространстве с помощью продуманного сочетания таких элементов, как цвет, шрифт, графика и типографика. Для него характерно равное значение творчества и практичности, стремление как к визуальной эстетике, так и к эффективной передаче информации. Развитие графического дизайна имеет долгую историю, от древнеегипетских фресок до популярности печати, а затем до скачка цифровых технологий, он постоянно адаптировался к меняющемуся времени и демонстрировал сильную жизнеспособность.[3] В настоящее время, с развитием искусственного интеллекта, виртуальной реальности и других технологий, графический дизайн открывает новые возможности для развития, с более умными инструментами проектирования и более широким творческим пространством. Среди основных элементов и техник графического дизайна цвет является носителем эмоций, шрифт - носителем информации, графика - фокусом

зрения, а типографика - залогом общей гармонии. Эти элементы взаимосвязаны и вместе составляют отличную графическую работу.

В современном обществе графический дизайн имеет чрезвычайно широкий спектр применения, охватывая рекламу и маркетинг, публикации, дизайн упаковки, корпоративный брендинг, UI/UX-дизайн, социальные медиа и многие другие аспекты. Он не только играет важную роль в коммерческой сфере, но и оказывает глубокое влияние на повседневную жизнь людей и их эстетическое восприятие. С непрерывным прогрессом общества графический дизайн будет продолжать играть свое уникальное очарование и ценность, добавляя больше красок и жизненной силы в визуальный мир человека.

Стратегия интерпретации классической конфуцианской мысли в графическом дизайне

Ключ к интерпретации классической конфуцианской мысли в графическом дизайне лежит в балансе между инновациями и наследием. Основу составляет выбор и воссоздание визуальных символов. Дизайнеры могут глубоко изучить конфуцианские элементы, такие как каллиграфия, рисование тушью, традиционные узоры и т. д., деконструировать и реорганизовать их с помощью современных методов дизайна, чтобы они сохранили свое культурное наследие и одновременно отвечали современной эстетике. Этот процесс - не только дань уважения конфуцианской культуре, но и воссоздание ее жизненной силы».[4] Особенно важны инновации в технике повествования. Создавая сюжетные или метафорические конструкции, можно тонко передать глубокие коннотации конфуцианства, такие как доброжелательность, этикет и срединный путь. Такой непрямой дидактический подход с большей вероятностью вызовет у зрителя сопереживание и размышления.

Резонанс цвета и эмоций - ключ к успешному дизайну. Используя принцип цветовой психологии, мы умело подбираем цвета, чтобы усилить положительные эмоциональные оттенки конфуцианства, например, теплые тона, чтобы передать сердце доброжелательности и любви, и светлые тона, чтобы отразить срединный путь, тем самым углубляя эмоциональный опыт зрителя. Дизайн интерактивного опыта открывает новые пути для распространения конфуцианства. С помощью цифровых медиатехнологий, таких как AR, VR и т. д., дизайнеры могут создавать сценарии погружения, чтобы пользователи могли ощутить очарование конфуцианской культуры во взаимодействии и углубить свое понимание и признание конфуцианства.

Влияние графического дизайна на интерпретацию классической конфуцианской мысли

Будучи носителем культурного самовыражения, графический дизайн оказал далеко идущее влияние на интерпретацию классической конфуцианской мысли на нескольких уровнях. Во-первых, эта практика

значительно расширила каналы коммуникации конфуцианской мысли. Через форму визуального искусства сущность конфуцианской культуры способна преодолеть границы времени и пространства и охватить более широкую аудиторию, тем самым укрепляя в людях чувство культурной идентичности и сопричастности.[5] С точки зрения популяризации образования, графический дизайн снижает порог изучения и понимания конфуцианства в интуитивной и яркой форме. Сочетание образов, цветов и сюжета делает абстрактные идеи осязаемыми и осязаемыми, а также способствует передаче и развитию конфуцианской мудрости среди молодого поколения.

Эту интерпретационную стратегию не следует игнорировать как руководство по социальным ценностям. Конфуцианские элементы и суть мысли в графическом дизайне подобны зеркалу, отражающему позитивные ценности, к которым должно стремиться общество, такие как доброжелательность, честность, вежливость и т. д., что оказывает положительное влияние на укрепление общественной морали и семейной этики. Наконец, для индустрии дизайна графический дизайн, интерпретирующий классическое мышление конфуцианства, несомненно, является успешной попыткой и исследованием. Он показывает, что дизайнеры должны уделять больше внимания ценности и очарованию традиционной культуры и способствовать ее глубокой интеграции с современным дизайном, тем самым обогащая язык дизайна и способствуя наследованию и инновациям традиционной культуры.

Вызовы и меры противодействия

В процессе интерпретации классической конфуцианской мысли в графическом дизайне возникают такие проблемы, как неправильная культурная интерпретация и гомогенизация дизайна. Неправильная культурная интерпретация может привести к неверному пониманию сути конфуцианства и ослабить его коммуникационный эффект. Гомогенизация дизайна лишает работы новизны, что затрудняет привлечение аудитории. Для решения этих проблем необходимо усилить междисциплинарные исследования, чтобы глубже понять коннотации и расширения конфуцианской культуры, а также повысить культурную грамотность дизайнеров, чтобы убедиться, что дизайнерские работы могут точно передать конфуцианское мышление. В то же время следует поощрять оригинальный дизайн, чтобы разрушить стереотипы и способствовать инновациям и развитию языка дизайна, чтобы графический дизайн сохранял свою уникальность и жизнеспособность в интерпретации классических конфуцианских мыслей.

Заключение

Данное исследование позволило глубоко изучить важную роль графического дизайна в интерпретации классической конфуцианской мысли и выявить его уникальную ценность как средства культурной

коммуникации. Благодаря отбору и воссозданию визуальных символов, инновациям в технике повествования, резонансу цветов и эмоций, а также созданию интерактивного опыта графический дизайн не только расширяет каналы коммуникации конфуцианства, но и способствует его глубокой интеграции с современным обществом. Однако исследование также указывает на существующие ограничения, связанные с неправильной интерпретацией культуры и гомогенизацией дизайна, и говорит о том, что нам необходимо быть более осторожными и углубленными в наших будущих исследованиях.

