CZU: 37.015+004 DOI: 10.36120/2587-3636.v20i2.52-57

SOME DIDACTIC ASPECTS ABOUT THE APPLICATION OF DISTANCE TECHNOLOGIES IN PROFESSIONAL EDUCATION

Violeta BOGDANOVA, doctorand, Tiraspol State University
https://orcid.org/0000-0003-4140-6317
Elena KHMELNITSKAYA, senior lecturer, BPF PGU "T.G. Shevchenko"
https://orcid.org/0000-0003-4300-0759
Liubomir CHIRIAC, professor, habilitated doctor, Tiraspol State University
https://orcid.org/0000-0002-5786-5828

Abstract. Models of educational organization using distance technologies are considered. Distance education is presented as a system. The organization of independent work of students and the application of a point-rating system for evaluating the use of distance technologies in the training of disciplines of the information cycle are described.

Keywords: distance technologies, blended learning, point-rating system of assessment, students' independent work.

UNELE ASPECTE DIDACTICE PRIVIND APLICAREA TEHNOLOGIILOR INFORMAȚIONALE LA DISTANȚĂ ÎN EDUCAȚIA PROFESIONALĂ

Abstract. Sunt examinate modele de organizare a învățământului la distanță cu implementarea tehnologiilor informaționale. Sunt descrise procedurile și metodele de organizare activității independente a studenților și modalitățile de aplicare a unui sistem de evaluare a notelor prin intermediul tehnologiilor informaționale la distanță în formarea disciplinelor ciclului informațional.

Cuvinte cheie: tehnologii la distanță, învățare mixtă, sistem de evaluare punctuală, activitate independentă a elevilor.

1. Distance Learning Models

A good education today is a synthesis of various forms of knowledge and modern technology. The advent of the Internet just over 30 years ago allowed the evolution of the distance learning technology.

Distance education models began to develop quite a long time ago. The first generation of distance education - correspondence training - first appeared at the end of the 18th century in Europe, due to the availability of postal service. Correspondence training is based on a printed basis, with little interactivity, a flexible system in terms of time, place and space. In the modern sense, email.

The second generation of distance education - tele-education - became popular in the 50s of the 20th century due to the widespread use of television. It is based on technologies of broadcast space (TV / Radio), audio and video conferencing, and it is strictly tied to a specific time, place and space.

The third generation of distance education - multimedia education - in comparison with the first generation, added to itself audio and visual means in the form of cassettes,

which became available in the late 60s of the 20th century. In the modern sense it means computer training and interactive video.

The fourth generation of distance education - flexible learning - was made possible thanks to the advent of the Internet in the late 80s of the 20th century. Interactive multimedia dialogue acts as a material delivery, having as its basis the Internet, the access to WWW resources and computer interaction; It has high interactivity, as well as well-developed material.

Researchers distinguish the fifth generation of distance education, based on the idea of flexible intellectual learning, thanks to the intellectualization of information systems and technological processes [2].

Modern didactic principles of distance education are highlighted in [3]. The courses of improving professional skills and self-education on the Internet today are gaining popularity. In many educational institutions, teachers develop their own distance learning courses. However, despite its popularity, distance learning has several disadvantages:

- the lack of good educational content for educators;
- the presence of a barrier to the use of new network technologies in self-education;
- the lack of stable operating of high-speed Internet communications in remote regions.

Despite the disadvantages, distance learning has one indisputable advantage - it allows teachers to organize effective independent work of students.

The organization of independent work should be based on the following principles:

- the student himself allocates time for searching, analyzing the necessary information and completing tasks;
- the teacher limits the time frame, determines the forms of control, forms a list of reliable and relevant sources of information;
- the assignments can be both written and oral;
- the control of the performed work can be both individual and that of a group;
- the interaction can be organized in a synchronous or an asynchronous form.

2. Distance learning as a system

If you imagine distance learning as a system (Fig. 1), then the goal of the system is to provide affordable and quality education. Accessibility is considered to have the possibility of gaining access to education from different regions for students with various developmental features. By quality we mean the conformity of the educational material for the current state of science and technology, the requirements of the labor market, the characteristics and needs of students.

