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Distance learning in the system of higher education in Kazakhstan (based on main platforms and services)

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Abstract. *In this article, the author considers distance learning as a new stage in the development of education. The author focuses on the latest achievements in the educational process, as well as the impact of the self-isolation process on the introduction of distance learning. The main advantages and disadvantages of distance learning technology are determined. The basic principles that a teacher needs to master for conducting distance learning of students are considered. The main educational platforms and services are presented, such as Microsoft Teams, Moodle, Zoom, Cisco Webex, Google Classroom. The main features of each platform and service for distance learning are highlighted. The strengths and weaknesses of each of the above platforms and services are considered.*

Keywords: *distance learning; platform; service; Microsoft Teams; Moodle; Zoom; Cisco Webex; Google Classroom*

At present, the use of information technologies in the educational process brings education to a new stage of development.

The variety of modern technical teaching aids has led to greater accessibility of education. The latest achievements of modern science and technology are used to create new and improve long-standing forms and methods of teaching. Among such developments is distance learning. The recent regime of self-isolation and the forced transition of universities and schools to distance learning has prompted many teachers to thoroughly delve into the process of organizing and implementing distance learning.

"Distance learning is a new form of organization of the educational process, combining traditional and new information technologies of education, based on the principle of self-acquisition of knowledge, mainly involving the telecommunication principle of delivering basic educational material to the student and interactive interaction between students and teachers both directly in the learning process, and in assessing the knowledge and skills they acquired in the process of learning" [1].

Distance learning is a new learning format that has been gaining popularity in recent years. This format of training undoubtedly has a number of advantages:

— saving time and money on the way to the educational institution;

— learning in a comfortable environment;

— the ability to study from anywhere in the world with the Internet and a gadget;

— Continuity of education during pandemics and martial law.

In addition to its advantages, distance learning is not without its drawbacks. Among the main shortcomings, I would like to highlight the following:

— a large load on the organs of vision;

— lack of direct contact between the teacher and the student;

— no guarantee of independent fulfilment of educational tasks;

— the impossibility of learning in the absence of the Internet and a gadget.

Having considered the positive and negative aspects of distance learning, we can say that a lot depends on the attitude of teachers and students themselves to the learning process. An important task of the student is to take classes responsibly, to complete training tasks in a timely manner and with high quality, and to be able to distribute study time in order to reduce the load on their body.

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Distance learning is a process of transferring and mastering knowledge, skills and types of human cognitive activity into a specialized educational environment, which is based on modern psychological, pedagogical and information and communication technologies [6].

In turn, the teacher needs to improve his skills, be responsible for conducting online classes, interest students in interesting tasks, and establish contact and feedback with students.

In the educational process, the teacher needs to master at the highest level not only the basic teaching technologies but also improve his knowledge, mastering the newly emerging technologies.

Every day, distance learning technologies are improving and becoming more accessible in the learning process.

Technologies for conducting training sessions are determined by many factors. From the point of view of managing the educational process, the choice of technologies is determined by the teacher of the university.

A large number of methods have been described that provide the possibility of transferring knowledge at a distance. Basically, they can be divided into two groups: 1) training in the format of real regulated time; 2) training in an individual independent mode [7].

The educational process in distance learning includes all the main forms of the traditional organization of the educational process: lectures, seminars and practical classes, a laboratory workshop, a control system, research and independent work of students [2].

In order to give students the opportunity to make an informed choice, it is necessary to gradually introduce them to the available forms of education — to provide some topics for self-study on the Internet, and to consolidate the results in classroom seminars. Thus, it will be possible to evaluate the results of online learning, and identify and fill educational gaps. The most suitable means of online learning for students are educational platforms [3].

To date, many educational platforms have been developed for conducting online classes. The most popular are Microsoft Teams, Moodle, Zoom, Cisco Webex, and Google Classroom.

Microsoft Teams is a service that is part of the Office365 cloud platform that allows you to organize online learning, collaboration and interaction between students and teachers.

