Information and Innovative Technologies in Distance Learning in Higher Education Institutions of Ukraine

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ABSTRACT

The article considers the possible development of information and innovative technologies for use in distance learning in higher educational institutions of Ukraine. The main advantages and disadvantages of distance learning in higher education institutions of Ukraine are identified. The main existing forms and technologies of distance learning and their characteristics are considered and analyzed. Based on the analysis and research, the application of levels of organization of the distance education process is proposed. in higher education institutions of Ukraine in the period of global constraints, as an example of a pandemic. Positive and negative qualities of distance education development in Ukraine are determined.

INTRODUCTION

Today, the rapid development of modern society has led to the creation and development of distance education systems in many countries. The strategic goal of distance education is extremely relevant - to provide citizens with the right to receive education at any level at their place of residence or professional activity. This goal is achieved in line with the global trend of the mobile dissemination of knowledge through the exchange of educational resources. It is logical that a means of achieving such a goal should be high-tech and scientifically sound organizational forms that are remote in nature. The educational system of Ukraine is included in the world trends in the development of distance learning.

According to the famous scientist Shabalin AV, from the point of view of sociology, it is distance education that can most effectively implement modern trends in education. These include the trend towards the digital presentation of virtually all types of information; rapid development of information technology and communication systems; accumulation of intellectual property in the form of knowledge, experience, opportunities [1, 8-14].

The purpose of this article is to review existing distance learning technologies and analyze the application of information and innovation technologies in higher education institutions in Ukraine.

MAIN TEXT

In the known literature, the definition of learning technology is a system of guidelines that, when using modern teaching methods and tools, should provide specialists in the shortest possible time with optimal effort and resources [1-7].

It is clear that it is impossible to define the concept of learning technology, but based on the analysis of existing ones we can conclude that the technology of distance education is one of the ways of carrying out pedagogical activities to achieve educational goals. The essence of this method is to preliminarily rationally and systematically divide the activity into procedures and steps with their coordination and synchronization in the future. Also note that there are two forms of distance learning technology. The first form is formed in the form of an action program containing procedures and operations. The second form is implemented in the form of activities built in accordance with this program. The skeleton of distance education technology consists of teaching methods, tools and forms. Modernization of this process continues constantly. Until recently, the transfer of knowledge to your home via the Internet seemed a complex and expensive process, which should be used only by foreigners.

Due to the rapid development of technology, every student and most universities in our country have and provide such an opportunity.

The most common technologies can be divided into about ten types of remote technologies (distance learning). Each of them carries an innovative element. Of course, today it is difficult to call innovative technology, if it is manifested in its pure form, it is even more difficult to find such technology in real life. Most often, modern technologies are used in combination and are responsible for a separate function in the student's study program.

Technologies can be divided into [15-17]:

Technology Summary

The physical essence of the technology is to purchase sets of teaching materials on paper and CDs and distribute

them to students for self-study. Based on the above, training a quality specialist is not complete: the release of CDs takes some time and financial resources, but examples used materials become irrelevant, often until students receive the material.

Technology of educational savings

When considering this technology, situational training methods are used (from the English case - case, situation). This approach to modeling certain situations helps to develop critical thinking and flexibility of imagination of the future specialist and helps to apply the previously studied theory on real examples without harm to themselves and others.

Multimedia technologies

The essence of this technology is the use of television in the learning process. Due to its peculiarity to convey material, technology is considered effective in the field of theory study. Technology is able to convey information to people with different methods of perceiving information. This technology includes video lectures that are effective in training specialists in various fields.

Internet technology

This technology is based on the use of the Internet to provide students with teaching materials for training (YouTube, Moodle, Zoom, and others). It is one of the advanced technologies in distance education of any direction. It can combine all of the listed technologies. It is considered the most complete technology in distance education. Since most of the innovations in the field of storage and processing of materials are focused on the Internet. From the client's point of view, this technology is one large virtual server, although in fact it deals with several servers, often geographically remote from each other. Such storages are not only very convenient, as they provide access to data from any computer with Internet access, but also from the point of view of training, they allow pairing or group work on projects and data stored in the cloud.

