BO'LAJAK TEXNOLOGIYA O'QITUVCHILARING TEXNIK VA TEXNOLOGIK KOMPETENTSIYASINI SHAKLLANTIRISH METODIKASI

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Annotatsiya: Mazkur maqolada bo'lajak texnologik ta'lim o'qituvchilarining texnik-texnologik kompetentsiyani shakllantirishga alohida yondashishni talab qiluvchi asosiy vazifalar haqida ma`lumot berilgan. Texnik va texnologik kompetentsiyani rivojlantirish bo'yicha taklif etilayotgan metodologiya ko'p qirrali bo'lib, bo'lajak texnologiya o'qituvchilarini har tomonlama rivojlantirishga qaratilgan, ularga zamonaviy o'quv jarayonining vazifalarini muvaffaqiyatli hal qilish imkonini beradi.

Kalit so'zlar: texnik va texnologik kompetenciyalar, raqamli texnologiya, keys metodi, integrasiya, pedagogik texnologiya, tendentsiya, ob'ektiv, moddiy-texnik ta'minlash, axborot – kommunikatsiya texnologiyalari.

МЕТОДИКА ФОРМИРОВАНИЯ ТЕХНИКО-ТЕХНОЛОГИЧЕСКОЙ КОМПЕТТЕНТНОСТИ БУДУЩИХ УЧИТЕЛЕЙ ТЕХНОЛОГИИ

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Аннотация: В данной статье представлена информация об основных задачах будущих педагогов технологического образования, требующих особого подхода к формированию технико-технологической компетенции. Предлагаемая методика развития технико-технологической компетентности многогранна и направлена на всестороннее развитие будущих учителей технологии, позволяя им успешно решать задачи современного образовательного процесса.

Ключевые слова: технические и технологические компетенции, цифровые технологии, кейс-метод, интеграция, педагогическая технология, тренд, объективность, материально-техническое обеспечение, информационные и коммуникационные технологии.

METHODOLOGY FOR THE FORMATION OF TECHNICAL AND TECHNOLOGICAL COMPETENCE OF FUTURE TECHNOLOGY TEACHERS

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Abstract: this article provides information about the main tasks of future teachers of technological education that require a special approach to the formation of technical and technological competence. The proposed methodology for the development of technical and technological competence is multifaceted and aimed at the comprehensive development of future technology teachers, allowing them to successfully solve the tasks of the modern educational process.

Key words. technical and technological competencies, digital technologies, case method, integration, pedagogical technology, trend, objectivity, logistics, information and communication technologies.

Introduction. The main goal of modern education is to prepare a person who is fully developed for society and the state, socially adaptable to society and work, and who can work on himself. Therefore, the level of competence of pedagogues is important in education of a comprehensively developed personality. In the science of pedagogy, the concept of psychological-pedagogical competence means the pedagogue's achievement of the highest level of results in the educational process, high professional potential, as well as communication and positive qualities. The meaning of the word «competence» is determined by having awareness, reputation, comprehensive understanding and experience in one's field. Competence is a personal quality, and it is the ability, knowledge, skills and competence expressed in pedagogical activity and social life in different situations [1].

A literature review. Competent approach in pedagogy is not a completely new phenomenon, but its tributaries existed in continuously developing educational processes and were formed step by step. Specific problems of teacher's professional competence development V.A. Adolfa, Yu.V. Vardanyan, S.M. Godnik, N.N. Lobanova, L.A. Orlova, E.M. Pavlyutenkova, V.G. Podzolkova, N.E. Shchurkova was reflected in the research of N. V. Kuzmina, A. K. Markova, E. F. Zeer, V. A. Slastenin, M. Ochilov, U. Makhkamov, S. Ochilov, O. Musurmonova, N. A. Muslimov and others. The issues of the specialist's professional competence are considered in the works of modern foreign scientists (G. Moskovit, R. L. Oxford, R. S. Scarcella, G. Julius).

