

Modern Technologies for the Development of Distance Education

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Abstract

The main purpose of the study is to determine the features of the application of modern technologies for the development of distance education. The global process of transition to the information society, as well as the economic, political and social changes that accompany it, are accelerating the reform of the higher education system, in which distance education occupies a special place. Based on the results of the study, the main features of the use of modern technologies for the development of distance education are characterized. Future research should be devoted to investigating the impact of Industry 4.0 on the education system.

Keywords:

Modern Technologies, Education, Distance Education.

1. Introduction

Modern conditions for the functioning of the state and the development of the education sector necessitate the modernization of technologies in the context of providing quality educational services, taking into account distance learning. More and more universities provide opportunities for distance learning. It is worth noting that distance learning as one of the forms of education implies the presence of an element of physical separation of teachers and students during the educational process using various technologies in order to facilitate and simplify communication between them. First of all, distance learning is most common among already employed students living in other countries or remote regions. The successful implementation of distance learning is highly dependent on the orderly implementation and consistent application of a set of methods and processes that provide online access to educational materials based on interactive interaction. participants in the educational process

The use of distance technologies in the educational process in the XXI century. has become one of the most important innovations in the

educational sphere of many countries for conducting distance learning courses. Therefore, it is substantiated that the study of the role of distance learning technologies, especially in the field of improving the quality of education, has been one of the most relevant and priority areas in pedagogical science in recent years. The development of educational distance technologies is aimed at improving the efficiency of the educational process as a whole. However, in the current conditions, there is a growing gap between the rapid spread of distance learning technologies and the ability of the teacher and student to skillfully apply them in the learning process.

Modern society needs a mass high-quality education that can meet the increased requirements for the consumer and the producer of material and spiritual values. Due to the increase in allocations for education, the increase in the number of educational institutions and other traditional methods, even wealthy countries are not able to fulfill the social order of society. The modernization of the education system is most reflected in the concept of distance education, which, thanks to such a global phenomenon as the Internet, covers wide sections of society and becomes the most important factor in its development. Modern information technologies open up new prospects for improving the efficiency of the educational process. A large role is given to active learning methods, self-education, distance learning programs.

First of all, distance education is an open learning system that provides for active communication between the teacher and the applicant using modern technologies and multimedia. This form of learning gives the freedom to choose the place, time and pace of learning. The distance education system has a number of advantages and significantly expands the circle of potential students.

Youth who cannot combine education with work or live in a remote area from regional centers can receive education remotely; military personnel; housewives; leaders; businessmen or students who want to get an education in parallel. Distance learning is suitable for almost everyone, because it allows you to harmoniously combine learning and everyday life. Modern education requires constantly expanding its perception of the complexity of the world and the formation of the information society. In order for knowledge to receive a specific connection with actions, it is necessary to constantly "teach yourself", replenishing and expanding your education. This is the goal of distance education.

2. Methodology

A set of methods form our research methodology. The methodology includes: analysis of philosophical, psychological, pedagogical, didactic, linguodidactic works on the research problem; method of system analysis for highlighting and substantiating the principles, features of distance learning; clarification of the essential characteristics of the basic concepts of the study.

3. Research Results and Discussions

Distance learning is recognized as one of the priority areas of the program for the modernization of general education and higher education. In modern conditions, there is a need to receive higher education remotely, which is caused by the need to study on the job, to receive education for people with disabilities and who are abroad or in places of deprivation of liberty. Such an opportunity is provided by distance learning, carried out thanks to information systems and educational technologies and communication systems [1].

Distance learning has a number of undeniable advantages. In particular, an aspirant of higher education can study at a convenient time for him, in a familiar environment and at a relatively autonomous pace. The lower cost of such training should also be taken into account, since there is no need to rent premises, pay a significant number of staff and save time [2].