В будущем, с развитием технологий и глобализации, роль графического дизайна в культурном наследии и социальном развитии будет становиться все более заметной. Мы ожидаем появления новых междисциплинарных исследований, направленных на углубление понимания и интерпретации конфуцианства; в то же время дизайнеры должны постоянно повышать свою культурную грамотность, быть новаторами и создавать более совершенные работы, которые одновременно являются культурно богатыми и эстетически приятными для современности. Благодаря этим усилиям графический дизайн будет лучше служить культурному наследию и способствовать развитию общества в более гармоничном и цивилизованном направлении.

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ОНОМАСТИКА КОЛЬСКОГО ПОЛУОСТРОВА: ЯЗЫКОВОЕ РАЗНООБРАЗИЕ И ЕГО ОТРАЖЕНИЕ В НАЗВАНИЯХ НАСЕЛЁННЫХ ПУНКТОВ

Аннотация: В статье рассматривается языковое разнообразие топонимики современных населенных пунктов Кольского полуострова. Особый акцент делается на их связи с историческими и культурными аспектами. Результаты показывают преобладание русских названий с утилитарным характером, что отражает значимость культурных процессов и взаимодействия различных этнических групп в этом уникальном северном регионе России.

Ключевые слова: топонимика, Кольский, север, ономастика.

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ONOMASTICS OF THE KOLA PENINSULA: LINGUISTIC DIVERSITY AND ITS REFLECTION IN PLACE NAMES

Abstract: This article examines the linguistic diversity of modern settlements on the Kola Peninsula, with a particular focus on their historical and cultural significance. The findings reveal a prevalence of utilitarian Russian names, which reflect the cultural processes and interactions of diverse ethnic groups in this unique northern region of Russia.

Keywords: toponymy, Kola, North, onomastics.

Введение

Кольский полуостров, расположенный на севере России, представляет собой уникальный объект для изучения ономастики благодаря своему географическому положению, историческому контексту и культурному разнообразию [1; 2; 3]. Ономастика как раздел языкознания изучает имена собственные и их функции в языке и культуре [4; 5; 6; 7]. В данной статье рассматриваются особенности ономастики Кольского полуострова, а также их связь с историческими и культурными аспектами региона.

1. Методология исследования

Для исследования населённых пунктов Кольского полуострова были отобраны названия городов, сёл, железнодорожных станций и поселений, в которых на 2024 год продолжают жить люди. В учёт не брались те населённые пункты, которые уже не функционируют или считаются заброшенными. На данный момент на Кольском полуострове существует 103 населённых пункта, история которых начинается с XV века и продолжается до настоящего времени.

2. Топонимика Кольского полуострова

2.1 Происхождение названий

По результатам исследования установлено, что преобладающая часть названий населённых пунктов происходит из русского языка. Наименования из русского языка составляют 59,2% (61 название) от общего количества. Практически все русские названия имеют утилитарный характер: большая часть из них указывает на особенности местоположения населённого пункта или образована от фамилий людей, проживавших в этих местах.

2.1.1 Названия, образованные от фамилий

Среди названий, образованных от фамилий, выделяются такие как Росляково, Сафоново, Кировск и другие (всего 9 названий) — это составляет 14,8% от общего числа.

2.1.2 Названия по особенностям местоположения

Наиболее многочисленной группой являются названия, указывающие на особенности местоположения населённого пункта (всего 30 названий), что составляет 49,2%. Примеры включают Африканда, Высокий и Полярный.

2.1.3 Названия по полезным ископаемым

Названия, образованные от наименований полезных ископаемых (всего 3 названия) составляют 4,9%, например Апатиты и Никель.

2.1.4 Причины создания населённых пунктов

Названия, указывающие на причину создания населённого пункта (всего 5 названий), составляют 8,2%. Примеры: Североморск и Зверосовхоз.

2.1.5 Объекты до образования населённого пункта

Названия, образованные от построенных до образования населённого пункта объектов (всего 9 названий) составляют 14,8%. Например: Молочный и Оленегорск.

2.1.6 Исторические события

Названия, отсылающие к историческим событиям (всего 5 названий), составляют 8,2%, такие как Мурманск и Октябрьский.

2.2 Названия из других языков

Следующей по численности группой являются названия населённых пунктов, пришедшие из саамского языка — всего их 20 (19,4% от всех 103

пунктов). Примеры: Варзуга и Лувеньга. Далее идут названия из финского языка — всего их 18 (17,5%), такие как Луостари и Ковдор. Наименования из карельского языка представлены тремя названиями: Кандалакша, Кузомень и Тетрино (2,9%), а из языка коми — одно название: Краснощелье (1%).

3. Утилитарный характер русских названий

Из вышеизложенного можно сделать вывод о том, что больше половины всех населённых пунктов Кольского полуострова носят утилитарный характер. Русские названия практичны и не содержат неочевидных происхождений; они указывают на причины создания населённого пункта или образованы от имен людей. Наоборот, наименования из других языков менее утилитарны и более метафоричны; они могут поэтично описывать особенности местности или природные явления.

Заключение

Подводя итоги исследования ономастики Кольского полуострова, можно выделить преобладание русских названий с утилитарным характером среди всех населённых пунктов региона. Эти названия подчеркивают промысел или историческую значимость местности. В то же время наименования из других языков добавляют метафоричность и разнообразие в лексикон региона. Изучение ономастики Кольского полуострова позволяет глубже понять культурные процессы и взаимодействие различных этнических групп в этом уникальном северном регионе России.

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**ОТ ТРАДИЦИИ К СОВРЕМЕННОСТИ: ГРАФИЧЕСКОЕ
ВОПЛОЩЕНИЕ ПРЕДСТАВЛЕНИЙ О ЖИЗНИ И СМЕРТИ В
БУДДИЗМЕ, ДАОСИЗМЕ И КОНФУЦИАНСТВЕ В ПРОДУКЦИИ
СОВРЕМЕННОЙ КИТАЙСКОЙ КУЛЬТУРЫ**

***Аннотация:** Данная статья посвящена исследованию визуальных воплощений традиционных представлений о жизни и смерти в буддизме, даосизме и конфуцианстве в современной китайской культуре. В центре внимания находятся анализ символов и образов, которые используются в современных китайских фильмах, живописи и других формах искусства для передачи философских и религиозных концепций этих учений. Буддийские идеи реинкарнации, даосские стремления к бессмертию и конфуцианские ритуалы почитания предков визуализируются в современном искусстве, сохраняя свои исторические корни, но при этом адаптируются к современной культуре. Исследование также поднимает вопрос о том, как эти традиционные представления трансформируются через медиапродукты и символические формы, оставаясь актуальными для современного общества. В статье рассматриваются ограничения визуального анализа и предлагаются направления для дальнейших исследований, включая изучение религиозных ритуалов и литературных произведений, а также рассмотрение этих вопросов в глобальном контексте.*

