TECHNOLOGIES FOR DEVELOPING STUDENTS' TECHNICAL THINKING IN THE TEACHING OF SPECIAL SUBJECTS

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Annotation: This article discusses the technology of developing students' technical thinking and abilities in the teaching of special subjects in technological education.

Keywords: Technology, thinking, professional, ability, idea, problem, experiment.

The achievement of state independence of the Republic of Uzbekistan and the choice of a specific path of economic and social development necessitated the reorganization of the structure and content of training. The introduction of the Law on Education required the development and implementation of new curricula, programs, textbooks and modern didactic support. In this regard, in the "National Training Program" the reform of the educational process, the content of which is based mainly on a set of normative documents (state educational standards, curricula and programs), training and education of personnel national independence Continuing education is the basis of the system of personnel training and a priority area that ensures the social development of the Republic of Uzbekistan, meeting the economic, social, scientific, technical and cultural needs of the individual, society and the state. . Continuity of education means that a person has the opportunity to be educated from birth to the end of his life. Such a system is reflected in the Law of the Republic of Uzbekistan "On Education".

The results of research work of a number of scholars of modern theory of technological education on pedagogical activity can also be used in the study of the activities of a teacher of technological education, but here a number of problems

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arise. These features are multifaceted and specific to different aspects of the activity, but they can be conditionally divided into three major groups, each of which reflects the uniqueness of a particular aspect. A teacher of technological education differs radically from the special knowledge of a subject teacher with a set of general and field technical and technological knowledge and skills in its structure, structure and form of presentation. Only technological education only their teachers ensure that such people grow up to be creative in finding their place in personal and social life in professional activities. In some studies, the typical types of activities of a teacher of technological education and their corresponding functions are as follows: educational, pedagogical, developmental, methodological (methodological), production-technical, organizational, diagnostic, etc., while in others: Organizers are divided into scientific, educational, organizational-managerial, production-technological, research. Among the characteristics of the professional thinking of teachers of technological education, there are specific aspects, which are currently determined by the fact that the effectiveness of the field and socio-pedagogical thinking has not been fully explored.

A well-established research methodology for university students will play an important role in training future technology teachers to become experts in their field. This research methodology has two aspects that prepare future technology teachers for professional pedagogical activities.

The first aspect is the identification of theoretical and practical problems of qualification in the teaching material, followed by the teacher's coverage of the application of the laws of natural (physics, chemistry, biology, etc.), general technical and technological education to techniques and technologies and assumed to be mastered by students.

The second aspect is the formation and development of research skills in general secondary schools that effectively use students 'knowledge of problem solving. In particular, the analysis of the bachelor's degree program in technological education revealed that there are many opportunities to link it with modern production in the field of technical-technological and organizational-

economic research. But to make these connections, it requires a scientific, didactic and thoughtful approach. Only through the study of natural, general technical and technological education, its practical issues through research, students will be able to deeply connect their professional knowledge with future pedagogical activities. Because the laws of these sciences underlie the principles of technological processes and techniques. Therefore, the development of research skills in the educational process is an important tool for future technology teachers to understand the principles of technological processes and technical work on a scientific basis. This represents the interdisciplinary nature of polytechnic knowledge. Only then will scientific research fulfill its real mission, helping future technology teachers to master the general scientific foundations of production.

Research skills play an important role in preparing future technology teachers for their careers. These include theoretical study, observation, problem solving, hypothesis, hypothesis planning, experimentation, experimental results, comparison of experimental results with hypotheses, theoretical analysis and generalization, practical application. scanning skills. Some of this is formed through the study of the basics of science, some through practice, and some through research.

In the work of future technology teachers, it is desirable that the task of research to put the problem in the first place, because it reflects the purpose of the work to be done and the need for it. In technical creativity, the research task is the basis for engaging students in research activities, so it is a necessary tool for developing research skills and accelerating creativity. The above requires a more detailed description of the nature and structure of the development of research skills in solving creative problems. The development of research skills means teaching students to use scientific methods related to the performance of research tasks in solving problems of scientific and technological creativity.

In view of the above, the following procedures for the implementation of the tasks described in the research description for the areas of technological education are expedient and include the stages of its implementation:

1. Assignment (clarifies the purpose of the work);

2. Ask a question (required to answer questions such as "What was wrong? Why? What should I do?");

3. Substantiate the hypothesis of the proposed idea. Conducting experiments to test it;

4. Discuss the proposed options and select the most appropriate, develop a scheme;

5. Preparation of an experimental device (model);

6. Device testing and research;

7. Development of the drawing and preparation of the experimental sample with elimination of shortcomings;

8. Test, improve and put into practice;

9. Preparation and execution of technical documentation.

In this case, it is important that students pay special attention to the fact that the process of developing a research assignment has a practical description of the entire professional field.

Of course, this creates a problem for the student, and they can occur for the following reasons:

1. Insufficient initial knowledge of the student;

2. The solution to the problem is more difficult for the student.

These challenges can be addressed through targeted additional training, counseling, and analysis of other aids. In this case, the following help from the teacher is needed. Help to find a solution.

There are two ways to do this:

- The teacher shows the solution;

- The teacher guides you to find a solution. This method can be roughly expressed in the following scheme.

Ways to help find a solution:

1) Help them understand the purpose of the solution,

2) Allow the student to review the solution they think is right,

3) Teach students to choose the right methods of analysis and solution.

Performance and implementation support.

In this case, the teacher should teach the main purpose and task of the research solution, to analyze all the situations, to determine the relevance, to generalize, as well as to determine the causes, it is advisable to implement this method according to the following scheme.

Ways to help make it happen:

1) Leading to implementation (transition to practical work),

2) Enforcement (avoidance of hesitation, instruction and control),

3) Error correction management (learning to identify the cause and fix it)

In short, the preparation of future teachers for professional creative work in the field of technical creativity requires a scientific approach to its technological management, knowing the objective laws of the creative process.

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