

DEVELOPMENT AND APPLICATION OF INNOVATIVE TECHNOLOGIES IN THE PROCESS OF REMOTE EDUCATION OF UKRAINE

Inna Ivzhenko¹, Iryna Sokol², Valentyna Kochyna³, Margaryta Noskova⁴, Liliia Yeromina⁵

¹Department of Theory and Technology of Social Work, Dragomanov National Pedagogical University, Kyiv, Ukraine

²Department of Information and Technological Education, Municipal Institution "Zaporizhzhya Regional Institute of Postgraduate Pedagogical Education" of Zaporizhzhya Regional Council, Zaporizhzhya, Ukraine

³Department of Foreign Languages, Kharkiv National University of Internal Affairs, Kharkiv, Ukraine

⁴Department of Pedagogy and Innovative Education, Lviv Polytechnic National University, Lviv, Ukraine

⁵Department of Preschool Education and Social Work, Bogdan Khmelnytskyi Melitopol State Pedagogical University, Melitopol, Ukraine

Corresponding E-mail: maxnik8888@gmail.com

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Abstract

The essence of the article is a review of the main existing forms of distance education technology and their characteristics. Based on the results of the analysis, the organization levels of the distance education process are proposed.

The positive and negative qualities of the development of distance education in Ukraine are determined.

Keywords: Science Preparation, Higher Education Institution Training, Principle of Clarity, Discipline, Pedagogy, Special Disciplines.

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INTRODUCTION

The objective development needs of modern society have led to the creation and development of distance education systems in many countries of the world. 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.

To date, the educational system of Ukraine is included in global trends in the development of distance learning.

According to the famous scientist Shabalin A.V., from the perspective 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 a comprehensive review of the application of innovative technologies in the process of distance education in Ukraine [1-7].

MAIN MATERIAL

Training technology is a system of guidelines which, in the course of using modern teaching methods and tools, should provide specialist training in the shortest possible time with optimal effort and money.

It is not possible to define the concept of teaching technology, but based on their analysis of existing ones, we can conclude that distance education technology is one of the ways to carry 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.

Today, this process is being modernized. Even 10 years ago, delivering knowledge to your home via the Internet seemed a complex and expensive process that only foreigners were supposed to use.

Today, many universities in our country provide this opportunity.

To date, 10 types of remote technologies stand out. Each of them carries an innovative element. Of course, today it is difficult to call an innovative technology, if it is found in its pure form, it is even more difficult to meet such a 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]:

Portfolio case technology.

This technology is based on the acquisition of sets of teaching materials on paper and CDs and their distribution to students for self-study. In our opinion, the training of a quality specialist is not complete: the release of discs consumes certain time and financial resources, however, the examples used in the materials become irrelevant, most often, until students receive the material.

Training-case technology.

This technology is based on the application of situational-training teaching methods (from the English case - case, situation). This approach to modelling certain situations helps in the development of critical thinking and the flexibility of the imagination of a future specialist and helps to apply the

previously studied theory on real examples without any harm to oneself and others.

TV technology.

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 network 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.

Local 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 centres 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.

Correspondent technology.

Technology involving the use of letters.

Radio technology.

Provides for the use of radio broadcasts, it loses its relevance and innovativeness and becomes ineffective.

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 technologicalization 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 acquaintance 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, 17].

- A traditional correspondence course of study with support for communication by electronic means of communication, but with full-time exams.
- a complex in the form of a combination of Internet technology and full-time exams.
- All training is based on Internet technologies, including exams.

Obviously, it is innovative technologies that form the basis of distance learning, forming its advantages over traditional ones. Most of the innovative technologies used in distance education are especially valuable in training a good specialist. Especially training-case and Internet network technologies.

CONCLUSION

Thus, analyzing the current system of distance education, we can highlight both positive and negative aspects.

The main positive aspects of distance education include flexibility, parallel learning, long-range action, asynchrony, mass character, internationality, profitability, modularity, the spread of innovative technologies, and the removal of social tension.