This application can be downloaded to a computer or smartphone, after registering, you will have access to the capabilities of this service. The service provides great opportunities for organizing online learning and allows you to:

— create Teams for conducting training sessions for students in groups;

— organize webinars, video lectures, as well as practical online seminars;

— create virtual classrooms, giving students the opportunity to make various presentations or share a digital whiteboard;

— teachers and students can interact using text, audio or video;

— provide students with access to educational materials and files;

— add and check individual and group assignments, issue them to students, track timely completion and carry out verification, and students — find out deadlines, turn in work and receive an assessment.

Currently, a virtual learning environment based on Moodle is widely used in the higher education system. Moodle is a web platform that refers to free software environments with open source code, i.e. is open source under the GNU Public License. Thanks to the open source, this system can be easily adapted to the goals of an educational project [4].

Leading institutes, universities, and colleges are deploying distance learning systems so that anyone can get an education from them, regardless of citizenship [8].

Moodle is a modular object-oriented dynamic learning environment. It is a free and open source platform that does not need to be installed on the server yourself. On smartphones and tablets, Moodle can be opened in Chrome and Safari mobile browsers or used with the Moodle Mobile app, making it more accessible for learning.

Among the capabilities of this platform, I would like to highlight the most useful and most used in the learning process:

— the ability to upload any type of content: text (including PDF and XLS), images, presentations, tests and courses, videos;

— the ability to create training plans;

— the interaction of students with each other and with the teacher through forums and chats;

—— to carry out the transfer of knowledge in electronic form using various types of files, archives, web pages, and video lectures;

— conduct knowledge testing and training using tests and tasks of various types, and students can send completed tasks in text form or in the form of files;

— the ability to track their own achievements in the course of studying a particular course by a student, and the teacher of the achievement of each student in the course of studying the taught discipline.

A definite leader among these programs is Zoom. Today, this program has, perhaps, the richest functionality, including the basic version. Zoom is a service for video conferencing, online meetings and distance learning. With it, it is possible to hold large interactive events with the broadcasting of video, sound and screens (up to 100 participants can participate in the free version of the program) [4].

Service features include:

— demonstration of presentations, images, graphs and documents for all participants in the educational process;

— communication between participants, both by voice and through messaging forms or by using the show of hands function;

— the teacher and students can write on the interactive whiteboard and communicate through the message board, which is located in the “screen sharing” section;

— conducting a survey with a different number of answers, the ability to make it anonymous;

— conducting sessions at a low Internet connection speed.

A significant disadvantage of the demo version of Zoom is the limited session time of 45 minutes.

Cisco Webex Meetings is an online meeting service that runs on PCs, smartphones, and tablets as a web application.

Allows you to create conferences for up to 1000 people. A tab is available in which it is possible to schedule video conferences in advance and make a mailing list in instant messengers or e-mail links to the meeting.

To conduct seminars, students connected in groups using the link sent earlier, at the appointed time. The teacher's screen displayed all those present in the form of window panels. The teacher was the moderator of the videoconference. The teacher conducted a survey of each student. Those present heard this answer and, if necessary, could supplement it or enter into a discussion. The function in the program "Raise your hand" was very helpful in this [5]. In the Cisco WebEx Meetings service, as well as the previously mentioned platforms and services, training rooms are created, and you can exchange presentations, text files and applications. It is also possible to record the lesson conducted by the teacher. For feedback from students and teachers, the service has a chat.

Another online learning service is Google Classroom. This service allows you to create courses, conduct webers and test students.

The service developed by Google is suitable for schools, technical schools, universities and non-profit organizations. Google Classroom is available for free. You can create 30 courses per day and open access to them for 200 people, which is an undoubted advantage of this service.

On the platform, the teacher can create his own course, organize the registration of participants, share the necessary materials with the training, propose tasks for completion and evaluate their performance.

Among the useful features of the Google Classroom service, I would like to highlight:

— the course can be divided into theoretical and practical parts;

— the ability to combine ready-made text documents, videos, presentations, and pictures into a course;

— use of tasks of different types: with the choice of one or more correct answers, writing an essay, task-picture, open-ended questions;

— setting evaluation criteria and deadlines for assignments;

— the possibility of holding video meetings lasting up to 60 minutes.

Info communication technologies help to optimize the learning process, freeing teachers from routine operations for the development and maintenance of educational materials, simplifying the control procedure and other processes that can be automated [9].

