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**ASPECTS OF DISTANCE LEARNING IMPLEMENTATION IN  
REGIONAL EDUCATIONAL INSTITUTIONS**

V. L. Nazarov (a)\*, L. I. Doliner (b), G. A. Butakova (c)

\*Corresponding author

(a) Institute of the Education Development, Ural Federal University, 52 Lenin street, house 52, building. 3, apt. 141,  
Yekaterinburg, Russian Federation, v.l.nazarov@urfu.ru

(b) Ural Federal University, 24 Uchiteley street, house 24, apt. 17, Yekaterinburg, Russian Federation,  
dolis13@rambler.ru

(c) Institute of the Education Development, 16 Academicheskaya street, Ekaterinburg, Russian Federation,  
butakovagal@gmail.com

***Abstract***

Digitalization involves the active use of the digital educational environment (DSP) in educational organizations. As a rule, such an environment assumes a combination of digital educational resources (CES), technical, technological and personnel support, as well as the availability of educational technologies focused on the use of all these resources to organize training at a modern level. It is assumed that the participants in the educational process will have a fairly comfortable environment for access to all the centers. Today there are many software products that allow this access. These are teacher's websites and blogs, and educational portals containing many links to Internet resources, as well as their own ones (Moscow electronic school: <https://www.mos.ru/city/projects/mesh/>, Russian electronic school: <https://www.nes.ru/>, Uchi.ru: <https://uchi.ru/> and others). Similar software products include distance learning systems that provide educators with the opportunity to create their own educational resources. The peculiarity of these resources is that within their framework it is possible to create a full-fledged training cycle that includes the whole range of teaching aids: theory, trainings, monitoring, self-monitoring, consultations, project development, etc. The process of using such tools today is called distance learning (e-learning, distance learning technologies). The study is dedicated to the process of introducing distance learning in the educational organizations of the region.

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**Keywords:** Distance learning, distance learning technologies, teacher training, joint development of electronic courses.



## 1. Introduction

The task of using computer (information) technologies in education has been associated for many years with the need to improve the quality of education. Unfortunately, it is too early to talk about solving this problem today. The era of digitalization has come. And although the task of improving quality has remained significant, education has set an equally urgent goal: to train personnel for the future digital economy.

Russian educators consider the digitalization of education as an inevitable process of changing the content, methods and organizational forms of educational activity, which takes place in a rapidly developing digital educational environment and is aimed at solving the problems of the country's socio-economic development (Nikulina & Starichenko, 2018).

One of the key conditions for digitalization is the widespread adoption of digital technologies in the educational process of educational organizations (Doliner, 2019; Machekhina, 2017). One of the conditions for the implementation of the Federal state educational standards of basic general and secondary vocational education (Nikulicheva, 2016) is the creation of an information educational environment that includes, along with the CRS, software and hardware “remote interaction of all participants in educational relations (students, their parents ( legal representatives), pedagogical workers, bodies administering education, the public), including with the use of distance educational technologies” (Nikulicheva, 2016, p.7).

It can be stated that distance learning has come a long way from initial ideas to modern means of its design based on pedagogical design and modern distance learning systems (LMS). Today, distance learning is increasingly being introduced into general and vocational education. However, with all the success, a certain range of problems should be noted. If we formulate them in a generalized way, then we can reduce them to two key ones:

1) There is a gap between the achievements demonstrated by the developers of distance learning systems and electronic courses, and practice: in a large number of educational organizations, distance learning is either quite formal or absent;

2) While distance learning most often resembles the “fifth wheel in a cart”, since the educational process is built mainly on traditional approaches to learning, and distance learning can be excluded without compromising educational results. But it becomes obvious that distance learning (e-learning, distance learning technologies) in modern conditions should become a system-forming component of modern education, on the basis of which either part of the educational process (blended learning) or (in certain cases) the entire educational process should be planned.

This, in particular, was demonstrated by the practice of a universal transition to distant education in schools and universities of the country in the context of the coronavirus pandemic in March-May 2020, which was implemented to varying degrees of success in various educational organizations.

At the State Autonomous Educational Institution of Additional Education of the Sverdlovsk Region, "Institute of the Education Development" (hereinafter - IED) in 2015-2019 a study was conducted related to the aspects of the introduction of distance learning in educational organizations of the Sverdlovsk region.