However, the distance learning system also has disadvantages. Firstly, for successful correction of training and an adequate assessment, it is important

to have direct contact with the applicant. In addition, it is impossible to accurately check whether that person is working, performing a task, or someone else is doing it. Therefore, the final quality control of knowledge is still carried out at the face-to-face session. In addition, not all settlements have access to the Internet connection. And most importantly, with distance learning, direct contact between the teacher and the student is lost [3].

With prolonged distance learning, the student ceases to correctly formulate his thoughts, speak out and conduct a debatable discussion. However, this form of education requires a conscious and motivated approach to education. Therefore, the remote form requires special self-organization and the ability to calculate your time.

The rapid development contributes to the modernization of the modern education system. Modern distance education is a branched system of knowledge transfer at a distance using various means and technologies, which contributes to obtaining the necessary information for use in practical activities [4-6].

Distance learning is a form of organization of the educational process and pedagogical technology, the basis of which is the guided independent work of students and the widespread use of modern information and communication technologies in teaching. The main goal of distance learning for students is to educate a person who has the desire and ability to communicate, learn and self-educate. Key elements and features of distance education are presented in Figure 1.

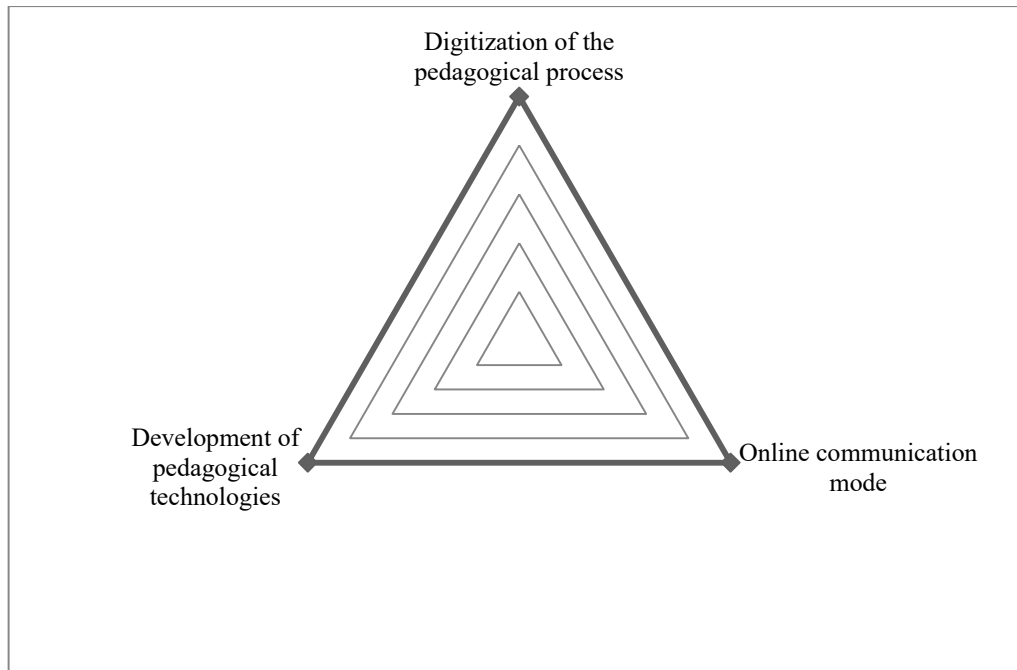


Fig.1. Key elements and features of distance education

The need to develop an integrated intellectual educational environment is based on a sufficient degree of development of Smart technologies and the intensity of their penetration into everyday life. Let us indicate the advantages of e-learning (E-learning): the ability to obtain modern knowledge at any time and anywhere in the world; accessibility of higher education for persons with special needs of psychophysical development; convenient time and place of training; strong assimilation of knowledge; constant contact with the teacher; individual training schedule; saving time and money.

The educational process in the Smart-environment combines: innovative and traditional technologies; modern software; informational resources; interaction of participants in the educational process in an open model of asynchronous individual learning; databases and knowledge; shells; means of communication. Smart learning is flexible learning in an interactive educational environment through freely available content from around the world that allows you to expand the boundaries of learning, not only in terms of the number of students, but also in terms of temporal and spatial indicators: it becomes available everywhere and always [7-10].

