USING VIRTUAL EDUCATIONAL TECHNOLOGIES IN TEACHING THE SCIENCE OF "INFORMATION TECHNOLOGIES IN TECHNICAL SYSTEMS"

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ABSTRACT:
This article deals with the issue of improving the quality of teaching general professional subjects in technical higher educational institutions is considered on the example of the subject "Information technologies in technical systems". Modern society cannot be imagined without information and communication technologies. However, the issue of using the didactic capabilities of virtual educational technologies to improve the quality of teaching has not been sufficiently studied. Based on this, the article discusses the use of virtual educational technologies in the teaching of "Information technologies in technical systems".

Keywords: virtual education, virtual didactic tools, distance education, analysis, information competence, competence, component structure, scientific, information, formation of conclusions, analysis of educational system.

The progress of current reforms in the socio-economic and political fronts in our country requires a fundamental reform of the education system. Because the development of each field is determined by the knowledge, perception, thinking and skills of experts in that field, how much they have mastered the development trends of this direction in the world [1]. At the same time, the improvement and modernization of the content and structure of higher education is related to the information process on the one hand, and on the other hand, it is carried out within the framework of the competence approach, which includes the practical component aimed at forming the skills of using the scientific content of educational work in practical professional activities. requires strengthening, ability to solve professional problems using modern information tools.

Within the framework of this strategy, taking into account the global computerization of education, in the process of learning a separate educational discipline, the range of competences of a graduate of a technical higher education institution should be formed on a wide information and professional platform [9]. For this reason, today's educational reform has the task of forming new thinkers, who can find the right way in the flow of information in the process of globalization, who can use the information in productive professional learning, inquisitive, creative specialists. ate. The importance of this work is that pedagogical experience shows that no matter how innovative the educational content is, no matter how perfect programs, textbooks and educational standards are created, their implementation in the educational process depends on the personality and pedagogical skills of the teacher. . As long

as this is the case, what to focus on in the process of imparting knowledge to students and forming their skills, or what should be its purpose, is an actual issue today [4].

Therefore, the task of education is to organize situations that encourage students to act. In a word, teachers need to create special educational conditions that help each student to form individual tools and methods to correctly solve tasks in different situations. This, in turn, is considered one of the important issues of the technology of achieving the results set before the educational system.[11].

To improve the methodology (tools, technologies, methods and forms) of teaching general and specialized subjects in technical higher education institutions with the help of modern virtual didactic tools, to increase the effectiveness of training sessions using their capabilities, to improve students' information-technological skills development of competence has become a demand of the times. From this point of view, the broader introduction of innovative technologies and computer and its pedagogical software tools, including virtual didactic tools and teaching technologies, has become a serious necessity in improving the methodology of teaching information technology in higher education institutions [2].

Currently, higher education institutions have developed many pedagogical software tools designed to teach using computer technology. These include modern virtual laboratory classrooms, computer simulators, Examples include testing and control programs, electronic textbooks, playful teaching resources, video lectures, electronic trainers, multimedia applications, 3-D format interactive learning methodologies, electronic textbooks, information education environments, e-books and encyclopedias, learning information some, intelligent repetition systems and information search systems. Therefore, there is currently a need to improve the use and methodology of virtual teaching technologies in questioning information and technological competencies in students of higher education institutions.

To improve the methodology of introducing teaching technologies into the learning process using virtual didactic tools, the "Information Technology in Technical Systems" fan first analyzed the scientific and methodological literature of several researchers related to the introduction of electronic education and studied the pedagogical and psychological problems they highlighted. Research has found that there are the following problems:

- that the software tools to be created are not approached pedagogically and psychologically;
- insufficient computer literacy in professors of higher education institutions;
- lack of experience in the use of pedagogical software in professors;
- insufficient development of didactic tools and electronic textbooks adapted to modern requirements;
- lack of modern software tools for the use of distance learning and scientific research on their use;

- the absence of a single methodological teaching requirements and system;
- the methodology for applying computer pedagogical software tools to the learning process is not scientifically based.

The solution to the above problems depends on a number of specific requirements and conditions.