Research methodology. In the modern educational space, attention is paid to a practical approach to learning, especially in the field of training technical specialists. Training future technology teachers in the conditions of undergraduate education is one of the main tasks that requires a special approach to the formation of technical and technological competence. This is related to the need not only to provide students with current knowledge and skills, but also to ensure the ability to apply the acquired skills in real educational practice.

It is difficult to overestimate the importance of technical and technological competence for future technology teachers. It represents a set of knowledge, skills, and abilities that enable the effective implementation of the educational process and are focused on the practical application of technological innovations and technical achievements.

In today's rapidly developing environment, where technologies are updated every day, the teacher's ability not only to observe these changes, but also to foresee them, is becoming a decisive factor for the success of the educational process.

Technological competence is not only the mastery of certain technologies or techniques, but also the ability to understand how they work, the ability to critically evaluate and integrate new technologies into the educational process, and the ability to teach and motivate students to actively apply technological knowledge in real life. This complex of knowledge and skills requires from the future technology teacher not only deep theoretical knowledge, but also highly developed practical skills, as well as constant self-improvement and professional development.

The methodology for developing technical and technological competence presented in this work is based on an integrated approach, which includes the following main elements: theoretical training, practical work, project activities and reflection. Such an approach allows not only to provide students with the necessary knowledge and develop skills, but also to contribute to the formation of professional identity and independence in the educational process.

Theoretical training is aimed at forming deep knowledge of students in the field of technology and engineering, understanding their historical development, current

situation and prospects. This creates a necessary basis for later application of knowledge in practical activities [3].

Practical work includes students' implementation of theoretical knowledge in real conditions, development and implementation of their own projects, and the use of modern technological tools and methods. This allows students to acquire the necessary skills in practice, as well as to form a creative approach to solving professional problems [4].

Thus, the proposed methodology for the development of technical and technological competence is multifaceted, aimed at the comprehensive development of future technology teachers, allowing them to successfully solve the tasks of the modern educational process.

Analysis and results. An important aspect of training future technology teachers is the introduction of innovative methods and technologies into the educational process. This is related not only to the rapid development of technical sciences and the need to train specialists who can adapt to the changing conditions of professional activity, but also to new educational standards that require the integration of digital technologies into the educational process. Thus, the introduction of innovative methods of teaching becomes the main element of the formation of technical and technological competence of future technology teachers.

The process of forming technical and technological competence in future technology teachers requires a careful approach to the selection of teaching methods and principles. Based on the analysis of modern educational trends and the needs of the professional environment, a methodology was developed that includes the following main stages:

1. Diagnostics of the level of initial competence - at the first stage, the level of current knowledge, skills and qualifications of students in technical and technological sciences is assessed. This allows to adapt the educational process to the individual characteristics of students and determine the directions of further development.

2. Theoretical training using active methods - at this stage, students are given the theoretical foundations of the main aspects of technical and technological science. The use of active learning methods, such as the case method, discussions, and brainstorming, allows for a deep understanding of the material and the development of critical thinking.

3. Practical work using modern technologies - special attention is paid to the practical application of the knowledge gained at this stage. Students work on real-life projects using modern technological tools and methods. It not only helps to strengthen theoretical knowledge, but also develops practical skills.

4. Reflection and self-assessment - after completing practical tasks, students analyze their work, identify successful solutions and points that require improvement. Reflection helps to develop the ability of self-analysis and self-improvement, which is an important skill for a future teacher.

5. Integration and systematization of knowledge - at the final stage, students integrate and systematize acquired knowledge and skills, applying them to solve complex interdisciplinary problems. This stage allows for the formation of a holistic vision of professional activity and develops the ability to think innovatively.

This methodology implies a close connection between theory and practice and is aimed at students' active use of modern technological resources. Such an approach not only helps to study the material in depth, but also develops the skills necessary for successful professional activity in the students in the future.

