SCIENTIFIC AND THEORETICAL FOUNDATIONS OF EDUCATIONAL TECHNOLOGIES

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Abstract. The scientific and theoretical foundations of educational technologies are one of the important areas of pedagogical science, which studies the theoretical and methodological aspects of the effective organization, planning, implementation and evaluation of the educational process. Within the framework of this topic, the history of the formation of educational technologies, stages of development, basic principles, methods and tools are scientifically analyzed. Also, modern pedagogical approaches, innovative and interactive methods, issues of integration of information and communication technologies into the educational process are covered. The abstract reveals the role of educational technologies in increasing the effectiveness of the educational process, their importance in the development of person-centered education, and their role in improving the professional competence of pedagogical personnel.

Annotatsiya. Ta'lim texnologiyalarining ilmiy-nazariy asoslari pedagogika fanining muhim yo'nalishlaridan biri bo'lib, u ta'lim jarayonini samarali tashkil etish, rejalashtirish, amalga oshirish va baholashning nazariy hamda metodologik jihatlarini o'rganadi. Ushbu mavzu doirasida ta'lim texnologiyalarining shakllanish tarixi, rivojlanish bosqichlari, asosiy tamoyillari, metodlari va vositalari ilmiy jihatdan tahlil qilinadi. Shuningdek, zamonaviy pedagogik yondashuvlar, innovatsion va interfaol usullar, axborot-kommunikatsiya texnologiyalarining ta'lim jarayoniga integratsiyasi masalalari yoritiladi. Annotatsiyada ta'lim texnologiyalarining o'quv jarayoni samaradorligini oshirishdagi o'rni, shaxsga yo'naltirilgan ta'limni rivojlantirishdagi ahamiyati hamda pedagog kadrlarning kasbiy kompetentligini takomillashtirishdagi roli ochib beriladi.

Аннотатция. Научно-теоретические основы образовательных технологий являются одним из важных направлений педагогической науки, изучающим теоретические и методические аспекты эффективной организации, планирования, реализации и оценки образовательного процесса. В рамках данной темы научно анализируется история формирования образовательных технологий, этапы их развития, основные принципы, методы и средства. Также рассматриваются современные педагогические подходы, инновационные и интерактивные методы, вопросы интеграции информационно-коммуникационных технологий в образовательный процесс. В реферате раскрывается роль образовательных технологий в повышении эффективности образовательного процесса, их значение в развитии личностно-ориентированного образования и их роль в повышении профессиональной компетентности педагогического персонала.

The socio-economic reforms underway in our country have had a significant impact on the education system. is having a significant impact. One of the priority tasks of our independent Uzbekistan is to educate the youth, who are the future of the country, to be knowledgeable, physically strong, and spiritually mature. This great goal is embodied in the reforms being carried out and consistently continued in the education system.

In today's conditions of mass education, working with the new digital generation, developing them, and preparing them for the profession in line with global requirements requires a modern teacher to have

high technological knowledge, skills, and It requires dedication and hard work.

The President of the Republic of Uzbekistan Sh. M. Mirziyoyev's "It is extremely important to solve one problem: this is the professional level of teachers and professors, their special knowledge. In this regard, it is necessary to actively participate in the processes of education, spiritual and educational development, and the formation of true values. "It is necessary to create a supportive environment," said the senior becomes important[1].

Educational technologies in the context of mass education are the creation and implementation of a pedagogical process, each stage and each element of which is seriously developed, substantiated, designed, and aimed at a guaranteed high-quality final result. gives the opportunity.

Implementing a new model of education in practice related to the technologization of the educational process. That is why the National Personnel Training Program has defined "Providing the educational process with advanced pedagogical technologies" as one of its main tasks.[2]

The driving force behind educational progress is a pedagogical system that integrates didactic issues and educational technologies. The successful design of educational technology and the guarantee of the final result depend on the teacher's understanding of the essence of didactic issues, their correct definition, selection and effective application.

As everyone knows, modern education is informative for students, If it is interesting and engaging, the expected learning goals can be achieved. Learners can only be motivated through the use of active teaching methods, forms, and tools that meet the demands of the time, through innovative approaches and collaboration. For this reason, advanced pedagogical scientists, innovative professors and practitioners are striving to widely use scientifically based educational technologies in their activities.

