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PRACTICAL SIGNIFICANCE OF PEDAGOGICAL APPROACHES IN THE PROCESS OF PRACTICAL TRAINING IN MODERN EDUCATION

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Abstract: This article discusses specific areas for improving the quality of education and organizing pedagogical processes using innovative technologies, developing students' analytical thinking and problem-solving skills through the study of problem situations, improving the quality of lessons and strengthening interactive communication between teachers and students, the place of active learning technologies, problem-based learning, and individualized approaches in the education system, and the importance of modernizing laboratory exercises and bringing them into line with international standards.

Keywords: problem situations, educational technologies, opportunities, information environment, modernization, individualized, interactive, educational environment, modern education system, regulatory and legal, optimization, software, digital technologies, innovative solutions, e-learning platforms.

In the modern education system, active learning technologies, problem-based learning, and individualized approaches play a key role. These approaches help to adapt the educational process to the needs and abilities of students. At the same time, the use of didactic and methodological guides by teachers is a key factor in increasing the effectiveness of the educational process.

An information learning environment has become an integral part of the modern education system. This environment not only increases the effectiveness of the educational process, but also serves to develop students' creative thinking. The widespread introduction of information and communication technologies (ICT), electronic learning platforms, and interactive teaching materials allow students to independently deepen their knowledge. For example, the tasks set out in the Law of the Republic of Uzbekistan "On Education" and the "Digital Uzbekistan – 2030" strategy [1] reveal the importance of digitizing the educational process.

Legal framework: Legal frameworks are essential for implementing modern pedagogical approaches. The Law "On Education" adopted in 2019 and the "Digital Uzbekistan – 2030" strategy approved in 2020 [2] are aimed at supporting the development of pedagogical technologies. These documents set clear directions for improving the quality of education and organizing pedagogical processes using innovative technologies.

Pedagogical approaches: To ensure the effectiveness of the pedagogical process, it is recommended to use the following modern approaches:

Active learning technologies: Active learning technologies serve to increase student participation in the lesson process and develop their independent thinking skills. With the help of these technologies, students not only master knowledge, but also have the opportunity to apply it in practice. [3]

Problem-based learning: By studying problem situations, students develop analytical thinking and problem-solving skills. This approach stimulates creative thinking and makes the learning process interesting. [4]

Individualized learning: Organizing the educational process in accordance with the needs and abilities of each student helps to more easily master educational materials.

Problems: There are the following problems in the implementation of an information learning environment and modern pedagogical approaches:
Technological limitations: Many educational institutions are still not fully equipped with modern technologies.
Lack of teacher training: Many teachers lack the knowledge and skills to effectively use ICT.
Insufficient monitoring and evaluation: Modern methods for analyzing teaching processes and evaluating results are not sufficiently used. The following measures are necessary to address the above problems:
Modernization of technologies: Equipping educational institutions with modern technical means and establishing their effective use. [5]
Professional development of teachers: Improving the skills of teachers through the organization of special training programs and seminars [6].
Introduction of innovative assessment methods: Using modern technologies and methods for qualitative assessment of students' knowledge [7].
Modern pedagogical approaches create broad opportunities for the effective organization of the educational process and the development of students' creative potential. For this, the legal framework supported by the state [8], the use of modern technologies [9] and the development of teacher training [10] are of priority.
Scientific research on the introduction of modern information and communication technologies into the education system in our republic has been carried out by a number of researchers. In particular, the theoretical foundations of the development and use of means of informatization of the educational process were studied by such scientists as U.Sh. Begimkulov, R. Hamdamov, N.I. Taylakov. At the same time, methodological issues of the use of computer technologies in education were studied by such specialists as A. Abdukodirov, M. Aripov.
Research on the integration of pedagogical and information technologies into education is widely covered in the works of scientists such as A.A. Abdukodirov, A.Kh. Abdullayev, M. Aripov, Sh.S. Akhrarov, B. Begalov, U. Begimkulov, A.R. Marahimov, M. Lutfullayev, N.I. Taylakov, S.S. Gulyomov, R.H. Hamdamov, U. Yuldashev. These studies provide a detailed analysis of the methodological foundations and pedagogical significance of introducing modern technologies into the educational process.
The scientific research conducted by these scientists sheds light on the current issues of increasing the efficiency of the informatization process of education, the use of innovative technologies in the educational process, and the digitalization of education. Such scientific research has made an invaluable contribution to improving the quality and efficiency of education, the formation of modern pedagogical approaches, and the improvement of the educational process. Research on this issue, in turn, creates an important theoretical and practical basis for the widespread use of information and communication technologies in educational institutions and the organization of modern educational processes.
In the countries of the Commonwealth of Independent States, the issues of improving the mechanisms for using modern multimedia educational systems have been studied in depth by a number of scientists. In particular, the issues of preparing for the effective use of information and communication technologies in professional and pedagogical activities were considered by V. Aleynikov, V. Gritsenko, I. Maruseva, S. Udalov. Scientific research on improving the mechanisms of using multimedia educational systems was analyzed by M. Abdurazzokov, A. Gein, G. Grigoryev, V. Krucheynik, V. Markov, N. Jang-Yushkov, A. Sheremet. These studies formed the theoretical and practical foundations for the effective use of multimedia technologies in the educational process.