Network technology

To implement this technology, it is customary to use local networks to provide students with educational materials. It performs all the same functions as the Internet network technology; however, it is considered more narrowly focused. Information satellite network technology. Television training is being implemented, as well as updating and updating information in local networks via wireless communication channels. Training and rotational technology. This technology organizes trips of teachers to training centers for classes for students. Practice shows that this technology is not quite popular today due to time costs. Examination-shift technology. Another technology, which provides for the departure of the examination committee for the exam or student assessment.

Communication technology

Letter technology

Sound technology

To explain the essence of this technology, radio transmission is used, it loses its relevance and innovation and becomes inefficient. The first five technologies, and especially Internet network technology, are by far the most demanded; the last five are the least due to the natural obsolescence of their technical means and technological methods.

We define the sequence of concepts of distance learning technology and educational distance technologies.

For this, it is advisable to consider each of them individually.

The main function of educational distance technologies is forecasting, and their main activity is the project. They are aimed at training highly qualified personnel and the formation of the country's intelligence.

If we consider the essence of distance education technologies, it can be noted that they are inherent in the regularity of the educational process, regardless of the chosen discipline. In the process of technology design, the formation and implementation of the system of educational activities of the teacher and student is carried out. This technology is focused on the application of knowledge to the organization of the educational process, taking into account the empirical innovations of teachers and developers of courses and tutors. Also, it should be aimed at obtaining a highly developed and highly qualified personality. So, distance education technologies are an important part of the educational process management mechanism, a means of translating the language of science into a specific language of management practice. Along with the processes of formation and management, the process of modernization is proceeding.

Since the distance education system is a complex process related to human-machine systems, the structural elements of this system, the features of their structure and patterns of functioning are known. The subject of this process are teachers and administration, the objects themselves are students. Both subjects and objects can divide processes into procedures and operations, as well as create an innovative environment for reproduction and preservation of the necessary level of management of the educational process. There are a number of signs of modern distance education: differentiation, division, division of the process into stages, procedures, operations, coordination and step-by-step actions aimed at obtaining a predicted result and the unambiguity of the procedures and operations.

We can consider all of the listed signs with examples. When we enter a university or institute, we go through both acquaintances with the characteristics and requirements of the educational institution (as a rule, on the official website of the institution), and the choice of a specialty, paperwork, payment for training. The training stage, in turn, consists of such procedures as: accessing the training literature (indicated on the server), studying it, consulting via e-mail (instant messengers) or using general webinars, as well as monitoring activities (campaigning). Three levels of organization of the distance education process are distinguished [16-22].

A traditional correspondence course of study with support for communication by electronic means of communication, but with full-time exams [23-24]. A complex in the form of a combination of Internet technology and full-time exams.

All training is based on Internet technologies, including exams. It is clear that it is innovative technologies that form the basis of distance learning, shaping its advantages over traditional ones. Most of the innovative technologies used in distance education are especially valuable in training a good specialist. Especially case study technologies and the Internet.

CONCLUSION

Summarizing the work done in this article and systematically analyzing the modern system of distance education in higher education institutions of Ukraine, I would like to highlight the various components of this learning technology, namely, positive and negative aspects that emerged during the consideration of this topic. The main advantages of distance education are characterized by the following features, such as flexibility, parallel learning, long-distance action, asynchrony, mass character, internationality, profitability, modularity, the spread of innovative technologies and the removal of social tensions. In turn, this technology includes a number of low shortcomings, such as technological and innovative support, the content is the lack of teamwork and social interaction, insufficient computer and engineering training to participate in the distance education system, technical difficulties associated with the language of instruction (in the case of teaching foreigners or vice versa), the lack of qualified teachers, low quality courses and the lack of modern licensed software.

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