Distance learning has entered the 21st century as one of the most effective systems for training high-level specialists. It makes it possible to implement the underlying principles of DL: the first is "education for all", the right of everyone to start studying and receive a secondary or higher education without entrance examinations; and the second — learning with minimal contact with the teacher when the emphasis is on independent work [8, 10].

In the course of the analysis of existing platforms and programs for distance learning, I would like to highlight the availability of the functionality and capabilities of the above platforms. All of the listed platforms and services have standard functionality necessary for conducting classes, with the help of which you can use video lectures, use presentations, and text files.

Thus, for better online classes and deep assimilation of academic disciplines, the standard functions of platforms and services are not enough. In addition to standard capabilities, it is necessary to use various types of test tasks in the educational process, evaluate the quality of their implementation, and use various educational materials. The platforms and services of Microsoft Teams, Moodle, and Google Classroom have such functions.

Summing up, it should be said that distance learning is a technology that is certainly convenient and useful, but, despite a large number of positive aspects, this technology also has negative aspects to minimize, which require work. When choosing a platform and service for distance learning, teachers should have knowledge about the capabilities of each platform, and relying on this knowledge, choose a platform whose capabilities will help in the implementation of specific pedagogical tasks.

References

1. Zubov AV, Zubova II. Informatsionnye tekhnologii v lingvistike: uchebnoe posobie dlia studentov lingvisticheskikh fakul'tetov vysshikh uchebnykh zavedenii [Information technologies in linguistics: a textbook for students of linguistic faculties of higher educational institutions]. Moscow: Akademiia; 2004. 208 p. (in Russian).

2. Demkin VP, Mozhaeva GV. Tekhnologii distantsionnogo obucheniia [Distance learning technologies]. Tomsk; 2002.106 p. (in Russian).

3. Tiunova NYu. Educational platform as a tool of college students' professional training intensification. Professional Education in Russia and Abroad. 2016;(22):103-108. (in Russian).

4. Tseryulnik AYu. Use of distance education model of teaching students in the educational process. International Research Journal. 2020;(96):92-95. doi:10.23670/IRJ.2020.96.6.094. (in Russian).

5. Tairov VV, Kirsh KD, Adamchik AA, Kosenko VYu. An analysis of the academic performance of students of the department of dentistry during distance learning during the COVID-19 pandemic. International Scientific Research Journal. 2021;(112):66-69. doi:23670/IRJ.2021.112.10.040. (in Russian).

6. Voronenko YuV, Minster OP, Ivanov DD. Promissory Concept of medical education. J Eur CME. 2015;4(1):25135. doi:10.3402/jecme.v4.25135.

7. Voronenko YuV, Mintser OP, Ivanov DD. Modern philosophy of knowledge transfer in postgraduate medical education. Počki. 2012;(2):15-16. doi:10.22141/2307-1257.0.2.2012.176626. (in Ukrainian).

8. Pokushalova LV. Distance learning is the educational system of the future. Philology. Theory and Practice 2009;(4):200-202. (in Russian).

9. Ruliene LN. Distance learning as a new educational practice. BSU bulletin. Philosophy. 2011;(1):67-70. (in Russian).

10. Iurkov NK, Levin VI, Bannov VIa, Trusov VA, Almametov VB. Distance learning in Russia and its problems. Proceedings of the International Symposium: Reliability and Quality. 2005;(1):316-317. (in Russian).

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Дистанційне навчання в системі вищої освіти Казахстану (на підставі основних платформ і сервісів)

Резюме. У цій статті автор розглядає дистанційне навчання як новий етап розвитку освіти. Автор наголошує на останніх досягненнях освітнього процесу, а також впливі процесу самоізоляції на впровадження дистанційного навчання. Визначено головні переваги й недоліки технології дистанційного навчання. Розглядаються базові принципи, які необхідно засвоїти викладачеві для проведення дистанційного навчання студентів. Наведені основні освітні платформи й послуги, такі як Microsoft Teams, Moodle, Zoom, Cisco Webex, Google Classroom. Висвітлено головні можливості кожної платформи і сервісу для проведення дистанційного навчання. Виділено сильні й слабкі сторони кожної з наведених вище платформ і сервісів.

Ключові слова: дистанційне навчання; платформа; сервіс; Microsoft Teams; Moodle; Zoom; Cisco Webex; Google Classroom