The Smart-learning system is focused primarily on organizing interaction between a teacher and students, although it is also suitable for organizing traditional distance courses, as well as supporting face-to-face learning. The teacher, having his own login and password, has the opportunity at a convenient time to update the teaching materials on the page, check control tasks, and bring the necessary information to the attention of students. The student can use all study materials for self-processing. Smart-learning is an integral part of Smart-education, it should be easily manageable, ensure the organization of the educational process, the flexibility of the educational process and be integrated with external sources. Smart education is learning that promotes creativity, collaboration, problem solving, and communication skills among students. Such a system of education, based on the use of cloud services, allows the integration of individual educational services and resources, provides greater convenience for users and data storage. To this end, educational content is developed in the lessons with its classification by subjects and topics, combined in metadata for better content management [11-12]. Creating a Smart environment based on the use of cloud services is a rather complicated process. This environment includes a Smart Tutorial.

The benefits of the distance education system are presented in Figure 2.

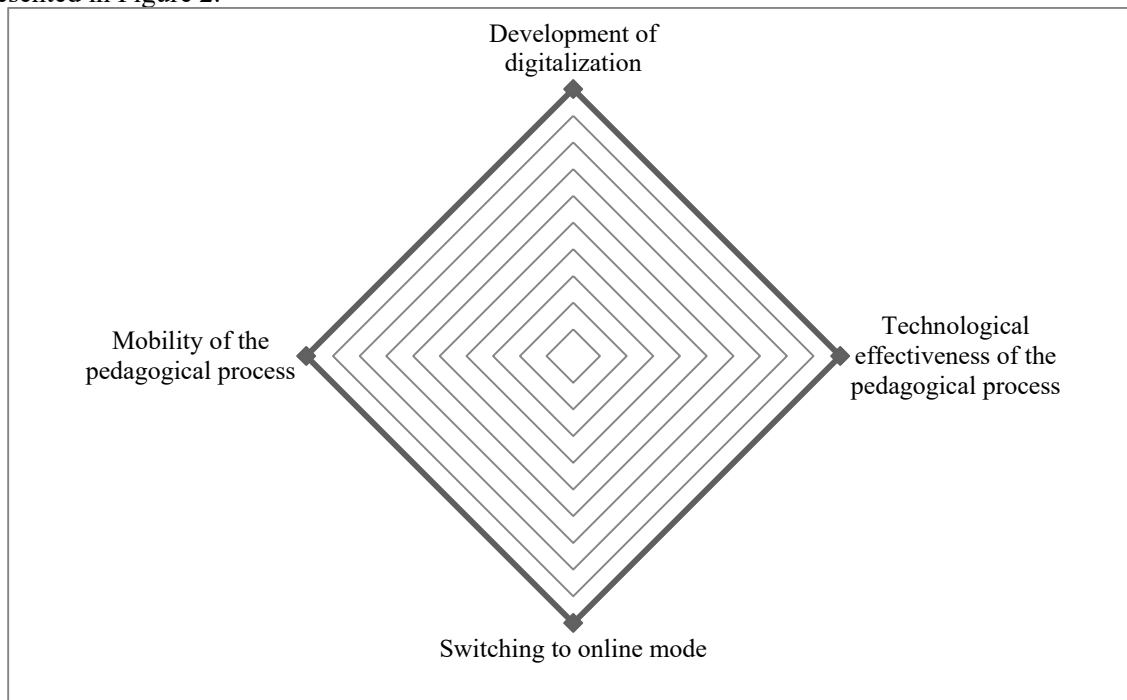


Fig.2. The benefits of the distance education system

The evolution of information and communication technologies, the informatization of society, the change in the methods of dissemination and use of information have a significant impact on the learning process. One of the modern means of implementing the learning process based on information and communication technologies is distance education. Distance forms and methods of training contribute to the individualization of the process of professional training of future specialists, increase the amount of independent work, form an information culture, encourage the use of innovative means of finding and using information.