The main principle of the implementation of the methodology is an individual approach to each student, which allows taking into account his personal interests, level

of preparation and inclination. This is achieved due to the flexibility of the educational process and the ability to adapt educational materials and assignments to a specific student [5].

The introduction of this methodology into the educational process requires teachers not only to have in-depth knowledge of technical and technological sciences, but also to master modern pedagogical technologies and teaching methods.

In addition, in the educational process, it is important to pay attention to the formation of the readiness of future teachers for continuous education and self-improvement, which is the main condition for successful professional activity in the conditions of rapidly changing technologies. This implies not only the acquisition of special technical knowledge, but also the development of the skills of independent search, analysis and application of new information, as well as adaptation to new technological trends.

The development of methodological recommendations for teachers of technological education focused on the use of modern technological solutions in the educational process is becoming an important part of research. The inclusion of modules on the basics of programming, working with digital equipment and using computer modeling in the curriculum will allow future specialists to apply the acquired knowledge more effectively in school practice.

Thus, the integration of technical and technological sciences into the undergraduate education process requires a comprehensive approach, including the development of adequate teaching methods, adaptation of educational programs to modern requirements, and the use of innovative technologies to increase the quality and efficiency of the educational process.

From the perspective of evaluating the effectiveness of teaching methods aimed at forming the technical and technological competence of future technological education teachers, the criteria and indicators that can adequately reflect the level of professional training of students, as well as the objectivity and reliability of the obtained results It is important to determine the methods and assessment tools that provide [6].

Various methods can be used to assess technical and technological competence, including testing, student portfolio analysis, design and research performance evaluation, as well as the use of modern digital tools that allow monitoring the learning process and student activity, and the results in real time. In addition, peer review methods can be used in the evaluation process, including external and peer review of work, which helps to increase the objectivity of evaluation and develop a professional community.

It is necessary to pay attention to the importance of cooperation between educational institutions and production enterprises in the conditions of development of technical and technological competence of future teachers of technological education. This partnership is important in ensuring the relevance of educational programs and providing students with the opportunity to acquire practical skills that meet the demands of today's labor market.

One of the main goals of such cooperation is the development of joint educational programs that include practical and practical training of students in production, the participation of industry experts in the implementation of educational courses and projects, as well as the use of modern techniques and technologies are to ensure use. Such an approach allows students not only to gain a deeper understanding of the practical application of theoretical knowledge, but also to develop the skills necessary for successful professional activity.

The exchange of knowledge and experience between academic circles and industry representatives, which helps to update and improve educational programs, adapt them to the changing requirements of the labor market and technological development, is also

an important direction of cooperation. Enterprises, in turn, have qualified specialists and are able to influence the process of training future employees, which is an important factor in their competitiveness and innovative development [7].

Establishing joint educational and scientific centers, organizing professional forums and conferences, as well as mechanisms for financial and material-technical support of educational institutions for effective cooperation between educational institutions and production enterprises.A number of activities, projects and initiatives are proposed, such as development.

However, despite the obvious advantages of such cooperation, there are a number of obstacles, including differences in the goals and objectives of educational institutions and production enterprises, administrative and bureaucratic obstacles, as well as a lack of funds and resources for the implementation of cooperation. Overcoming these barriers requires proactive work by all stakeholders, including the development of effective communication mechanisms, simplification of administrative procedures, and incentives to invest in educational initiatives.

Conclusions and suggestions. Thus, cooperation between educational institutions and production will develop the technical-technological competence of future teachers of technological education, ensure the relevance and practical orientation of educational programs of the modern technological world, students' plays an important role in forming professional skills and preparing them for a successful profession.

In conclusion, it opens new perspectives in improving the quality of training of future teachers of technological education, which contributes to the integration of advanced world experience and standards in the field of technical and technological education. This not only enriches the learning process, but also helps students develop global thinking, intercultural competence, and readiness to work in international teams.

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