## **2. Problem Statement**

In the period preceding the coronavirus pandemic, the majority of educators did not understand well what tasks e-learning (EE) and distance education technologies (DET) can solve. In the best case, this was perceived as an auxiliary tool that can be used sporadically to solve some unimportant educational problems. Attempts to train teachers to work in a digital educational environment ended unsuccessfully: no more than 5% of students tried to introduce at least elements of distance learning, but either the high laboriousness or rejection of the leaders of educational organizations quickly thwarted these attempts.

To change the situation and make distance learning technologies an integral part of the modern educational process, it was decided to create a regional digital educational environment, the basis of which will be a distance learning system (LMS) containing electronic courses, to prepare the developers of these courses and create the conditions under which the educational organizations of the region will begin actively introduce it into the educational process.

## **3. Research Questions**

The following questions are considered in the article:

- How to prepare teachers so that they are ready and interested to introduce distance learning in their educational activities?
- What conditions need to be created so that the introduction of DET meets the needs of educators?
- How to prepare and motivate the administration of educational organizations in the region to introduce DET in the educational process?
- What regulatory documents should be prepared in an educational organization for DET to become an element of the educational process?

## **4. Purpose of the Study**

To identify the conditions and sequence of actions necessary for the introduction of distance learning technologies in the educational process of the educational organization of the region.

## **5. Research Methods**

The study was preceded by an analysis of literature and Internet sources, questionnaires, interviews with teachers and heads of educational organizations in order to identify key research issues, and to identify what real problems it would be possible and would like to solve with the help of distance learning.

## **6. Findings**

The first research question is related to the creation of a system of advanced training for teachers in the field of distance learning.

In accordance with the Federal Law of the Russian Federation dated December 29, 2012 No. 273 “On Education in the Russian Federation”, training of educators began to be carried out more often (every

three years, and not once every five years), which required the intensification of the activities of the Institute for Educational Development. One of the solutions was to introduce distance learning into the system of additional professional education. Hypermetod eLearning Server was acquired and the development of e-courses began. At the same time, teachers began to teach the basics of Distance Learning (DL), for which a course "Modern Distance Learning Technologies" (MDLT) was developed and teachers were given access to the LES. The course was part-time. It was the distance part of the course that provided practical training for teachers in the field of DL. The observation showed that the teachers studied with interest, but really tried to introduce Distance Education in their institutions at best 10% of the number of graduates. Moreover, they did this fragmentarily, having developed only a few classes. When the training was attended by over 2000 teachers, it became obvious that the effectiveness of the training had low results: there was practically no introduction to distance education in educational organizations. Surveys aimed at finding out the reasons for this showed that:

- Teachers, even after completing the MDLT course, did not have sufficient skills to develop modern interactive tools and electronic courses;
- Educational organizations (both schools and colleges) were not interested in introducing Distance Learning in the educational process, since there were no normative documents obliging to do this;
- Teachers are extremely busy and allocate time for the development of an electronic course in full; they have neither time nor motivation;
- There were very few electronic courses that can be used in work.

The first problem was solved quite simply: we developed a series of small (from 24 to 40 hours) continuing education programs focused on the technical and methodological aspects of developing electronic courses (designing and preparing interactive course components, creating videos and training modules, etc.). These programs taught mainly to those who completed the main course of MDLT.

To solve the second problem, a continuing education program was developed for the heads of educational organizations "E-learning and distance learning technologies in an educational organization", in which leaders and their deputies were trained to implement and use distance learning. However, this was not enough, because, having got acquainted with the technology of distance learning, the leaders did not know how to put DL in practice in the institution. To solve this problem, at the second stage, the "Center for Distance Educational Technologies" (CDET) structure was created, the task of which included:

- support for the introduction of DL in educational organizations;
- development of electronic courses for educational organizations;
- support the development of electronic courses for teachers;
- consultation of all users of CDET.

