

IMPROVING THE METHODOLOGY OF FUTURE PRIMARY TEACHERS IN USING PEDAGOGICAL PROGRAMS

Muhammadjonova Durdonaxon Bahromjon qizi

Department of Digital Technologies and Artificial Intelligence, Assistant
Teacher of Kokand State University, Uzbekistan,

Abstract. This article highlights the methodology for improving primary school teachers' skills in using pedagogical software. In the age of digitization, the effective use of modern software tools is a crucial factor in enhancing the quality of primary education. The article analyzes the problems encountered in developing teachers' knowledge and skills in the field of pedagogical software, the types of software, and opportunities for their application in the teaching process. Additionally, issues related to the methodologically correct integration of interactive learning platforms, virtual classrooms, and interactive programs in the improvement process are considered. The article proposes innovative approaches, practical training sessions, and ways to enhance curricula aimed at improving the digital competence of primary school teachers.

Keywords: primary education, pedagogical software, digital competence, methodology, improvement, interactive tools, teacher training, educational technologies.

INTRODUCTION

The development of modern information and communication technologies is imposing new demands on the education system. In the process of digital transformation, the importance of primary education is increasing, as it is the initial stage in shaping children's core competencies and preparing them for the future digital world. In the Republic of Uzbekistan, as part of the "Digital Uzbekistan-2030 strategy and the "Youth – Our Future" concept, the digitization of the education sector is being rapidly implemented. Under these circumstances, improving primary school teachers' skills in effectively using pedagogical software has become a pressing pedagogical challenge.

Pedagogical software is a set of software tools designed for organizing the educational process, delivering learning materials, assessing knowledge and skills, and individualizing education. For primary school teachers, the use of pedagogical software must be based not only on technological but also on didactic and psychological principles, as they directly influence the cognitive and psycho-emotional development of the younger generation.

LITERATURE REVIEW AND METHODS

The process of improving primary school teachers' pedagogical software skills requires a series of methodological and methodological approaches. Modern pedagogical research indicates that the development of teachers' digital competence should be considered not only through separate courses but also as a continuous and systematic process [1].

Types of pedagogical software and their role in primary education:

- Learning Management Systems (LMS)
- Interactive electronic textbooks and teaching manuals
- Didactic games and simulation programs
- Diagnostic and monitoring programs
- Virtual and Augmented Reality (VR/AR) technologies
- Artificial intelligence-based personalized learning platforms

According to international research (TPACK model - Mishra and Koehler, 2006), for effective use of pedagogical software, teachers must be able to integrate technological, pedagogical, and content knowledge. This model is particularly important in training primary school teachers, as they are tasked with teaching multiple subjects simultaneously [2].

Research conducted in the context of Uzbekistan indicates that the level of primary school teachers' use of pedagogical software is still insufficient. The following factors contribute to this:

1. Lack of technical equipment
2. Limited availability of specialized software

3. Teachers' psychological barriers towards digital technologies
4. Insufficient methodological manuals
5. Low effectiveness of the continuous professional development system [3]

MAIN DIRECTIONS OF THE IMPROVEMENT METHODOLOGY

1. Stage-by-Stage Improvement Model. A phased model is proposed for improving primary school teachers' pedagogical software skills:

First Stage - Basic Digital Skills:

- Basics of using computers and mobile devices
- Using office software and internet resources
- Working with simple interactive programs

Second Stage - Specialized Programs:

- Educational programs designed for primary school
- Working with interactive whiteboards and learning platforms
- Basics of creating multimedia materials

Third Stage - Integrated Approaches:

- Integrating pedagogical software with traditional teaching methods
- Using pedagogical software in individualized and differentiated learning
- Systems for evaluating and analyzing results

2. Interactive Teaching Methods. The following interactive methods are considered effective in the pedagogical software improvement process:

Master Classes and Practical Training: Demonstration lessons conducted by experienced methodologists to develop pedagogical software usage skills in real classroom settings.

Quizzes and Competitions: Competitions aimed at determining and encouraging the level of knowledge about pedagogical software tools.

Project Work: Teachers creating specialized teaching materials for their own classes, testing them in practice, and evaluating the results.

Simulation Games: Strengthening pedagogical software usage skills by modeling various pedagogical situations in a virtual classroom environment.

3. Electronic Educational Resources and Platforms. The following electronic resources are recommended for improving primary school teachers' skills:

Specialized Learning Platforms: MOOC (Massive Open Online Courses), video lessons, and interactive exercises designed for primary school teachers.

Methodological Portals: Specialized websites that allow teachers to exchange experiences, evaluate, and recommend new software products.

Mobile Applications: A collection of educational applications designed for primary school, enabling teachers to make effective use of their time on the go[4].

RESULTS AND DISCUSSION

The process of improving primary school teachers' pedagogical software skills is complex and multifaceted. It should not be limited to teaching only technical skills. The main focus should be directed toward pedagogical effectiveness. Basic Principles of Improvement:

1. Continuity and Systematicity: Professional development should not be a one-time event but a continuous process.

2. Practical Orientation: All skills being taught must be immediately applicable in classroom practice.

3. Individual Approach: A differentiated approach that considers each teacher's initial level of preparation.

4. Reflection and Self-Assessment: Developing teachers' skills in analyzing their own activities and assessing the effectiveness of pedagogical software use.

Challenges and Ways to Overcome Them:

1. Technical Limitations: Equipping schools with modern technology and expanding opportunities for using cloud technologies and mobile applications.

2. Insufficient Methodological Support: Creating a network of methodological centers at each district and school level and staffing them with specialists in digital skills.

3. Motivational Issues: Implementing a system of incentives for teachers who effectively use pedagogical software, including raising their salaries and career opportunities.

4. Lack of Localization of Software: Developing and adapting local pedagogical software that takes into account national cultural and linguistic characteristics.

CONCLUSION

Improving primary school teachers' pedagogical software skills is not only a technological but also a systematic pedagogical process that significantly enhances the quality of primary education. The improvement methodology should aim to develop teachers' digital competence, prepare them for active work with modern educational technologies, and ultimately serve the comprehensive development of the younger generation [5].

In the future, it is advisable to conduct research in the following areas:

- Methodology for using artificial intelligence-based personalized learning systems in primary school settings.
- Integration of Virtual and Augmented Reality technologies in primary education.
- Development of systems for assessing and monitoring teachers' digital competence.

Primary school teachers' effective use of pedagogical software not only enhances their professional skills but also positively impacts the digital transformation of the entire education system.

REFERENCES:

1. Niyozova G.K. Pedagogical Software in a Digital Educational Environment. Tashkent: O'qituvchi, 2020.
2. Yuldashev Sh.T. Modern Educational Technologies and Their Application. Tashkent: Fan va Texnologiya, 2019.

3. Azizxodjayeva N.N. Innovative Approaches in Primary Education. Tashkent: O'zbekiston, 2021.
4. Mishra, P., & Koehler, M. J. (2006). Technological Pedagogical Content Knowledge: A framework for teacher knowledge. Teachers College Record.
5. Xolmuhamedova M. Professional Competence of a Primary School Teacher. Tashkent: Mumtoz So'z, 2022.