IMPROVING THE IMPLEMENTATION OF DIGITAL TECHNOLOGIES IN THE PROCESS OF TRAINING FUTURE TEACHERS

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Abstract. *The article is devoted to the need for professional development and retraining of teachers in the system of continuing education for the preparation of competitive specialists in the modern world.*

Key words: *World education, didactic tools, megatendants, lifelong learning, independent education, information technology, "Digital Uzbekistan - 2030" strategy, IT specialists, IT industry, Action strategy, Continuing education system, imprinting, meraising, authorization, initiation.*

СОВЕРШЕНСТВОВАНИЕ ВНЕДРЕНИЯ ЦИФРОВЫХ ТЕХНОЛОГИЙ В ПРОЦЕСС ПОДГОТОВКИ БУДУЩИХ УЧИТЕЛЕЙ

Аннотация. *Статья посвящена необходимости профессионального развития и переподготовки педагогических кадров в системе непрерывного образования для подготовки конкурентоспособных специалистов в режиме р-н мира.*

Ключевые слова: *Мировое образование, дидактические инструменты, мегатенденты, непрерывное обучение, независимое образование, информационные технологии, стратегия «Цифровой Узбекистан – 2030», ИТ-специалисты, ИТ-индустрия, Действие. Атеги, Система непрерывного образования, импринтинг, мераизинг, авторизация, инициация.*

Development trends in the field of global education indicate the relevance of introducing modern didactic teaching aids in the information society and increasing their effectiveness. "Megatrends" in the context of scientific approaches to the formation of a global educational environment, characteristic of European countries, show that ensuring continuity and practical orientation of education, independent education, focus on creative development, active use of new formats of education in development. Of particular importance is the creation of modern didactic tools and improvement of the direction of introducing digital technologies in the training of future computer science teachers, as well as those who know how to correctly apply the mechanisms of their use in the educational process. During the years of independence, a new system of training personnel was created in the Republic of Uzbekistan, highly qualified, competitive, able to work

independently in the chosen field of education, meeting modern requirements for the quality of specialists, making a worthy contribution to the scientific, technical, socio-economic and cultural development of the country, consistently training of specialists capable of growth, adaptation to the conditions of rapidly advancing socio-economic development, possessing high cultural, spiritual and moral qualities is carried out. In order to achieve better results in training, adequate understanding of the ultimate goals of education, its improvement and modernization of content, especially the use of interactive teaching methods and modern didactic tools.

Measures taken in the Republic of Uzbekistan to improve the efficiency of the system of professional training and retraining of personnel in the field of information technology create a solid basis for providing government agencies and network organizations with qualified IT specialists.

In particular, a specialized school for in-depth training in information and communication technologies named after Muhammad al-Khwarizmi and branches of a number of foreign universities have been launched, digital technology training centers are being gradually created in regions and cities.

At the same time, the shortage of qualified personnel in the labor market of the Republic requires improvement of educational programs and methods in the field of information technology, strengthening cooperation between educational institutions and IT companies.

Today, increasing the potential of our country's intellectual resources by improving the software and methodological support for organizing education in higher educational institutions, organizational and pedagogical mechanisms for training future teachers on the basis of domestic and world educational experience is of particular importance. According to the Action Strategy for the further development of the Republic of Uzbekistan [2], "Further improvement of the system of continuous education, increasing the opportunities for quality educational services, continuing the policy of training highly qualified personnel in accordance with the modern needs of the labor market" are important tasks today. In particular, the use of modern didactic teaching aids in the training of computer science teachers is of particular importance. The use of modern didactic tools that allow the development of a person's creative abilities on a global scale based on a phased (stage-by-stage) learning model (imprinting - understanding the content of educational material; repetition and memorization; authorization - understanding the content of educational material); educational material and its reproduction; initiation – stages of assessment and recognition of acquired knowledge); development of new models for the formation of professional competencies using modern teaching technologies; integrated use of traditional and modern teaching methods

using information and communication technologies; effective use of the capabilities of modern didactic teaching aids in directing future computer science teachers to creative and research work, revealing the essence of universal and educational values, as well as regulatory legal documents used to improve the trend of introducing digital technologies in the preparation of future IT teachers.

Therefore, it should be noted that the environment of the information society, based on the process of global change, the rapid development of science and technology, and the development of information technology, has a strong influence on the education system. One of the main tasks of today's regularly implemented educational reforms and innovation processes is full adaptation to the features of the digitalization process. At the international level, the importance of improving the mutual cooperation of social institutions in the management of the education system is becoming increasingly obvious. That is why the development of interactive technologies for informatization of educational processes in higher educational institutions, paying special attention to improving pedagogical mechanisms for creating an integrative educational environment, is one of the urgent tasks.