The content, goals, and objectives of education have changed over time. As a result of its expansion and development, its forms, methods and tools are also improving. The main directions of current human activity are turning into a holistic system, that is, technologies, which allow the full implementation of the goals set for this activity. Similarly, in the field of education, educational technologies have begun to be actively used in recent years.

As is known, the process of education consists of the older generation teaching its knowledge and experience to the younger generation, and in this process, information necessary for human life is mainly transmitted from generation to generation.

Human life is closely related to information. Every human action is about receiving and transmitting information or using it, learning, mastering, storing and enriching it. That is why the current human civilization is called an information civilization. The 21st century is not called the information age for nothing.

"Civilization is a highly stable state of matter capable of acquiring the most information to collect, analyze, and use information, and to create knowledge about the environment and itself."

This definition shows how important the transmission of information from generation to generation, that is, the work of education, is. That is, education is a condition for the existence of civilization.

Technology - The word "technique" (Greek: "techno" - art, skill, skill, "logos" - science, doctrine, concept, thought, meaning) is used in the sense of a system, a set of effective methods that lead to new qualitative and quantitative changes in production.

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[1]Sh.M.Mirziyoyev "Critical analysis, strict discipline and personal responsibility should be the daily rule of every leader's activities." Tashkent 2017, p. 45.
[2]National Program for Personnel Training of the Republic of Uzbekistan / Tashkent; "Sharq", 1997

Technologization of education – qualitatively solving educational development issues means designing the teaching process in a universal way, regardless of the personal skills of the teacher, in achieving educational goals.

There are various definitions of educational technology, let's look at some of them:

Technology is a set of methods and ways used in a work, skill, or art (Explanatory Dictionary).

Technology– the art of processing, changing the state, a set of skills, abilities and methods (VM Shepel).

Pedagogical technology– a set of psychological and pedagogical procedures (settings) that determine the specific set and composition (location) of forms, methods, techniques, ways of teaching and learning, educational tools; it consists of organizational and methodological means of the pedagogical process (BT Likhachev).

Pedagogical technology is a description of the process of achieving planned educational outcomes (IP Volkov).

Pedagogical technology is a model of joint pedagogical activity in which all the details of the design, organization, and conduct of the educational process are thought out to ensure absolutely comfortable conditions for students and teachers (VM Monakhov).

Pedagogical technology is a systematic method of creating, applying and defining knowledge, taking into account technical and human resources and their interaction, which sets itself the task of making educational forms more effective throughout the entire process of teaching and learning (UNESCO).

Based on the above, the following generalized definitions can be given, taking into account that educational technology is a broad, multifaceted concept:

Educational technology- consists of the process of learning to assimilate information, use it in practice, and create new information by discovering new meanings and contexts in it and various connections between information. It is a system of pedagogical actions that is scientifically designed, guarantees effective results, is repeatable, and is organized at a certain time and under certain conditions.

Pedagogical technology– a set of educational methods, techniques, paths and educational tools; it is a set of organizational and methodological tools of the pedagogical process.

Educational technologies, as a theoretical discipline, constitute a separate direction of pedagogical sciences, having its own goals, objectives, problems, methodology, and other theoretical foundations.

It is known that in a rapidly changing information society, educational institutionsThere is a need to shift attention from one-sided education to education that comprehensively develops the individual.

The main task of the educational process in a modern educational institution is is to raise the quality of teaching to a new level. Accordingly, the attitude towards students, the principles of approaching them have changed. In the modern lesson, each student has the opportunity to participate in the learning process, taking into account their specific characteristics and personal experience. With this approach, students have the opportunity to communicate with their peers, apply the knowledge they have gained in practice, and understand where, how, and for what purposes this knowledge is used in our daily lives.

Now the student is not only a recipient of knowledge, skills and qualifications, but also an independentis a thinker, a seeker of information, the Internet and additional sources of information, an analyst and a researcher. Educating young people requires a modern set of teaching methods in education, the creation of methodological and didactic materials, and a special approach to studying existing textbooks and manuals.

The essence of organizing and conducting such experiments and tests in various academic subjects is to fully reveal the student's potential and individuality. The main goal of conducting

636

experimental research in the educational process is to raise the quality of education to a new level.