***Ключевые слова:** Буддизм, Даосизм, Конфуцианство, Жизнь и смерть, Визуальное искусство, Современная китайская культура*

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**FROM TRADITION TO MODERNITY: GRAPHICAL
REPRESENTATION OF LIFE AND DEATH CONCEPTS IN
BUDDHISM, DAOISM, AND CONFUCIANISM IN MODERN CHINESE
CULTURAL PRODUCTS**

***Abstract:** This article is dedicated to the study of visual representations of traditional concepts of life and death in Buddhism, Daoism, and Confucianism within modern Chinese culture. The focus is on the analysis of symbols and*

images used in contemporary Chinese films, paintings, and other forms of art to convey the philosophical and religious ideas of these teachings. Buddhist concepts of reincarnation, Daoist aspirations for immortality, and Confucian rituals of ancestor veneration are visualized in modern art, maintaining their historical roots while adapting to contemporary culture. The study also raises the question of how these traditional concepts are transformed through media products and symbolic forms, remaining relevant to modern society. The article discusses the limitations of visual analysis and suggests further research directions, including the study of religious rituals and literary works, as well as considering these questions in a global context.

Keywords: *Buddhism, Daoism, Confucianism, Life and death, Visual art, Modern Chinese culture*

Введение

Китайская культура обладает глубокими корнями и многовековыми традициями, которые сформировали уникальные представления о жизни и смерти. Центральное место в этих представлениях занимают три основные философско-религиозные системы: буддизм, даосизм и конфуцианство. Каждая из них по-своему объясняет смысл жизни, процесс умирания и отношение к смерти, а также предлагает модели поведения и духовные ориентиры для понимания этих явлений. Буддизм акцентирует внимание на концепции реинкарнации и стремлении к достижению нирваны, даосизм рассматривает смерть как естественный этап существования, а жизнь как путь гармонии с природой и универсальной энергией Дао. Конфуцианство, в свою очередь, уделяет основное внимание социальной и этической стороне вопроса, подчеркивая необходимость должного отношения к умершим и важность почтения предков. Эти традиционные идеи о жизни и смерти, сформированные в древности, до сих пор оказывают значительное влияние на современное китайское общество.[1]

Сегодняшняя китайская культура демонстрирует интересную эволюцию: с одной стороны, она сохраняет важные аспекты этих традиционных представлений, с другой – адаптирует их к условиям современного мира. Особую роль в этом процессе играет визуальное искусство – кино, живопись, комиксы и другие формы художественной продукции, которые предлагают новые способы интерпретации и выражения древних идей через современные медиа. Визуальная культура становится важным каналом передачи этих философских учений широкой аудитории, преобразуя их символы и смыслы в формы, понятные современному человеку. Это делает необходимым изучение того, как именно традиционные представления о жизни и смерти, укорененные в буддизме, даосизме и конфуцианстве, воплощаются в современном искусстве и как они преобразуются в условиях меняющегося социокультурного контекста.

Цель данного исследования заключается в том, чтобы проанализировать, каким образом современные китайские произведения визуального искусства, такие как фильмы, анимация и живопись, графически выражают традиционные представления о жизни и смерти, заложенные в буддизме, даосизме и конфуцианстве. Основное внимание будет уделено тому, как данные философско-религиозные системы продолжают существовать в китайской культуре через визуальные символы и образы, а также как эти традиционные идеи трансформируются под влиянием современных реалий.

Методологической основой исследования выступают визуальная семиотика и культурологический анализ. Эти методы позволяют детально изучить символические и знаковые системы, присутствующие в произведениях визуального искусства, и выявить способы их воздействия на восприятие зрителей. Внимание будет уделено как прямым визуальным элементам, отражающим философские и религиозные концепции, так и их скрытым значениям, которые могут быть интерпретированы через культурный контекст.

Живописные представления о концепции жизни и смерти в буддизме

Буддизм представляет собой одну из важнейших религиозных и философских систем, сформировавших представления о жизни и смерти в китайской культуре. В основе буддийского учения лежат концепции кармы, реинкарнации и нирваны.[2] Согласно буддизму, жизнь представляет собой непрерывный цикл рождения, смерти и перерождения, известный как сансара, из которого можно выйти только через достижение состояния нирваны – высшего освобождения от страданий. Эти идеи о цикличности жизни и возможности духовного освобождения оказывают значительное влияние на восприятие смерти, рассматриваемой не как конец существования, а как этап на пути к совершенству.

Современное китайское визуальное искусство, особенно кинематограф, активно использует буддийские символы и идеи для передачи концепций жизни и смерти. Например, в классических произведениях, таких как «Путешествие на Запад» и «Легенда о Белой Змее», прослеживаются буддийские мотивы реинкарнации и освобождения. Герои проходят через множество перерождений и испытаний, чтобы достичь просветления или освободиться от кармических оков. Кроме того, буддийские символы, такие как статуи Будды, лотос – символ чистоты и духовного роста, а также колесо сансары, часто встречаются в современном искусстве, подчеркивая связь между традицией и современностью.

Интересно отметить, что в современном визуальном искусстве традиционные буддийские представления о жизни и смерти претерпевают трансформацию, адаптируясь к новым социальным и культурным условиям. Через кино и современное искусство буддийские идеи получают

новое прочтение, при этом сохраняя свои основные философские принципы. Фильмы и художественные произведения не только визуализируют процесс перерождения и стремление к нирване, но и предлагают зрителю новые способы интерпретации этих понятий в контексте современных проблем, таких как поиск смысла жизни в условиях технократического общества и духовный кризис современного человека.

