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ONLINE EDUCATION CHALLENGES AND SOME TIPS OF THEIR SOLUTION

Summary. *The types and methods of distance learning are considered. The author comes to the conclusion that in spite of all the online education challenges the teachers are able to organise the students' work on a rather high level. The best way of doing this is using mixed learning methods on the basis of modern information and communication technologies. The distance and blended learning effectiveness in dependence of the existing types of online interaction and technology platform (Moodle) is studied. Due to the previous Moodle implementation by some Ukrainian Universities, the transition to this type of learning was not so painful.*

Key words: *blended learning, distance course-resource, distance learning, quarantine measures, remote platform.*

The general problem outline. Because of the spread of the Covid-19 virus in March 2020, all the countries began to introduce quarantine measures, which led to the closure of all educational institutions for indefinite time. They were forced to short term moving to the distance learning (DL) process. The readiness was different, there were too many technical problems – the lack of Internet, computers, online learning materials. And the most important is teachers' unpreparedness to distance learning.

The IT industry was the first to respond to the needs of teachers and students: it increased channel capacity, a large number of services and learning tools. For video conferencing one of the most popular software was found ZOOM, a large number of blogs with recommendations for conducting training, distance learning courses on the development of educational resources and training organization was published in social networks.

The latest researches and publications analysis. There are a lot of scholars in our country and abroad who are paying a great attention to the problem of distance education, some of them are greatly interested in the implementation of modern information and communication technologies methods (V. Kukharenko, V. Bondarenko, G. Tkachuk, M. Kurvits, L. Liakhotska). Since we have been facing it for the last two years it is becoming more and more demanded.

The aim of the article. To study and analyse the distance education peculiarities.

Under the "Regulations on distance learning ", approved by the Ministry of Education and Science of Ukraine, distance learning is an individualized process of acquiring knowledge, skills, abilities and human being cognitive activity methods, which occurs mainly through indirect interaction of remote participants in the learning process specialized environment, which operates on the basis of modern psychological, pedagogical, information and communication technologies [8]. Nowadays it is espacially up-to-date.

It is important to emphasise that in Ukraine electronic distance learning courses have started since 1996 [3]. Their rapid development leads to the distance university education practical implementation improvement. The main distance learning methodological principles are: contact establishing, the principle of awareness of the course studied, the principle of clarity and accessibility, the principle of taking into account the students' native language and positive emotional background [6].

After the quarantine easing in the world it became clear that humanity moved to a new stage of development, where distance learning will play great role. Therefore, it is important to analyze the results of the remote educational process and identify priority ways to develop online education. The global threat in the form of Covid-19 has set new challenges for academic staff and higher education seekers. And though a small number of lecturers and students actively used distance learning services before quarantine, then in modern conditions there is a significant increase in the number of registered scientific teaching staff and applicants on the Moodle platform. Such a quick and unexpected transition to a new type of activity forced most teachers to master on their own new technologies and methods for them, and students – to learn "new rules" of teaching.

For the last 7 years the majority of Ukrainian universities have been using modern information and communication technologies based on the remote platform "Modular Object-Oriented Dynamic Learning Environment" – Moodle. The Moodle platform, as a content management system – CMS, allows to use the Internet to access the relevant training resources. It contains a large number of different learning elements (so-called "modules") that provide dialogue and cooperation between the teacher and students. Using this platform a teacher can select any of the modules, place them on the site, edit, update, using Moodle for information, training and students' assessment. The platform allows you to use forums within the training discipline, monitor student's activity, contains an electronic assessment journal. The system is completely free, has an open source code, does not need any paid software for its work, hasn't got any use restrictions. It can be easily installed at home computer, the educational institution local network, and the global network . In addition, the easy-to-learn Moodle system has a handy interface, simple and clear to the average user.

The COVID-19 crisis has shown educational institutions that integration of blended and distance learning into the learning process is long enough and needs qualified teachers.

Such a specialist training requires hard work for more than two months on distance learning course development. Let's consider some simplified approaches to course development to help teachers.

Distance course planning.

Distance course development begins with planning [4], namely:

- It is necessary to determine the method of distance learning:

- meetings in real time (material explanation, answering questions);

- distance learning through interactive learning materials (videos, interactive videos, texts, pictures). For students' questions it is necessary to create a chat to communicate so that when faced with difficulties, they continue to perform tasks.

- To plan the students' work in the subject , basing on the learning results that students should achieve.

