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DIDACTICS OF USING INNOVATIVE TECHNOLOGIES IN PRACTICAL CLASSES

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Annotation: In this article, the teaching methods of the "Introduction to the Field" course and their implementation in accordance with approaches to improving general didactic teaching methods are discussed. It serves to represent information through digital technologies and to present it in a clearer and simpler form. The use of digital technologies in proving the solutions of problems simplifies the process, enables students to fully understand the problem, and helps them to acquire the ability to solve problems independently, thereby developing their creative thinking and creative abilities. Therefore, examining the didactic possibilities of digital technologies applied in the educational process is considered one of the important tasks.

Key words: innovative education, digital technology, procedure, constructive, innovative educational technologies, abstract, modeling, interactive.

Introduction.

Nowadays, what is called “innovative education” and the use of ICT in lifelong learning are developing day by day, and we also witnessed during the pandemic period that humanity sometimes had to adapt to it out of necessity. Just as the processes of acquiring knowledge through understanding the essence and characteristics of digital technologies in society and applying them in practice differ, the concept of digitalization of education is also not a very complex process to fully understand or explain. Digital education is the teaching of a subject through information technologies, where the organization and management of the learning process are carried out without human intervention. In this process, pedagogical and psychological approaches are considered as factors ensuring the effectiveness of digital education.

The implementation of digital technologies in the education system is eliminating certain gaps and shortcomings that have emerged in the field as a result of globalization. Its effectiveness as a useful tool has been proven through practical experiments conducted by researchers in developed countries. The digitalization of pedagogical activity positively affects not only the content of education but also its organization, quality, and the speed of its implementation in terms of time. Reducing or simplifying the role of the human factor in education through digital technologies, as well as creating virtual teaching systems, leads to a shortening of time constraints within the education system.

According to researchers J.F. Halliwell and R.D. Putnam, after the emergence of the virtual education sector, scholars began to pay attention to changes in the previous mechanisms of forming social capital. Some even started serious debates, arguing that the virtual environment of education poses a threat to national stability. In this context, the imbalance of educational resources is perceived as the loss of an essential part of skills, namely human or social capital [1].

In the higher education system, the virtual education sector (distance learning) increasingly highlights the gap between the rapid flow of information and the slower pace of traditional learning processes. Today, continuous higher education should be understood as a non-equilibrium system characterized by features such as variability, gflexibility, and the inherent “complexity” of internal processes, the existence of which is determined by network logic [2].

Literature analysis. In the process of developing innovative electronic-didactic formats of education, the learners’ abilities and interests are taken into consideration. In the teaching and upbringing process, it represents a system of interaction between the instructor and the learner,

which is carried out on the basis of didactic and personalized methodological principles aimed at designing the system in accordance with the set educational goals, as well as applying pedagogical-psychological approaches, digital-technological strategies, formats, and teaching techniques.

In his monograph, A. Abduqodirov identifies four main forms of using innovative technologies, particularly computers, in the educational process:

- Passive use – the computer functions merely as a basic calculator;
- Reactive interaction – the computer acts as an examiner;
- Active interaction – the computer provides guidance to the student and also serves as an assessment tool;
- Interactive communication – the computer operates as artificial intelligence, engaging in dialogue with the student [3].

Researcher M.V. Ivanov, in his scientific works, emphasizes that the level of accuracy in a "conversation" with a machine can never reach a high degree. What is called a "dialogue mode" is essentially explained by the alteration in the sequence or volume of information. These procedures do not guarantee the complete processing of data stored in the device's memory. Genuine communication is an objective dialectical contradiction or a discussion topic that arises in a given context, which even the most advanced machine is incapable of fully perceiving or comprehending [4].

At this point, it becomes evident how essential it is for today's educators to possess the ability to apply innovative technologies in the teaching process. This necessity is repeatedly emphasized by scholars conducting research in various fields of the education system, and we are all witnessing that such viewpoints are being validated with each passing day.

Main part. Nowadays, various perspectives are being expressed regarding the teaching of the "Introduction to the Field" course and its role in the higher education system. In our view, this subject in higher education should be regarded not only as a fundamental digital discipline but also as one of the essential components of human culture. Mastering the course of general professional subjects becomes challenging for students due to the considerable complexity of the relationships within error theory. As a result, the demands on students' logical thinking and spatial imagination are steadily increasing. In studying these subjects, the construction of specific visual representations is often supported by drawn diagrams, the conventionality of which frequently creates significant difficulties for learners.