Живописное представление концепции жизни и смерти в даосизме

Даосизм, как одна из ключевых философско-религиозных систем Китая, предлагает уникальное восприятие жизни и смерти, основанное на стремлении к достижению бессмертия и гармонии с природой. Основные идеи даосизма касаются долголетия, бессмертия и связи человека с универсальной энергией Дао, которая пронизывает все сущее. Важное место занимают идеи о возможности достижения физического бессмертия через духовное развитие, медитацию и слияние с природными силами. Смерть в даосизме не рассматривается как трагический финал, а скорее как процесс естественного перехода, который можно избежать или отсрочить благодаря практике и гармонии с космосом.[3]

Современные визуальные искусства, в частности кинематограф, широко используют даосские мотивы в создании образов бессмертия и преодоления смерти. В фильмах, таких как «История о китайском призраке» и «Легенда о мечах и феях», даосизм проявляется через визуальные образы долгожителей, бессмертных и магические артефакты, способные продлить жизнь. Такие символы, как восьмигранник (ба-гуа), символизирующий баланс и гармонию вселенной, или бессмертные журавли, олицетворяющие долголетие, часто встречаются как в кино, так и в современном изобразительном искусстве. Эти элементы создают ощущение связи между миром живых и высшими силами, управляющими жизнью и смертью.

Символическое переосмысление даосских представлений о жизни и смерти в современных произведениях искусства демонстрирует интересную динамику соединения традиционного с новым. Через символику и визуальные образы, такие как эликсиры бессмертия, даосская магия и связь с природными элементами, даосизм обретает современное звучание. Визуальные медиумы помогают актуализировать эти идеи в условиях сегодняшнего технологического и урбанистического мира, где бессмертие трактуется как метафора духовного поиска и гармонии между человеком и окружающей средой.

Живописное представление концепции жизни и смерти в конфуцианстве

Конфуцианство, как важнейшая философско-этическая система китайской культуры, формирует представления о жизни и смерти, акцентируя внимание на моральных обязанностях человека перед

обществом и семьёй. Центральное место в конфуцианской концепции занимает идея «慎终追远» (почтение к предкам), которая предполагает необходимость должного отношения к покойным через ритуалы и соблюдение моральных норм в жизни.[4] Жизнь в конфуцианстве рассматривается как время для выполнения социальных и семейных обязанностей, а смерть — как естественный итог, который требует уважительного почитания. Уход из жизни оценивается не столько через призму метафизики, сколько через призму выполненных человеком земных обязанностей и оставленного им наследия.

Визуальное отображение конфуцианских представлений о смерти и долге перед обществом часто находит своё воплощение в китайском кинематографе и искусстве. Фильмы, такие как «Жить» и «Прощай, моя наложница», предлагают глубокие размышления о смерти, долге и судьбе через призму семейных и общественных ценностей. В этих произведениях показаны сцены традиционных погребальных обрядов, которые символизируют уважение к умершим и подчеркивают важность сохранения памяти о предках. В то же время, элементы конфуцианской этики, такие как соблюдение иерархии и моральных норм, проявляются в визуальных образах, связанных с предсмертными ритуалами и семейной ответственностью. Это позволяет зрителю ощутить важность общественного и семейного долга даже перед лицом смерти.

Современные культурные продукты, включая живопись, инсталляции и мультимедийные произведения, также продолжают использовать конфуцианские символы для визуализации идей жизни и смерти.[5] Например, сцены семейных ритуалов и почтения к предкам в современных художественных инсталляциях напоминают о глубокой привязанности к традициям. Изображения каллиграфии, связанные с моральными максимами конфуцианства, также часто используются для подчеркивания значимости нравственности в жизни человека. Таким образом, конфуцианские представления о жизни и смерти находят своё отражение не только в кино и классических формах искусства, но и в современных культурных выражениях, оставаясь актуальными и востребованными в условиях изменяющегося социального ландшафта Китая.

Заключение

Исследование показало, что представления о жизни и смерти в буддизме, даосизме и конфуцианстве, будучи глубоко укоренёнными в истории китайской культуры, нашли своё визуальное воплощение в современных формах искусства, таких как кино, живопись и другие медиа. Эти философско-религиозные системы, несмотря на свою древность, продолжают оказывать значительное влияние на современную китайскую культуру. Визуальные образы, отражающие буддийские концепции реинкарнации, даосские стремления к бессмертию и конфуцианские ритуалы почтения предков, демонстрируют не только сохранение

основных идей, но и их трансформацию в контексте современных вызовов. Через современные медиапродукты традиционные представления о жизни и смерти приобретают новые смыслы, сохраняя свою религиозную и культурную значимость, при этом адаптируясь к изменяющимся запросам и мировоззрению современного общества.

Тем не менее, данное исследование имеет определённые ограничения, поскольку основное внимание уделено анализу визуальных искусств, тогда как более полное понимание процесса трансформации традиционных идей могло бы быть достигнуто через рассмотрение литературы и религиозных ритуалов. В будущем перспективным направлением исследований может стать междисциплинарный подход, сочетающий различные аспекты китайской культуры. Также важно учитывать глобальный контекст, изучая, как подобные философские идеи о жизни и смерти, распространённые в других культурах, оказывают влияние на китайскую визуальную культуру и, наоборот, как китайские культурные традиции трансформируются в глобальном масштабе.

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ИССЛЕДОВАНИЕ ПАРТИЙНЫХ СИСТЕМ И РАЗВИТИЯ ДЕМОКРАТИИ В СТРАНАХ ЕВРАЗИИ — С ТОЧКИ ЗРЕНИЯ СРАВНИТЕЛЬНОЙ ПОЛИТОЛОГИИ

***Аннотация:** В статье рассматривается эволюция партийных систем в странах Евразии и их влияние на процессы демократизации с точки зрения сравнительной политологии. В работе проводится анализ различий партийных систем в демократических и авторитарных режимах на примере постсоветских государств, таких как Россия, Беларусь, Казахстан, Грузия, Украина и Армения. Автор исследует, как партийные системы в демократических странах поддерживают политическую конкуренцию и развитие демократических институтов, тогда как в авторитарных режимах они служат инструментами легитимации власти и подавления оппозиции. Особое внимание уделяется роли внешних факторов, включая международные организации и геополитические влияния, в развитии партийных систем и демократических процессов в регионе. На основе проведенного анализа предлагаются перспективы для дальнейших исследований политических систем в Евразии.*

***Ключевые слова:** Партийные системы, Демократизация, Авторитарные режимы, Евразия, Политическая конкуренция, Геополитические влияния*

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RESEARCH ON PARTY SYSTEMS AND DEMOCRATIC DEVELOPMENT IN EURASIAN COUNTRIES — A COMPARATIVE POLITICAL PERSPECTIVE

***Abstract:** This article examines the evolution of party systems in Eurasian countries and their impact on democratization processes from a comparative political science perspective. The paper analyzes the differences between party*

systems in democratic and authoritarian regimes, using post-Soviet states such as Russia, Belarus, Kazakhstan, Georgia, Ukraine, and Armenia as case studies. The author explores how party systems in democratic countries support political competition and the development of democratic institutions, while in authoritarian regimes, they serve as tools for legitimizing power and suppressing opposition. Special attention is given to the role of external factors, including international organizations and geopolitical influences, in the development of party systems and democratic processes in the region. Based on the analysis, the paper suggests future research prospects for political systems in Eurasia.