Also, the issues of readiness to use multimedia systems were covered by the works of such specialists as T. Boronenko, I. Gotskaya, D. Karakozov, V. Matrosov, M. Shvetsky. These studies describe the process of adapting pedagogical personnel to innovative technologies and the directions of developing knowledge and skills in using multimedia.

The problems of professional training of teachers of information technology were studied by G. Abdulgalimov, T. Batirva, D. Karakozov, A. Nebaba, and these studies are aimed at forming a culture of using information technologies in pedagogical personnel and instilling in them the necessary skills to master innovative educational tools. These scientific works reflect approaches aimed at improving the quality and efficiency of the educational process as a result of the introduction of information and communication technologies into the educational process. These studies are of great importance in the development of the modern education system and serve to bring the process of informatization of education to a new level. In foreign countries, scientists such as A. Brown, R. Walraven, B. Raust, F. Vendkefer, P. Mitchell have conducted extensive research on the importance of using information technologies in education and the foundations of their effective use. These studies have studied in detail the scientific and methodological approaches to strengthening the role of information technologies in modern education and integrating them into teaching processes. Within the framework of these works, the issues of updating the methodology of teaching information technologies in higher educational institutions, preparing for the use of information and communication technologies in professional and pedagogical activities have been thoroughly studied. Also, approaches aimed at developing the professional skills of teachers teaching computer science and ways to use effective methods to improve the quality of education have been proposed.

These scientific works emphasize that the use of information technologies not only improves the quality of education, but also increases the interactivity and innovation of the educational process. At the same time, theoretical foundations and practical guidelines for the use of innovative approaches in the application of information and communication technologies in pedagogical activities have been developed.

These studies have become important in adapting the educational process to modern requirements and serve as the main source for developing new technological approaches to teaching. This serves to bring the process of training teachers and improving their qualifications to a qualitatively new level.

The current level of development of science, technology and technological progress has created the need for the widespread introduction of modern pedagogical and information technologies in the educational process of higher educational institutions in the technical direction. At the same time, it is required to quickly implement the latest innovations in the field of science and technology into the content of curricula and textbooks. This will allow students to master many fundamental concepts more easily, conveniently and effectively. In this regard, it is important to develop methodological guidelines and manuals for organizing laboratory exercises and practical classes in higher education institutions. By introducing them into the educational process, students' theoretical knowledge is strengthened with practical skills.

The concept of methodological guidelines: A methodological guideline is a methodological material that clearly and in detail describes the procedure for completing coursework, laboratory and practical classes in accordance with the curriculum in a particular subject. This guideline is aimed at forming the necessary practical skills in the subject studied by students and is published in small editions based on the recommendations of the scientific and pedagogical councils of higher education institutions.

The concept of methodological guidelines: A methodological guideline is intended for professors and teachers, and provides detailed recommendations on the purpose of a lesson, lesson

organization tools and methods of using them, lesson content, practical exercises and additional tasks. Such manuals are one of the important factors in increasing the effectiveness of the educational process. These materials are tools that serve to organize the educational process in an innovative and effective way, with the help of which students' learning activity and independent work skills are significantly developed. In higher education institutions, great attention is paid to directing students to independent learning activities, forming skills for independent mastery of knowledge and their application in practice. This requires the selection of methods and technologies used in the educational process in such a way that they not only encourage students to master ready-made knowledge, but also serve to develop the skills of independently searching for knowledge from various sources, forming their own point of view, substantiating it, and applying the acquired knowledge in the assimilation of new knowledge.