Some instructors do not adequately address these difficulties and tend to overestimate students' abstract abilities. A distinctive feature of the superficial mastery of the compulsory subject "Algorithmic Languages and Programming" is the limited reserve of numerical imagination and the inability to constructively transform the mental images that arise in the mind.

When solving problems, due to insufficiently developed scientific imagination, the student fails to visualize the studied diagrams and cannot apply the spatial arrangement of elements in new, altered conditions that differ from the textbook illustrations or the figures drawn by the instructor on the board during the lesson [5].

It is necessary to clearly distinguish between the needs and possibilities of using innovative technologies as a means of teaching, nurturing, and developing learners at every stage of the educational process.

At the current stage of the education system and its management, it is almost impossible to imagine the process without innovative technologies. The integration of digital technologies into the learning process is regarded as an urgent requirement for the advancement of modern society.

The use of innovative technologies in the learning process not only reduces the workload of the teacher and enhances the quality of instruction, but also makes the educational process more creative and mutually engaging.

The principle of applying innovative technologies in the educational process can be realized in the following three forms:

- As a simulator – serving as a tool for practice and skill development;
- As a tutor – performing certain instructional functions to support the teacher;
- As a device simulating a specific environment and the actions of specialists within it.

The didactic potential of using innovative technologies at a decisive level depends on the proper organization of students' learning activities. By employing software-pedagogical tools, the teacher is required to determine, in each specific situation, the appropriate sequence of their application in order to stimulate students' intellectual activity during the lesson. In this regard, it is essential to adhere to certain didactic requirements when integrating digital technologies, which can be outlined as follows:

❖ Careful selection of learning material (topics) appropriate for presentation through innovative technologies;

❖ Recognition that many topics within general professional courses require comprehensive and detailed presentation;

❖ Necessity of combining the teacher's initial explanations with textbooks and specially developed instructional manuals;

❖ Integration of innovative technologies with other forms and methods of teaching;

❖ Placing serious emphasis on fostering students' ability to independently comprehend and assimilate new material through the use of innovative technologies;

❖ When the teacher clearly defines in advance how to work with software-based learning aids, students' "exploratory" activities contribute to solving the key questions of the studied topic on an individual basis.

Addressing the economic challenges associated with integrating innovative e-learning resources into the information space of the education system requires simplifying the methods of their application in teaching. For this purpose, the types of innovative electronic educational resources are selected based on the nature of actions performed by teachers and students when using specific software, which in turn facilitates the simplification of the teacher's management tasks.

One of the advantages of using software tools lies in the optimality of didactic resources. The ability to generate information in electronic form fosters greater creative skills among future specialists. Based on such resources, electronic complexes and digital lesson plans can be developed and introduced into practice, enabling students to acquire sufficient competencies and independent working skills, thereby becoming active participants in the educational process.

Conclusion. It should be emphasized that the application of innovative technologies in the education system is among the most urgent tasks of today. Through innovative educational technologies, the teaching of the course "Algorithmic Languages and Programming" allows students to work individually, thereby fostering the formation of their knowledge, skills, and competencies. The ultimate outcome lies in improving the quality of instruction by effectively utilizing the potential of innovative technologies and purposefully drawing on the ideas of contemporary development.

REFERENCES:

1. Helliwell J.F., Putnam R.D. Education and social capital. - National Bureau of Economic Research, 1999. - № 7121.

2. Игнатова Н.Ю. Образование в цифровую эпоху: монография. Нижний Тагил, 2017. 128 с.
3. Абдуқодиров А.А., Пардаев А.Х., Масофали ўқитиш назарияси ва амалиёти. Монография. Т.: Фан. 2009. -145 б.
4. Иванов М.В. Пути совершенствования методов преподавания в высшей школе // Современная высшая школа. - 1982. - №3. - С. 118-122.
5. С.Авдеева. Учебные материалы нового поколения в проекте ИСО. Народное образование. № 9, 2007, С. 187-194.