Keywords: *Party systems, Democratization, Authoritarian regimes, Eurasia, Political competition, Geopolitical influences*

Введение

Актуальность исследования партийных систем и их влияния на процессы демократизации в странах Евразии обусловлена уникальной политической ситуацией в этом регионе. Евразия представляет собой пространство, где сосуществуют демократические и авторитарные режимы, что создаёт сложную и многослойную политическую картину.[1] В странах этого региона наблюдаются значительные различия в политических системах: от авторитарных режимов в России, Беларуси и Казахстане до развивающихся демократий, таких как Грузия, Украина и Армения. Эти различия коренятся как в исторических предпосылках, так и в современных политических процессах, что делает анализ партийных систем в данном контексте особенно важным для понимания возможностей и ограничений демократизации в регионе. Вопрос партийных систем приобретает критическую важность, так как именно эти структуры обеспечивают взаимодействие между гражданским обществом и государством, влияя на политическую стабильность и развитие демократических институтов.

Цель исследования заключается в выявлении ключевых особенностей партийных систем в странах Евразии и их роли в процессе демократизации. Компаративный анализ партийных систем позволит выявить наиболее значимые политические структуры, оказывающие влияние на развитие демократии в странах Евразии, что, в свою очередь, даст возможность глубже понять взаимосвязь между типом политического режима и партийной системой. Особое внимание уделяется странам, находящимся на этапе политического перехода или сталкивающимся с вызовами авторитаризма.

Научная новизна работы заключается в её сравнительном подходе к анализу партийных систем евразийских стран, что позволяет более комплексно оценить их роль в демократическом развитии различных политических режимов. В то время как многие исследования

сосредотачивались на анализе отдельных государств или общих политических тенденций региона, данное исследование предлагает систематическое сопоставление партийных систем демократических, авторитарных и гибридных режимов. Такой подход не только позволяет глубже понять особенности партийных систем в разных политических контекстах, но и раскрывает их взаимодействие с внешними факторами, включая геополитические влияния и участие международных организаций.

Методологическая база исследования строится на использовании сравнительного анализа, что даёт возможность всесторонне сопоставить партийные системы и их влияние на процессы демократизации в странах Евразии. Применение исторического подхода позволит проследить эволюцию партийных систем с момента распада СССР до настоящего времени, что важно для понимания исторических корней и траекторий политических изменений.

Историческое развитие партийных систем в странах Евразии

Эволюция партийных систем в постсоветских странах Евразии представляет собой сложный и многослойный процесс, тесно связанный с политическими, экономическими и социальными изменениями, произошедшими после распада СССР. В России, Казахстане и Беларуси партийные системы развивались в условиях перехода от советской однопартийной системы к новым политическим структурам, которые на первых этапах были чрезвычайно нестабильными. В России с 1990-х годов сформировалась многопартийная система, которая на фоне политической трансформации и экономических трудностей переживала периоды кризисов и роста.[2] Со временем, однако, российская партийная система начала централизоваться вокруг одной доминирующей партии — «Единой России», которая стала основным инструментом укрепления власти. В Казахстане и Беларуси эволюция партийных систем пошла по пути более жёсткого авторитаризма, где доминирующие партии стали олицетворением правящих элит, фактически исключая возможность возникновения реальной оппозиции. Таким образом, партийные системы этих стран развивались в условиях постепенного усиления исполнительной власти и ослабления демократических институтов.

На развитие партийных систем в странах Евразии значительное влияние оказали историко-политические факторы, связанные с распадом СССР, постколониальными процессами и установлением авторитарных режимов. После распада Советского Союза многие постсоветские государства столкнулись с вызовами, связанными с политической неопределённостью и экономическим кризисом, что создало благоприятные условия для формирования авторитарных режимов. В Казахстане и Беларуси политическая власть быстро сосредоточилась в руках узкой элиты, что привело к формированию политических систем, где партия власти играла ключевую роль в поддержке правящих режимов. В России, хотя

формально сохранялись элементы многопартийной системы, реальная политическая конкуренция была ограничена за счёт институциональных механизмов, поддерживающих доминирование одной партии. В то же время, факторы национального строительства и государственного суверенитета в постсоветский период также оказывали значительное влияние на партийные системы, так как новые государства стремились утвердить свою независимость и политическую идентичность через формирование централизованных структур власти.[3]

Сравнение партийных систем постсоветских стран с политическими системами государств Центральной Азии и Кавказа показывает значительное разнообразие политических режимов и партийных структур в данном регионе. Страны Центральной Азии, такие как Казахстан, Узбекистан и Туркменистан, развивались по пути жёсткой авторитаризации, где политические партии существовали лишь как формальные инструменты поддержки правящих режимов, фактически лишённые политической самостоятельности. В то же время, в странах Кавказа, таких как Грузия и Армения, наблюдаются более гибридные модели партийных систем, где сохраняется некоторая степень политической конкуренции и возможности для демократических преобразований, хотя они также сталкиваются с вызовами, связанными с коррупцией и слабостью институциональных структур. Это различие в эволюции партийных систем в странах Евразии подчёркивает значительное влияние как внутренних, так и внешних факторов на политические процессы в регионе, а также указывает на разнообразие путей, по которым шло развитие партийных систем в постсоветское время.

Партийные системы в контексте демократического развития

Партийные системы в демократических государствах Евразии, таких как Грузия, Украина и Армения, характеризуются относительно высокой степенью политической конкуренции и наличием многопартийной системы, что в значительной мере способствует процессам демократического развития. В этих странах партии играют ключевую роль в организации выборов и обеспечении представительства различных политических и социально-экономических групп населения. В Грузии, например, наблюдается регулярная смена власти через демократические выборы, что демонстрирует устойчивость партийной системы к вызовам политической нестабильности. В Армении после бархатной революции 2018 года усилилась политическая конкуренция, что способствовало росту демократических институтов.[4] Украина, несмотря на внутренние кризисы и внешние конфликты, сохраняет многопартийную систему, которая остаётся основой политической борьбы. Тем не менее, эти страны продолжают сталкиваться с вызовами, связанными с коррупцией, политической фрагментацией и слабостью государственных институтов, что замедляет демократические процессы.