    Ask yourself three questions:

- what learning results will students achieve ?;

- how will they achieve learning results ?;

- how can the teacher support them in this?

Basing on the answers, you need to make a plan for yourself and the students' work:

- to determine what the relationship with students will be;

- to start creating educational materials, after all to organize educational work remotely is to help a student to understand himself what he does not know and is not able. Training materials should be accompanied with instructions for work, indicating the time required for work on the task and

for studying the materials, the necessary strategies, recommendations and tips.

A precondition is to take into account the challenges you may face.

Challenge 1. Students who have not worked before may not start work after.

Challenge 2. It takes some time to create training material.

Challenge 3. You need to think about the work that students will do for evaluation.

Challenge 4. You need to decide what digital services will be used.

Distance course-resource [5] – is the material of a teaching subject educational and methodical complex (manual, textbook or lecture notes, methodical instructions for laboratory and practical works, subject programme, tests), information about the teacher), which is placed in a distance course (such as Moodle) for effective use by students.

The structure of the distance course-resource

The distance course-resource includes links to:

- Teacher's methodical cab;
- news forum;
- questions to the teacher forum;
- textbooks, manuals, abstracts;
- methodical instructions for laboratory classes;
- methodical instructions for practical classes;
- work program;
- tests before the course.

Additionally, for students' own work organization you can post the weekly work program course with:

✓ tests for passing;

✓ tasks for placing students' reports on the work done;

✓ rating system for assessing students' activity;

✓ final tests for the discipline.

Possible options for a distance resource course usage:

- students' selfwork in the subject organization;
- creating a full-fledged distance course, which will meet all the requirements of the "Regulations on the university distance course expertise ";
- organization of blended learning in the subject, for which needs finding the most effective combination of classroom and distance learning, significantly reducing the number of lectures and increasing the practical part course.

Creating a distance course, teachers can observe psychological, pedagogical and informational problems as well as design problems, so it is better to use practical recommendations:

Psychological:

- distance course is a comfortable student and teacher environment for the educational process organization;
- distance course is the teacher's face, his attitude to the student;
- student is a main person in the educational process;
- the result is important in teaching, not the process or the logic of the subject;
- creating a distance course does not require from the teacher programming knowledge or its skills;
- a successful distance learning course has a weekly format.

Pedagogical:

- the quality of the distance course is determined by the teacher's level of Bloom's taxonomy knowledge;
- the week purpose should be achievable and clear to the student;
- the student should understand when he has reached the goal;
- the chat shouldn't last more than one hour;

- forums should be defined for each week as needed;

- do not use specific pedagogical terms unnecessarily;

- course score should correlate with Bloom's taxonomy.

    Information materials:

- the text questions on a separate page are not recommended as they create an extra background that breaks the connection between the text and the questions;

- Additional downloads of information files are students' time waste;

- Additional sources of information should be provided in a separate file with sources annotation;

- each section should have a meaningful title;

- do not submit instructions to tasks on a weekly page;

- the "book" element in Moodle must be a book (over 5 pages);

- "Lecture" in Moodle should not be without questions.

    Design:

- distance course is a comfortable students'and teacher's environment;

- transparent navigation and easy search;

- information on the main page is minimized and available at mobile device;

- applications should be embedded in the course pages (presentations, infographics, mind maps, videos).

Of course, it's obvious that in today's reality Moodle platform is not enough for the full-time students. In this case we can speak about mixed learning methods on the basis of modern information and communication technologies.

Let's consider the main types of distance learning [2; 9; 10] (Fig. 1):

Video conferencing is a common way for teachers to interact directly with students in real time. It can be an eye to eye session or a class-like scenario when several students connect to a teacher online.

Synchronous learning means that all the students of the group study together (and often even in one classroom), but the teacher is in another place. This is done using video conferencing, which connects teachers and students in a digital form.