The level of students' mastery of subjects depends on the quality of the lesson andis one of the main factors determining the effectiveness of a lesson. Therefore, in order to improve the quality of education provided to students, the teacher must plan the lesson correctly and, first of all, correctly and clearly define the goal of the lesson.

When setting a goal, it is necessary to determine the following:

1. The time it takes to achieve the result;

2. The needs and capabilities of the student;

3. Methods that encourage the student to strive to achieve this goal;

4. Types of control that determine the result.

One of the main requirements for achieving the above-mentioned goal is the introduction of modern pedagogical technologies into the teaching process.

Pedagogical technology, in a narrow sense, is the process of learning to master information, use it in practice, and create new information by discovering new meanings and contents in it and various connections between information. Pedagogical technology, in a broad sense, is a set of educational methods, techniques, and educational tools, it is a set of organizational and methodological tools of the pedagogical process. In general, pedagogical technology is a systematic method of creating, applying, and defining the entire process of teaching and learning, taking into account technical resources and human interactions. When pedagogical technology is applied to the teaching process, it is guaranteed to teach the student to read independently, acquire knowledge, and think. In this process, under the guidance of a teacher, the student independently receives, learns, and assimilates knowledge. Thus, pedagogical technology is an activity of influencing a person for a predetermined goal. This includes processes such as implementing, organizing, conducting, improving, analyzing, researching, comparing, summarizing, drawing conclusions, managing, controlling, and evaluating activities.

Specific tools will be needed to implement pedagogical technologies. Verb The basis of the manual is information. Expressing this information in logical forms that students can understand constitutes verbal communication between the student and the teacher. There are various forms of verbal communication, the main ones of which include speaking, lecturing, talking, asking questions, answering questions, debating, reporting, etc. In this process, students are engaged in activities such as concentrating, listening, hearing, understanding, understanding, perceiving, thinking logically, memorizing, and recalling. In this, the student's interest, passion, need, benefit, ability, talent, and talent are the basis for his success.

Nonverbal means convey meaning through gestures, hand movements, and body language.is to express or emphasize the content. Each human action has a certain meaning, and nothing else can replace them. It is customary to call these actions nonverbal speech. Nonverbal speech is carried out through the movement of one or another muscle of a person.

Visual aids are used in the process of pedagogical technology to help students visually It includes all the tools designed for them to see. These include: images, writing and illustrations in books, handouts, educational posters, photographs, videos, film images, various objects, etc.

In this process, the student's activity, concentration, vision, observation, imagination It develops from doing, thinking, perceiving, storing in memory, etc. Audio tools can be tape recorders, various discs, and other natural sounds that provide the opportunity to learn and assimilate information through hearing. In order to effectively use these pedagogical tools, it is advisable to take into account the student's abilities and capabilities.

Natural resources are intended to be studied in the process of pedagogical technology includes all

natural objects related to the content. These include: devices, equipment, objects, etc. Educational tools necessary for the teacher and the student are also considered necessary means of pedagogical technology. The quality and effectiveness of pedagogical technology today largely depends on the quality of all types of necessary tools and the knowledge of how to use them with high efficiency. The correct and effective use of these tools depends on the teacher's qualifications, skills, creativity and research.

Conclusion

Therefore, advanced pedagogical technology develops rational ways of the education system. It is a creative and design process in which the teacher is the main responsible person, because his main task is to deliver information to students quickly, clearly and in an understandable way.

Students' acceptance of news, their inclination towards it, and their behavior Despite the different nature of the subject, the teacher should focus the students' attention on the object being studied, find a problem in it, or, if possible, encourage the students to think about the problem in this object independently, creating a problematic situation, mobilizing their attention, activating their thinking, helping the students to draw the necessary conclusions and generalizations through their own reflection, teaching them to observe, remember, be creative, and, on this basis, compare the observed facts and phenomena with the knowledge they have acquired. Today's teacher should not be limited to teaching lessons based on ready-made electronic resources, but should also act as a person with the skills to create educational resources and effectively use the capabilities of modern teaching technologies that apply them in practice, conveying the content of the subject and its constituent knowledge to students.

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