В странах с авторитарными режимами, таких как Россия, Беларусь и Казахстан, партийные системы играют иную роль, направленную на поддержание политической власти действующих режимов. Эти системы характеризуются доминированием одной или нескольких партий, которые служат инструментами легитимации власти и фактически исключают возможность реальной политической конкуренции. В России, например, партия «Единая Россия» играет ведущую роль в политической системе, контролируя законодательную власть и обеспечивая устойчивость режима. В Беларуси и Казахстане политические партии выполняют преимущественно декоративную функцию, создавая видимость плюрализма, в то время как реальные механизмы власти сосредоточены в руках узкого круга политических элит. Главной проблемой в этих странах остаётся отсутствие эффективных институтов политической оппозиции, а также подавление гражданских свобод, что препятствует развитию подлинно демократических процессов. В результате, даже при наличии формально демократических процедур, таких как выборы, партийные системы этих стран не способствуют демократизации.

Влияние партийных систем на политическую стабильность и демократические процессы в странах Евразии существенно варьируется в зависимости от политического режима. В демократических странах многопартийные системы, несмотря на свои недостатки, обеспечивают механизм смены власти, который способствует политической стабильности и укреплению демократических институтов. В авторитарных же режимах партийные системы, как правило, способствуют поддержанию политической стабильности на основе концентрации власти в руках правящей элиты, но делают это за счёт ослабления демократических институтов и подавления политической оппозиции. В конечном счёте, успех демократизации и политическая стабильность в странах Евразии во многом зависят от способности партийных систем адаптироваться к внутренним и внешним вызовам, обеспечивая политическую конкуренцию, подотчётность власти и участие граждан в политической жизни.

Сравнительный анализ партийных систем в Евразии

Сравнительный анализ партийных систем в странах Евразии демонстрирует значительные различия в их функционировании в зависимости от типа политического режима. В демократических государствах, таких как Грузия, Украина и Армения, партийные системы обладают высоким уровнем политической конкуренции и плюрализма, что способствует развитию демократических процессов. Эти системы предоставляют платформы для разнообразных политических сил, включая оппозиционные движения, что поддерживает возможность смены власти через выборы и обеспечивает политическое участие граждан. В то же время, в авторитарных государствах, таких как Россия, Беларусь и

Казахстан, партийные системы функционируют преимущественно в интересах правящих элит. В этих странах доминируют прокремлёвские или провластные партии, которые фактически контролируют политическую сцену, подавляя оппозицию и ограничивая возможность реальных демократических изменений. Таким образом, партийные системы в авторитарных режимах выполняют роль стабилизаторов режима, но делают это за счёт ослабления политической конкуренции и общественного контроля.

Роль партийных систем в поддержке или подрыве демократических институтов значительно варьируется в зависимости от политического контекста. В демократических странах партийные системы играют ключевую роль в поддержке демократических институтов, таких как свободные и справедливые выборы, независимые средства массовой информации и сильные гражданские общества.[5] Эти системы способствуют развитию подотчётности власти, обеспечивая механизм политической сменяемости и представления интересов граждан. Однако даже в демократических странах, такие как Украина и Грузия, партийные системы сталкиваются с проблемами коррупции, политической фрагментации и слабости институциональных структур, что иногда приводит к политической нестабильности. В авторитарных режимах партийные системы, напротив, зачастую служат инструментом подрыва демократических институтов. Доминирующие партии монополизируют политическую власть, ограничивая доступ оппозиции к ресурсам и институтам, таким как законодательные собрания или судебная система, что способствует консолидации авторитарной власти и ослаблению демократических механизмов.

Влияние внешних факторов, таких как геополитика и международные организации, также играет важную роль в развитии партийных систем и демократических процессов в Евразии. Международные организации, такие как Европейский Союз и ОБСЕ, оказывают значительное давление на страны региона в плане соблюдения демократических стандартов и проведения реформ, направленных на укрепление демократических институтов. Например, в Украине и Грузии влияние западных организаций привело к политическим и избирательным реформам, которые способствовали усилению роли партийных систем в демократическом процессе. С другой стороны, в авторитарных государствах, таких как Россия и Казахстан, партийные системы часто подвержены влиянию геополитических факторов, связанных с интересами других авторитарных режимов, таких как Китай или Иран, а также противостоянием с западными демократическими институтами. В результате внешнее давление со стороны международных организаций может либо способствовать демократическому развитию, либо, наоборот, усиливать

политическую изоляцию и авторитарные тенденции, что в конечном итоге влияет на структуру и функционирование партийных систем в регионе.

Заключение

В ходе проведённого исследования были выявлены ключевые особенности развития партийных систем в странах Евразии и их влияние на процессы демократизации. Анализ показал, что партийные системы в демократических странах региона, таких как Грузия, Украина и Армения, играют значительную роль в поддержке политической конкуренции и демократических институтов. В то же время в авторитарных государствах, таких как Россия, Беларусь и Казахстан, партийные системы служат инструментами укрепления власти правящих элит и препятствуют развитию демократических процессов. В этих странах доминирующие партии, часто контролируемые государством, ограничивают возможности политической оппозиции и гражданского участия, что тормозит процессы демократических реформ. Таким образом, партийные системы в странах Евразии развиваются в зависимости от политического контекста и исторических условий, что обуславливает их неоднородное влияние на демократизацию.

Роль партийных систем в развитии демократии в Евразии остаётся неоднозначной. В демократических режимах они способствуют институционализации политической конкуренции, поддержке гражданского общества и обеспечению механизмов смены власти через выборы. Однако даже в этих странах партийные системы сталкиваются с вызовами, такими как коррупция, фрагментация и влияние внешних факторов, что ограничивает их потенциал. В авторитарных режимах партийные системы, напротив, выполняют функцию поддержания политической стабильности за счёт подавления оппозиции и ограничения гражданских свобод. Это способствует сохранению статус-кво и препятствует демократическим изменениям. Тем не менее, будущее развитие партийных систем в Евразии будет во многом зависеть от внутренних и внешних факторов, включая экономические реформы, давление международных организаций и общественные запросы на политические изменения.