The creation of an electronic information educational environment of an educational institution is not a purely technical issue, but for this it is necessary to use the scientific, methodological, organizational and pedagogical capabilities of the institution based on a systematic approach. The use of modern information and telecommunication technologies in the educational system is carried out in the following areas:

• information and telecommunication technologies as an object of study, that is, students develop general ideas and skills about new information technologies, their components and areas of application;

• information and telecommunication technologies as a means of education, i.e. knowledge is given to students on the basis of modern information and pedagogical technologies, and lectures, practical and laboratory classes are organized on the basis of modern computer software;

• as a means of managing the educational process, i.e. creation of a system of information, analysis and forecasting to improve the efficiency of all activities of an educational institution, including educational, spiritual, educational and research work;

• as a means of conducting scientific and pedagogical research of students and teachers, that is, the creation and implementation of modern information systems to increase the effectiveness of scientific research and pedagogical research among teachers and students of educational institutions.

A computer science teacher working with information technology tools must meet the following qualification requirements: firstly, he must embody the qualities of media competence.

The concept of media competence is considered a relatively new term in our educational system and includes the ability to transmit and evaluate media information in various forms, learn and communicate.

Media education is the process of personal development through the media [3]. Professor A.B. Fedorov says that media education in the modern world in order to form a culture of communication with mass information, creative, communication potentials, critical thinking, full perception, interpretation, analysis and evaluation of media texts, self-expression through media Technology considers this as a development process individuals using tools and materials of mass communication (media) for the purpose of learning in various forms.

Secondly, be able to create electronic textbooks and be able to work freely with them.

Thirdly, the opportunity to freely work in programs such as ZOOM, Google Meet, Google disk (At the request of Roskomnadzor, we inform you that a foreign person who owns Google information resources is a violator of the legislation of the Russian Federation - editor's note), Camtasio studio.

And fourthly, enriching the distance education platform with new information resources.

Recently, the global coronavirus pandemic has seriously affected the education system, as well as all other sectors. Quarantine rules have made many traditional forms and methods of education ineffective. In this situation, the following problems and disadvantages were identified:

• Internet speed does not reach the required level in all regions;

• insufficient ICT facilities in all educational institutions;

• low level of media literacy in academic subjects;

• a number of shortcomings were identified in the form of distance learning, such as the lack of full responsibility for the subject of training.

The general pedagogical principles of training for informatization of education can be called:

• invariance of basic training in relation to computer science, its focus on information, communication, general cultural aspects, compatibility with the modern level of development of the information society;

• specialization of training of specialist teachers, i.e. focus on introducing the capabilities of information and communication technologies into a specific subject;

• differentiation of teaching staff training, its focus on personal preferences, professional needs and characteristics of students.

In order to implement the principles of professional training of computer science teachers and implement the principles of a differentiated approach when developing the structure of the curriculum, it is necessary to reflect:

• state of the process of informing students. society in educational programs;

• theoretical foundations of informatization of education;

• the main organizers of the activities of teaching staff specialists in the use of information and communication technologies in a specific subject in educational programs;

• methodological support for independent learning activities.

Currently, teaching subjects using computers is becoming increasingly important.

Computer science teachers use a computer not only to prepare teaching materials for the lesson, but also use the necessary computer programs when teaching the subject, using it as a means of individual work with students. The convenience of the interface included in computer software allows teachers to effectively master modern information technologies. Thus, it is possible to effectively use the capabilities of information and communication technologies in the development of student-centered education and in the formation of students' creative abilities.

Another important aspect of the wise use of computer technology in the educational process is the creation of a computer model of real processes and experiments. Computer processing, modeling and display of results often replaces the need for expensive experimental equipment, in some cases (atomic and quantum physics, semiconductors, chemistry, biology, astronomy, medicine, process modeling related to sciences such as history) is considered the only way to demonstrate these processes. Modern information technologies teach phenomena and processes in the micro- and macrocosm, complex devices, biological systems through the use of computer graphics and modeling; they present physical, astronomical, chemical, biological processes occurring at very high or low speeds in a convenient form. The time scale helps solve new didactic tasks. Therefore, one of the promising areas for introducing modern information technologies into education is computer modeling of events and processes. Computer models help the teacher to harmonize the content of a traditional lesson and display many effects on the computer screen, organize new, non-traditional learning activities for students.

In the process of educational reforms carried out in our country, the use of modern information and communication technologies in the educational process, world educational resources of the teaching staff of higher educational institutions and young researchers, the use of

electronic sources of modern scientific literature, as well as modern sociological research on the introduction of pedagogical technologies and studying problems related to the principles of informatization of educational processes in higher educational institutions.

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