Innovations or innovations are characteristic of any professional activity of a person and therefore naturally become the subject of study, analysis and implementation. Innovations do not arise by themselves, they are the result of scientific research, advanced pedagogical experience of individual teachers and entire teams. One of the types of innovations in the organization of vocational education is the introduction of distance learning [13-19].

Distance learning is a new organization of the educational process, based on the use of both the best traditional teaching methods and new information and telecommunication technologies, as well as on the principles of self-study, intended for the general population, regardless of material support, place of residence, health status. Distance learning allows you to introduce interactive technologies for presenting material, receive a full-fledged education, and improve the skills of employees in geographically distributed places. The learning process can take place anywhere, the only condition is access to the Internet.

At present, Internet technologies are transferring many aspects of our life to the network, thereby accelerating the pace of development of the information society and overcoming geographical barriers. Education is no exception. Now it is no longer necessary to be near the teacher. Quite a long time there is a correspondence form of education for students. But its possibilities are very limited. The Internet allows you to expand them, to make distance learning truly complete and comprehensive.

Distance learning at a university is not a variety or an improved version of distance learning, since it

is a new, independent, progressive form of education with great potential. The scope of possible application of distance learning in universities is quite wide: from holistic training of specialists to individual courses and fragments of didactic support for different types of classes. Based on the analysis of global trends in the development of distance education, we consider it appropriate to single out the following trends in the development of distance education in Ukraine: information technology, regulatory legal, financial and economic, institutional, scientific and methodological and organizational - pedagogical.

Distance learning technology enhances the role of active learning methods. The implementation of distance learning technology can be ensured by developing a model for the use of virtual learning environments. The introduction of virtual learning environments into the educational process and the provision of necessary methodological recommendations to students and teachers on the use of virtual learning environments in professional training will ensure advancement in the criteria and quality levels of the use of distance learning technology in the professional training of accounting and audit specialists and will provide training opportunities. Thus, today there is a need to develop and implement distance learning programs in the educational process that meet the best world standards and provide training of specialists at a high professional level. The use of the Internet allows quick access to the information resources of the educational institution and the possibility of effective interaction "teacher-student", both on-line and offline. Distance learning involves a high-tech approach to the process of knowledge transfer and allows you to create a system of mass continuous self-learning, general information exchange. It is this system that can most adequately and flexibly respond to the needs of society in the training of highly professional specialists. In addition, the introduction of distance learning allows you to put into practice the idea of lifelong education, learning through life. The system of distance education increases the efficiency and quality of education due to additional opportunities for cognition of the surrounding reality and self-knowledge, the development of the student's personality; management of the educational process, monitoring (control, correction of the results of educational activities, computer pedagogical testing

and psychodiagnostics; dissemination of scientific and methodological experience; organization of intellectual leisure.

4. Conclusions

Summing up, it should be noted that the modern development of society is characterized by a rapidly growing process of informatization and computerization, due to the process of globalization, in which education turns from a complete process into an endless one. A person striving for a worthy social position and position in society and who wants to be competitive in the labor market must continuously learn new things and acquire new skills and abilities. This entailed the development of continuous education, which is characterized not only by education throughout life, but also by a constant transition to a higher level, which is characterized by a constant growth of professional knowledge and skills, the acquisition of life and professional experience. It is continuous education that improves the achievements of individuals and society every day, as new knowledge and technologies are acquired and implemented. It should be noted that the use of innovative distance learning technologies is impossible without effective independent controlled work of students. Independence in learning, responsibility for one's own educational activities, the ability to organize one's working time and distribute the load are the main characteristics inherent in the modern requirements of society. Thus, it can be argued that the purposeful and systematic use of innovative distance learning technologies in the system of higher education contributes to the activation of self-educational activities of students, increases the intensity and consistency of educational work, regulates the control of educational activities during semesters, increases students' motivation to study educational material, which in ultimately leads to an increase in the quality of training of future specialists and reveals potential opportunities.

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