Перспективы дальнейших исследований в области партийных систем и демократизации в Евразии открывают возможности для более глубокого изучения взаимодействия между политическими институтами и режимами. Особое внимание следует уделить изучению гибридных режимов, где сочетаются элементы авторитаризма и демократии, а также роли новых политических движений и внешних акторов, таких как Европейский Союз и Китай, в трансформации партийных систем. Исследование этих аспектов поможет более точно понять траектории демократического развития в постсоветских странах и в евразийском регионе в целом, а также выявить факторы, способствующие успешным политическим реформам и

усилению демократических институтов в условиях нестабильности и внешнего давления.

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СОВРЕМЕННЫЕ ТЕХНОЛОГИИ УПРАВЛЕНИЯ ОРГАНИЗАЦИЕЙ

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ОПТИМИЗАЦИЯ УЧЕТНОЙ ПОЛИТИКИ ДЛЯ ОБЕСПЕЧЕНИЯ ЭКОНОМИЧЕСКОЙ БЕЗОПАСНОСТИ ПРЕДПРИЯТИЙ НЕФТЯНОЙ ПРОМЫШЛЕННОСТИ

Аннотация: Практика финансово-хозяйственной деятельности показывает, что современное предприятие функционирует в условиях значительного количества различного вида угроз. К их числу относятся и экономические угрозы. Одним из способов их нейтрализации является эффективная учетная политика предприятия.

Ключевые слова: экономические угрозы; учетная политика предприятия; экономическая безопасность; нефтеперерабатывающая промышленность.

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OPTIMIZATION OF ACCOUNTING POLICY TO ENSURE ECONOMIC SECURITY OF OIL INDUSTRY ENTERPRISES

Abstract: The practice of financial and economic activity shows that a modern enterprise operates under conditions of a significant number of different types of threats. These include economic threats. One of the ways to neutralize them is an effective accounting policy of the enterprise.

Keywords: economic threats; accounting policy of the enterprise; economic security; oil refining industry.

ВВЕДЕНИЕ

Учетная политика организации в ее хозяйственной деятельности оказывает значительное влияние, поскольку она обеспечивает базу для системы учета, проведения оценки, а также обеспечивает предоставление необходимой финансовой информации.

В учетной политике излагаю конкретные принципы, а также руководящие указания и процедуры в процессе использования которых организация осуществляет подготовку своей финансовой отчетности.

Важность правильно сформированной учетной политики определяется несколькими причинами, среди которых необходимо выделить следующие.

Во-первых, применение учетной политики предполагает последовательность составления отчетности из года в год, а также ее сопоставимость как с отчетностью предприятия за разные периоды, так и с отчетностью других организаций и предприятий.

Во-вторых, правильно сформированная учетная политика соответствует применимым стандартам бухгалтерского учета и другим требованиям законодательства.

В-третьих, учетная политика служит инструментом обеспечения принятия решений и распределения ресурсов:

В-четвертых, учетная политика служит инструментом обеспечения взаимодействия с заинтересованными сторонами через финансовую отчетность – основное средство коммуникации с акционерами, кредиторами, клиентами и поставщиками.

Пятое, четко определённая и последовательно используемая учетная политика организации обеспечивает доверие инвесторов к финансовой отчетности компании.

Шестое, учетная политика является основной для проведения внешнего и внутреннего аудита, а также для обеспечения функционирования внешней системы контроля предприятия.

Мировая нефтяная промышленность представляет собой значительную часть мировой промышленности, включающая в себя различные отрасли, в том числе разведку нефти ее добычи, транспортировку нефти и ее переработка, а также сбыт, как сырой нефти, так и продуктов ее переработки

Добыча сырой нефти осуществляется из различных источников, в том числе из наземных источников нефти: сланцевые формации и нефтеносные пески, и морские нефтяные месторождения. Одними из крупнейших стран производителей нефти являются США, Саудовскую Аравию, Россию и Канаду.

Указанные страны, обладают значительными запасами нефти, которые оцениваются и отслеживаются такими организациями, как Организация стран-экспортеров нефти (ОПЕК) и Международное энергетическое агентство (МЭА). Перечисление стран по объемам запасов нефти показано на рисунке 1.

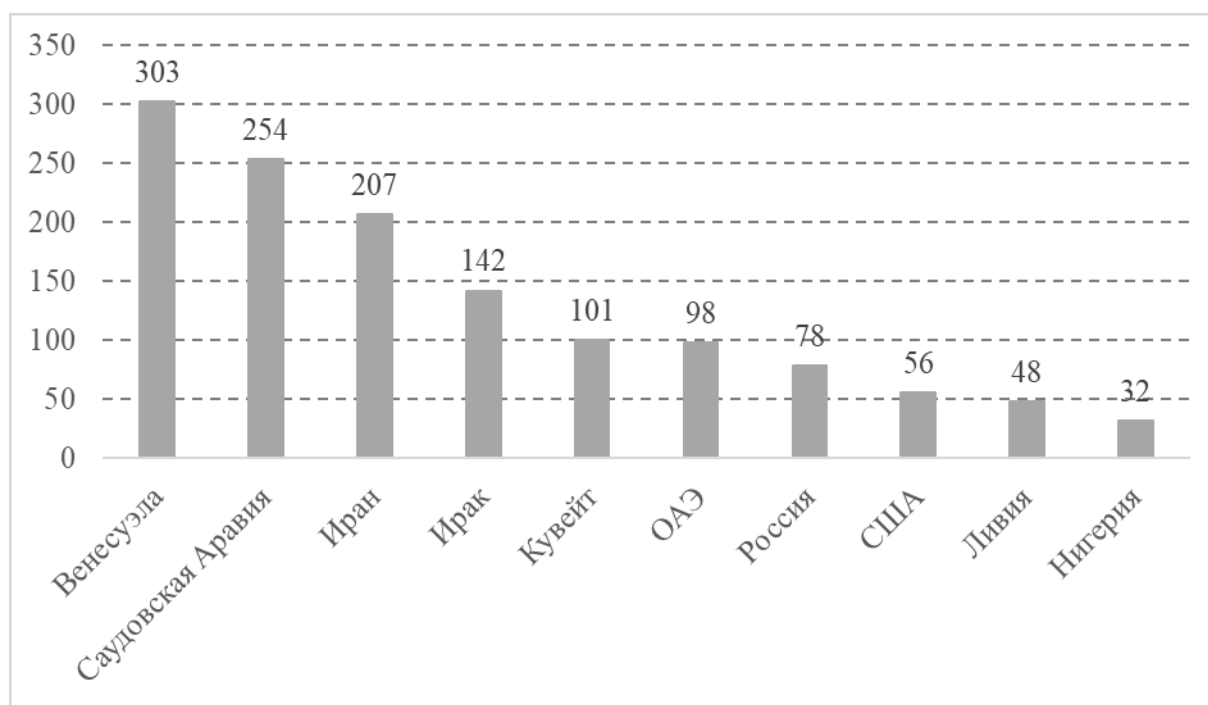


Рисунок 1 –Страны по объемам запасов нефти, млрд. барр.