The disadvantages include low technological and innovative support, lack of teamwork and social interaction, inadequate

computer training for participating in the distance education system, technical difficulties associated with the language of instruction of foreigners, lack of tutors, poor quality of courses and lack of modern software .

REFERENCES

1. Smyrnova (2017). Theoretical Aspects of the Use of Electronic Educational Resources in Professional Activity of Future Teachers of Technology. *Journal of Vasyl Stefanyk Precarpathian National University*, 4(1), pp. 140-147.
2. I.Smyrnova (2017). The requirements for establishing the esm as part of the ivs Izmail state university of humanities. *Formation of Knowledge Economy as the Basis for information society*, pp. 141-143.
3. I.Smyrnova, M. Musorina (2016). The formation of technical culture of skippers like experience in the process of qualification. *Modern Methodology of Science and Education*, 6(10), pp. 17-20.
4. I.Smyrnova (2017). System Overview Of The Purpose And Content Of Information Technology Training Of Future Teachers Of Technologies To The Development And Use Of E-Learning Resources. *International Scientific and Practical Conference World science*, 3(5), pp. 6-12.
5. Kuts, M. O. (2016). Problem technologies in foreign languages teaching of higher technical educational establishments students'. *Cherkasy University Bulletin: Pedagogical Sciences*, 37(370).
6. Skliarenko Olesia, Akimova Alina & Svyrydenko Oksana (2019) Psycholinguistic Peculiarities of Contextual Realisation of Concept «MACHT» in Linguistic and Cultural Space of German's. *Psycholinguistics. Pereiaslav-Khmelnyskyi Hryhorii Skovoroda State Pedagogical University*. 26 (2). pp. 321-340.
7. Shytyk Liudmyla & Akimova Alina (2020) Ways of Transferring the Internal Speech of Characters: Psycholinguistic Projection. *Psycholinguistics. Pereiaslav-Khmelnyskyi Hryhorii Skovoroda State Pedagogical University*. 27 (2). pp. 361-384.
8. Deyneha, I.O., Akimova, L.M. & Kratt, O.A. Regional features of marketing mix formation in rural green tourism. *Actual Problems of Economics*. № 9(183). - pp. 184-194.
9. Klymenko, V.V., Akimova, L.M. & Korzh, M.V. (2016) Regional aspects of middle class development in Ukraine. *Actual Problems of Economics*. 4(178), pp.178-188.
10. Yachina, N. P., Petrova, T. N., Kharitonov, M. G., Nikitin, G. A., & Zhumataeva, E. O. (2016). The method of the content selection for formation of technological culture among students based on ethnological values. *International Electronic Journal of Mathematics Education*, 11(1), pp.211-219.
11. Hasan, M.N., Mahmudul Alam Bhuiya, N.M., Hossain, M.K. In silico molecular docking, PASS prediction and ADME/T analysis for finding novel COX-2 inhibitor from *Heliotropium indicum*(2019) *Journal of Complementary Medicine Research*, 10, pp. 142-154.
12. Fayzullina, A. R., & Saglam, F. A. (2015). History and social sciences teacher's professional activity in the context of IT-development of education. *Journal of Sustainable Development*, 8(7), pp.107.
13. Bayanova, A. R., Kuznetsov, V. V., Merculova, L. V., Gorbunova, L. N., Pervozvanskaya, O. A., Shalamova, O. O., & Vorobyova, C. I. (2019). Student Performance Interrelation with Gadget Use at Lessons. *Journal of Environmental Treatment Techniques*, 7(3), pp. 432-437.
14. Kovaleva T.M. (2009). Innovation school: axioms and hypotheses, *Pedagogical community of Russia*, pp.170.
15. Clarin M.V. (2010). Innovation in Learning: Metaphors and Models: An Analysis of Foreign Experience, pp. 300.
16. Lazarev, B.C., Martirosyan B.P. (2011). Pedagogical innovation: object, subject and basic concepts, *Pedagogy*, N 4.
17. Solodukhina O.A. (2011). Classification of innovative processes in education. *Secondary vocational education*, No. 10, pp. 12 - 13.