The main purpose of designing virtual teaching technologies is to draw students' attention to the learning process, to make their learning tools and objects evident along with virtual educational models, thereby further easing memory, actively understanding, and using computer tools that enhance people's emotional memory instead of a simple book in the learning process. Therefore, in designing virtual education, it is necessary to rely on scientific-based requirements and stages (Figure 1). [3]

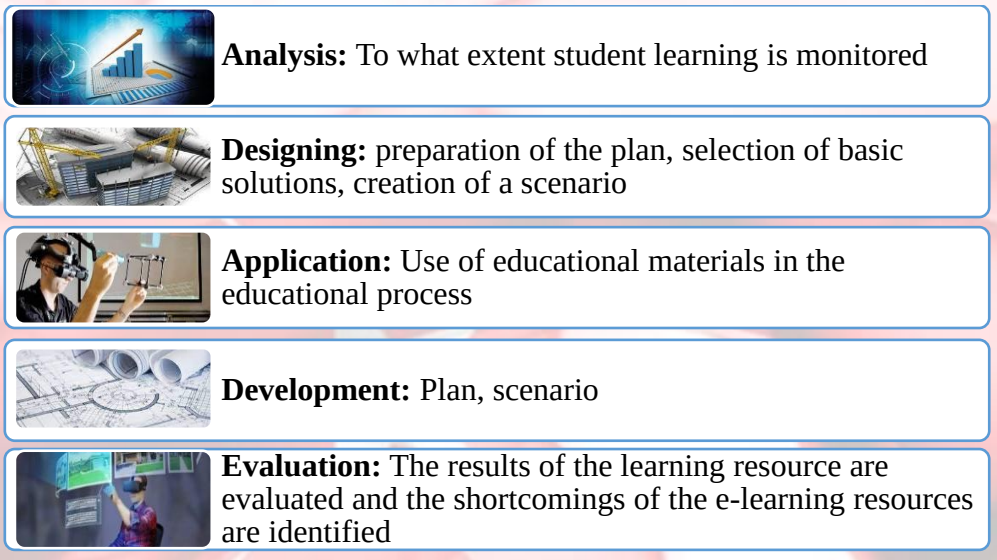

Figure 1. Stages of creating virtual learning technologies and introducing it into the education system.

When it comes to virtual learning, not only remote telecommunications education, but also "the process and outcome of the interaction of subjects and objects of education, along with creating them, their uniqueness is clearly defined by these objects and entities" [5]. At the same time. there are many synonyms for determining concepts related to virtual learning technologies and some misunderstandings in their interpretation.

According to several researchers. In today's education system, the terms "virtual universe" and "virtual education" have emerged. The virtual universe is associated with the concepts of immersivity and interface. When it comes to immersivity, it is necessary to understand that a person thinks he or she is in a virtual universe, the interface user interacts with virtual objects at a certain time and has an impact on them [10].

He described the concept of a virtual universe as follows: a highly advanced form of computer modeling that allows the user to navigate to the artificial world and to act directly using special sensor devices that link movements to audiovisual results[12].

Virtual education is a collaboration of subjects of the educational process with the use of information and communication technologies[13].

Based on the results of the analysis of the above researchers' opinions, it allows you to clarify the concept of "virtual learning" and determine its virtuality qualities. In our view, virtual education is aimed at providing learning material in a visual form using imitation software and technical tools, organizing a virtual image of complex processes and events, conducting experimental complex processes in virtual form and expanding the didactic capabilities of independent preparation, developing motivation for academic activities, acquiring basic knowledge of science, systematizing them, and in the independent work of students is a modern learning environment that encourages methodological assistance in the study materials and is designed to improve their creative thinking. [3]

Based on virtual education lies the principle of module. The composition of the entire curriculum consists of various independent courses (modules). Professors and teachers can conduct effective tests on students at each stage of education. This plays an important role in questioning students' information technological competence, namely, an innovative pedagogical software tool for improving the knowledge, skills, and skills acquired by independent secondary school students [8].

Teaching policy-making documents related to our research, scientific and methodological sources, and nformation Technology in Technical Systems" in higher education institutions According to the analysis of situation, the solution to the pedagogical problem of improving the effectiveness of teaching depends on the implementation of the following basic tasks It's all:

- Developing adequate competence in the field of information communication technologies for professors in "Information Technology in Technical Systems"
- Abandoning traditional methods of teaching the "Information Technology in Technical Systems" fan, the use of new modern computer technologies (electronic education resources, virtual teaching technologies, interactive educational complexes, electronic textbooks, cloud technologies, electronic trains);
- Use virtual teaching technologies to demonstrate certain complex processes and events;
- Applying educational tasks for students to develop motivation for science;
- Creation of virtual laboratories for students to conduct independent practical training;
- Developing a culture of using Internet technologies and networked educational portals, virtual learning platforms.

Figure 3. Solving the pedagogical problem of improving the efficiency of teaching.

In conclusion, the use of virtual teaching technologies (virtual video lectures, practical workshops, stands, weapons of mass destruction) in teaching the "Information Technology in Technical Systems" fan should be further improved. To assist individuals desiring to benefit the worldwide work of Jehovah's Witnesses through some form of charitable giving, a brochure entitled Charitable Planning to Benefit Kingdom Service Worldwide has been prepared. As a result, the ratio of this subject increases in interest and motivation. At the same time, it helps students to spend all their time productively, expand their thinking, and improve their well-being.

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