Несмотря на значительную роль российской нефтяной промышленности в мировой экономике его функционированию угрожают значительные риски что требует совершенствование учетных политик российских предприятий нефтяной промышленности.

МЕТОДЫ И ИССЛЕДОВАНИЯ

В качестве методов исследования в данной работе были использованы теоретические и эмпирические методы. В том числе: абстрагирование, анализ и синтез, наблюдение, сравнение.

РЕЗУЛЬТАТЫ

В процессе анализа учетных политик предприятий, осуществляющих нефтедобычу и нефтепереработку, были выявлены следующие проблемы, связанные с формированием консолидированной отчетности российских предприятий см. рисунок 2.

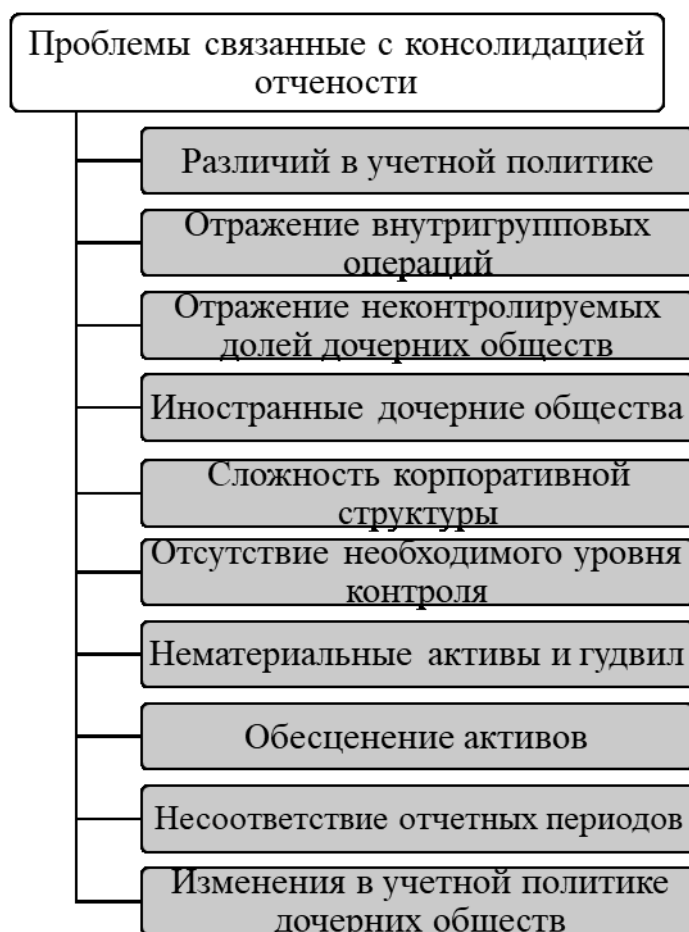


Рисунок 2 – Общие положения РСБУ и МСФО

Решение указанных на рисунке 3 проблем должно происходить в процессе оптимизации, которая должна осуществляться в соответствии со следующим алгоритмом.

На первом этапе должен осуществляться анализ учетной политики головной компании и дочерних обществ. В процессе этого этапа осуществляется оценка текущей учетной политики, а также выявление областей, которые требуют осуществления оптимизации. Далее проводится оценка соответствия действующих учетных политик дочерних обществ актуальным нормативным актам, а также действующим отраслевым стандартам.

Второй этап заключается в определении целей и задач оптимизации учетной политики. Одной из целей оптимизации учетной политики должно стать обеспечение объективности финансовой отчетности, а также снижение налоговых рисков нефтедобывающих и нефтеперерабатывающих компаний и повышение эффективности хозяйственной деятельности.

Третий этап представляет собой исследование альтернативных вариантов учета активов и обязательств. В рамках этого этапа производится изучение возможных вариантов учета, которые разрешены соответствующими нормативными актами и отраслевыми стандартами.

Также в ходе третьего этапа происходит оценку преимуществ и недостатков каждого вариантов учета активов и обязательств.

Четвертый этап заключается в выборе оптимального варианта учета, которые лучшим образом коррелируют с целями оптимизации. Также на этом этапе осуществляется рассмотрение влияния выбранных вариантов на финансовую отчетность и налоговые последствия.

На пятом этапе осуществляется разработка документации по учетной политике, в процессе которого составляются и пересматриваются документации по учетной политике в которой четко излагаются выбранные варианты учета. В процессе разработки документации по учетной политике также осуществляется обеспечение согласованности и прозрачности учетной политики.

На завершающем, шестом этапе осуществляется внедрение и мониторинг разработанной учетной политики. Данный этап посвящен внедрению и мониторингу учетной политики во всех соответствующих подразделениях. После внедрения учетной политики производится ее внедрение во всех соответствующих подразделениях головной компании и в ее дочерних обществах.



Рисунок 3 – Общие положения РСБУ и МСФО

Следует отметить, что оптимизация учетной политики нефтедобывающих и нефтеперерабатывающих предприятий является

сложным процессом, требующим тщательного анализа и профессионального суждения. Регулярный пересмотр и обновление учетной политики имеют решающее значение для обеспечения ее актуальности и эффективности.

ЗАКЛЮЧЕНИЕ

Учетная политика – это конкретные принципы, основы, общепринятые условия, правила и практические подходы, применяемые организацией при подготовке и представлении финансовой отчетности.

К числу проблем учетной политики российских нефтеперерабатывающих компаний следует отнести: различие в учетных политиках, неконтролируемые доли, взаимодействие с иностранными дочерними компаниями, отсутствие контроля, проблемы обесценения, изменений в учетной политике и т. д.

По результатам работы было предложено внедрить типовые учетные политики через утверждение учетных политик на совете директоров головного общества с целью последующего внедрения утвержденной типовой учетной политики в хозяйственную деятельность дочерних обществ.

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