This approach allows students to improve their creative and critical thinking skills, develop responsibility and self-control skills. At the same time, this process is also important in increasing their learning activity and developing independent research activities.

Today's modern educational technologies require the widespread introduction of interactive methods that guide students to independent learning, including project-based learning, case studies, problem-solving methods and other innovative approaches. These methods support students in expressing, justifying, discussing their thoughts and developing creative solutions.

The following scientists were involved in the creation of educational manuals and textbooks on information technologies for certain stages of the continuing education system: A.A. Abdqudodirov, M. Aripov, A.B. Ahmadov, B.A. Begalov, B. Boltaev, R. Boqiev, N.I. Taylakov, A. Sattorov, T.Kh. Kholmatov, U.A. Nazarov, U.Yu. Yuldashev, S.S. Gulomav and others. If we turn to the classification of educational literature created for laboratory and practical training in information technologies in Russia, the textbook “Practical course on computer technologies” by N.V. Makarova, E.I. Kultyshev, A.G. Stepanov and V.L. Shirokov provides complete information about Microsoft Windows 95 (98), Word 97, Excel 97, Access 97, PowerPoint 97 programs and the basics of working on the Internet. It describes in detail the formulation of each problem, the step-by-step sequence of execution and technologies.

V.P. The textbook “New Information Technologies” prepared under the editorship of Dyakonov provides extensive information on the basics of computer science, from supercomputers to pocket computers, basic and additional components of audio and video devices, wired and wireless networks.

The textbook “Programming Olympiad Questions” by Steven S. Skiena and Miguel A. Revilla provides a wide range of questions for laboratory and practical exercises designed to prepare students for international programming Olympiads. The textbook “Information Systems” by Yu.S. Izbachkov and V.N. Petrov provides detailed information on database design and creation, modern programming technologies - COM, ActiveX, and Internet technologies.

The textbook “Computer Practice from Informatics: Office Technologies” by G.V. Kalabukhova and V.M. Titov provides computer skills, theoretical information, and practical tasks.

V.S. Mikshina, G.A. Eremeeva, and N.B. The "Informatics Laboratory Practice" manual by Nazina lists laboratory tasks based on state educational standards. They describe number systems, the basics of algorithmization, programming in the Turbo Pascal environment, and practices of working with graphic and text editors, databases, and spreadsheets.

REFERENCES

1. O‘zbekiston Respublikasi Prezidenti. “Raqamli O‘zbekiston – 2030” strategiyasi. PQ-6079-son qaror, 2020-yil, 5-8-bet.

2. O‘zbekiston Respublikasi Prezidenti. “Raqamli O‘zbekiston – 2030” strategiyasi. PQ-6079-son qaror, 2020-yil, 5-8-bet
3. Karimov B.X., Tojiboyev I.T. Pedagogik texnologiyalarni qo‘llash usullari. Toshkent: O‘qituvchi nashriyoti, 2020-yil, 67-75-bet.
4. Islomova S.N. Axborot-kommunikatsiya texnologiyalari asosida ta’lim jarayonini takomillashtirish. Samarqand: Samarqand Davlat Universiteti nashriyoti, 2021-yil, 43-92-bet.
5. O‘zbekiston Respublikasi Prezidenti. “Raqamli O‘zbekiston – 2030” strategiyasi. PQ-6079-son qaror, 2020-yil, 5-8-bet.
6. Islomova S.N. Axborot-kommunikatsiya texnologiyalari asosida ta’lim jarayonini takomillashtirish. Samarqand: Samarqand Davlat Universiteti nashriyoti, 2021-yil, 43-92-bet.
7. Karimov B.X., Tojiboyev I.T. Pedagogik texnologiyalarni qo‘llash usullari. Toshkent: O‘qituvchi nashriyoti, 2020-yil, 67-75-bet.
8. O‘zbekiston Respublikasi “Ta’lim to‘g‘risida”gi Qonuni. 2019-yil, yangi tahrir. Toshkent: O‘zbekiston Respublikasi Oliy Majlisi, 3-bet.
9. Karimov B.X., Tojiboyev I.T. Pedagogik texnologiyalarni qo‘llash usullari. Toshkent: O‘qituvchi nashriyoti, 2020-yil, 67-75-bet.
10. Islomova S.N. Axborot-kommunikatsiya texnologiyalari asosida ta’lim jarayonini takomillashtirish. Samarqand: Samarqand Davlat Universiteti nashriyoti, 2021-yil, 43-92-bet.