Asynchronous learning has a less connected but less limited format. Instead of live online classes, students are given learning tasks on time. They study the theoretical material needed to perform the tasks independently. Communication with the teacher takes the form of consultations, usually created in the form of a chat, forum or correspondence.
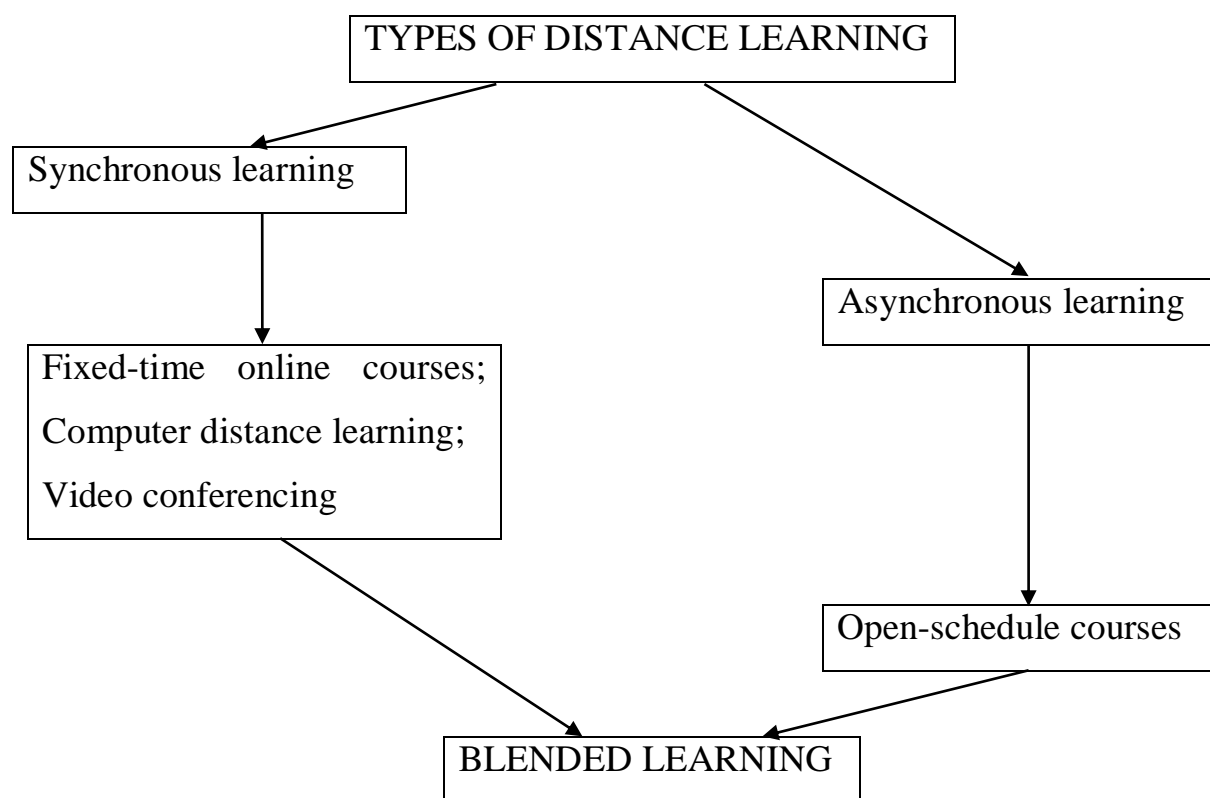
Open-schedule courses add another level of flexibility. This is a type of asynchronous learning, but for the lack of deadlines. This type is ideal for students with special time requirements, such as employed workers or maternity leave students.

Fixed-time online courses are a type of synchronous course that requires all the online users to visit a specific virtual location at a specific time and location (such as a webinar). In comparison with synchronous classes, it allows students from anywhere in the world to connect and interact over the Internet.

Computer distance learning is a synchronous lesson with a fixed time on computers, usually in a computer lab. This type of DL is more common in the institutions that already have access to the necessary devices.

Mixed (blended) learning combines elements of synchronous and asynchronous styles (Fig. 1). Depending on the specifics of the course, it is possible to change the ratio between independent work hours and hours for direct interaction with teachers quickly. This form of education is easily adapted to the needs of the curriculum and has a number of advantages [9].

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                    │  TYPES OF DISTANCE LEARNING      │
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TYPES OF DISTANCE LEARNING

Synchronous learning

Asynchronous learning

Fixed-time online courses;
Computer distance learning;
Video conferencing

Open-schedule courses

BLENDED LEARNING

Fig. 1. Blended learning structure

Conclusions.Therefore, we see how important it is to use different types of distance learning nowadays. Of course, there is no arguing in the importance of a personal contact between a teacher and a student, but even under the remote learning conditions they can easily have a face to face meeting on some distance platform by video conferencing (Zoom, Skype, Google Meet, Microsoft Teams). Any social networks can be helpful (Viber, Telegram, WhatsApp). The easiest way for a higher education teacher to reach the aim in learning process in our opinion is blended learning development methods.

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