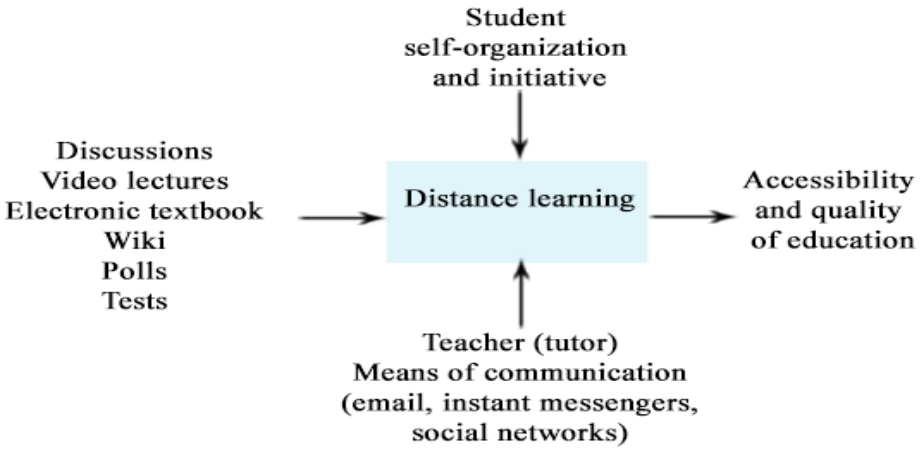

Figure 1. Distance Learning as a System

To organize distance learning, you can use tools such as discussion, video lectures, electronic textbooks, surveys, tests, wikis?, and more.

A necessary condition for the successful achievement of the goal of distance learning it means to increase the accessibility and quality of education - is the initiative of a student and his ability to self-organize. The teacher (often a tutor) interacts with the group through e-mail, social networks of instant messengers.

Remote technology is able to provide timely corrective content of training by speedy updating knowledge in the educational information environment of educational organizations.

Many researchers suggest using the blended learning model to improve the quality and accessibility of education through the advantages of traditional (classroom) and distance learning methods to expand the psychological component of learning motivation to ensure the mastery of the ways of performing information and analytical activities as part of the learning process, and gaining knowledge of the chosen profession [1,4,5].

3. The organization of independent work in distance learning

The class time of the disciplines of the information cycle in secondary vocational education to cover the entire spectrum of modern information and communication technologies, directions of use and development is not enough. Up to 50% of the time is allocated by modern standards for student independent work. The way out of this situation may be the use of distance technologies to increase the effectiveness of extracurricular independent work of students.

There are various ways to organize communication and training. From the point of view of quick messaging and receiving feedback, it is convenient to use e-mail, social networks, instant messaging systems - instant messengers, etc.

Communication of participants in the educational process by email, in our opinion, is inferior to using the capabilities of instant messengers and social networks to organize the learning process. Creating closed or open groups in social networks or instant messengers helps to organize a quick exchange of messages between all participants in

the educational process. The moderator of the group can be both the teacher himself and the initiative student.

Posting materials for organizing independent work while using social networks or messaging services is inefficient, because they are quickly lost in the message flow. For these purposes, distance learning systems such as Moodle are effective.

When organizing the training of information disciplines, we took the principle of accessibility as a basis. The entire educational material on computer science is divided into modules, a point-based rating assessment of the knowledge of students of all types of student activities is applied: from the development of theoretical material and the implementation of practical tasks, to creative assignments and passing tests (Fig. 2).

Figure 2. Fragment of a distance course

The Moodle distance learning system reflects the time a student enters and exits the system, so you can roughly estimate the time a student spent on independent work.

4. Assessment in distance learning

Assessing the knowledge gained during distance learning is effective while using a point-rating system that allows you to objectively evaluate the knowledge of students, activates their initiative and independence. The features of a point-rating system is the division of readable discipline into modules (blocks); setting key dates and deadlines; the definition of a point-rating scale and its compliance with the traditional rating system; carrying out control and measuring measures at the end of the study of the module; the translation into a traditional grading system.

For certain types of the work performed by students, taking into account the deadlines, points are awarded. For the untimely delivery of the work, the maximum number of points is reduced. A certain number of points is awarded during the intermediate certification. To get the final rating score for the discipline, all these points are summed up and then transferred to the traditional rating system in accordance with the accepted rating scale.

We shall illustrate this scale with an example. For the disciplines of the information cycle being read within the framework of secondary vocational education, a point-rating assessment system containing clear boundaries and criteria has been developed and

tested. At the beginning of the study of the discipline, students get acquainted with the rules that are unchanged during the semester (table 1).

Table 1. The structure of the point-rating system of discipline

Points which a student can earn during the semester	Student rating
10 points - activity in the educational process; 40 points - practical work; 10 –the preparation of a multimedia, the demonstration on a selected topic; 10 –the participation in an educational project; 30 points – an intermediate certification.	- "excellent" you need to score more than 90 points during the semester. - “good” - from 75 to 89 points; - “satisfactory” - from 60 to 74 points; - “unsatisfactory” - from 30 to 59 points; - “non-admission to intermediate certification” less than 30 points

The student can get the maximum rating for the work during the semester (70 points) and with the intermediate certification, performed in the form of testing (30 points).

The student can score the greatest number of points for the implementation of the practical work described in the compiled guidelines and placed in the distance learning system. Their implementation activates educational and cognitive activity, i.e. the student’s interaction process with the surrounding reality, the result of which is the mastery of knowledge at the level of reproduction or creativity, the skills needed by a future specialist [6].

When evaluating practical work, the following points are taken into account. The student must understand the content of the work performed (know the definition of concepts, describe the meaning of the terms used in the work, etc.). The student has the right to finalize the work (according to the instructions of the teacher) for a period of not more than a week without reducing the score.

As for the untimely completion of practical work, the initial score is reduced by 10% for each week. The total score for practical work is made up of points obtained taking into account delinquencies and corrections. The correctness of the work is evaluated in points in accordance with table 2.

Table 2. Practical Assessment Criteria

Score	Content Characteristic
1	There is no theoretical material in a fully completed work
2	In the fully completed work, the theoretical material was practically not covered, mistakes were made on the nature of the issues under consideration.
3	In a fully completed work the theoretical material is presented at the minimum acceptable level.
4	In a completely completed work, there are no theoretical errors, but the student’s own, independent, substantiated, reasoned judgments are not formulated
5	In the completely completed work, there are no theoretical errors; own, independent, substantiated, reasoned judgments of the student are formulated.

5. Conclusions

The use of distance technologies (*Teams/Office 365, Google Meet, Zoom, Livresq, Google Classroom)* in the educational process of vocational training helps to create motivation for learning, independence and initiative among students, the teacher to expand the subject of the course, solving the problems of lack of classroom hours by organizing independent work. The point-rating system allows you quickly and objectively to evaluate the knowledge of students. Remote technologies are effective as an addition to the main course, which allows you to organize a blended learning model.

Bibliography

1. Chiriac L., Globa A. Studierea informaticii în învăţământul preuniversitar prin prisma metodelor şi tehniciilor moderne de programare. În: Studia Universitatis. Seria Ştiinţe ale educaţiei, (2016). Chişinău: USM, 2016. ISSN:1857-2103.
2. Морозов А.В. Новые технологические подходы в современном дистанционном образовании. В: VII Международные Махмутовские чтения. Казань: Отечество, 2018. с.361-370.
3. Скворцов А.А. Педагогические условия дистанционного обучения студента в наукоемкой образовательной среде: дис. канд. пед. наук: 13.00.01 / Скворцов А.А. Тамбов, 2015. 240 с.
4. Андропова Е.В. Технология смешанного обучения и ее роль в повышении качества образования. В: Информатика и образование. 2009, №8. с.112-114.
5. Билик Е. Модели смешанного обучения направленные на формирование групповой работы и коммуникативной компетенции. In: Conferința științifica națională cu participare internaţională „Învățământ Superior: Tradiții, Valori, Perspective”, Chişinău: UST, 2019. p. 122-12.
6. Мешкова Л. М. Сущность и структурно-содержательные компоненты активизации учебно-познавательной деятельности студентов технических вузов. В: Вестник Челябинского государственного педагогического университета, №5. 2010. с.119-125.
7. Зайченко Т. П. Основы дистанционного обучения: теоретико-практический базис. СПб.: Изд-во РГПУ им. А. И. Герцена, 2004. 167 с.
8. Ишанова С.А. Деятельностный подход в дистанционном обучении и открытое образование. В: Ученые записки Худжандского государственного университета им. академика Б. Гафурова, № 2. 2017. с. 242–246.
9. Молчанов С.В. Формирование современной информационно-образовательной среды: актуальные научные подходы к электронному обучению (краткий обзор наиболее интересных точек зрения). В: Образование и право, № 7 (23). 2011. с. 69–74.