During the work of the Center, the following approach was developed (Butakova, 2020; Nazarov, 2000):

1) To form a motivation for the introduction of DL in educational organizations. A request for the implementation of programs using e-learning and training using distance learning technologies may come from parents, students, teachers, in the end, this may be the decision of the administration to make educational activities more effective. In any case, it is necessary to enlist the support of all participants in educational relations by informing them of the benefits of this form of training. In addition, already in the learning process, it is necessary to systematically monitor the satisfaction with the quality of training of all participants, this will help to avoid some problems. One form of interaction may be periodic questioning. And another important point: it is necessary to determine why, in fact, the distance learning form will be used. Practice has shown that the following areas are among the most popular:

- The transition of educational organizations to a 5-day academic week by translating Saturday into the distance learning format;
- Work with target groups of students: either with poor grades, or with children with increased educational motivation;
- Homework;

2) Use of DL in force majeure circumstances. In this case, the development of content is difficult because it's difficult to prepare for this situation in advance. However, in this case, you can organize a "quick" distance learning using ready-made electronic educational resources (electronic textbooks, online services, webinars, ready-made courses and video lessons, etc.). Unfortunately, the situation with self-isolation and the massive transition to "distance" education has shown that real-life platforms can ensure the full-fledged implementation of educational programs in distance form for no more than 25% of students. Only a small part of the teachers used systemically such a "quick" approach. The main part tried to implement traditional training through telecommunication technologies. As a rule, it is "given the task - got a solution - checked - put marks - gave the task." To do this, use e-mail, electronic diaries, video conferencing (such as Zoom). Resources are used on the technology "go & look ...". As a result, the load on teachers has increased significantly, since in fact from the frontal forms of work occurred to the individual; In fairness, it should be noted that a similar situation has occurred in many countries of the world;

3) Preparation of an implementation plan for DL. Such a plan will help to systematize the process and plan the load of teachers and administration. It usually takes at least 6 months to implement the plan. The option when "from Monday" it was decided to introduce "distance learning" usually ends in failure, because "An unworked scheme causes a lot of negativity on the part of all participants in educational relations" (Butakova, 2020, p. 10);

4) To prepare the regulatory basis for the implementation of DL. First of all, this is the main educational program, in which it is necessary to justify the need to use DL, describe the features of educational activity, the training of teachers, material, technical, methodological, hardware and software conditions, a description of electronic educational courses used to implement training using distance learning technologies. Learning using distance learning technologies can take place according to an individual curriculum (for students at home, for children with disabilities, and in other cases when the student needs an individual educational path).

The use of teaching using DET is described in an explanatory note to the curriculum, for example, as follows: “the main form of organization of educational activity is the classroom lesson form (lectures, seminars, laboratory classes, workshops, research, presentation, integrated lessons, discussion, didactic games , group work, video tutorials). In addition to the classroom-lesson form, other forms are used to organize educational activities, such as: consultations, conferences, web conferences, design works, tours, group work, creative workshops, intellectual, role-playing games, a forum, a literary drawing room, independent work, as well as training using distance learning technologies in individual courses, topics” (Butakova, 2020, p. 12).

In addition, local regulatory acts and administrative documents should be prepared. These documents include, first of all, the “Regulation on e-Learning”, and training using distance learning technologies in an educational organization” (hereinafter - the Regulation), the order on appointing those responsible and determining their authority. The key objectives of the Regulation are to describe the goals and objectives of using the DL, the conditions for using the DL, and the organization of the DL.

In the Regulation, it is necessary to prescribe the technology of accounting and payment for conducting classes in a remote form, as well as payment criteria for developers of electronic courses. It should be noted the nuances associated with the development of courses. Firstly, the development of materials for their classes and for their tasks is included in the duties of the teacher. It makes sense to talk about payment if and only if the development is done for the institution, becomes the property of the institution, and any teacher in the future will be able to use the created product in professional activities. The financial component is already determined by the administration of the educational organization;

5) Of course, it is necessary to educate teachers in the basics of implementing distance education technologies using the distance learning system. There is a certain methodological complexity associated with the technology of developing electronic courses. To independently develop an electronic course for a teacher is quite difficult and time-consuming. To solve this problem (this is the solution to the third problem), the following approach was developed:

- When working with CDET, the following rule applies: all created electronic courses are available to all DL users. This means that it is not necessary to create a new course, you can use the finished one. When using the course by another teacher, a copy of the course is created, which can be edited for his professional tasks. This approach has significantly expanded the range of electronic courses used;
- The preparation of teachers for using DL includes two components: the organization of educational activities using distance learning and familiarity with the technology of developing electronic courses. The most problematic moment is to teach educators to develop courses together. The problem is that traditionally their work has a pronounced individual character, and the labor-intensive technology for creating electronic courses involves collective work (to reduce these same labor costs);

6) The last problem (a small number of electronic courses) was solved with the help of the approach described above: the use of CDET by the educational institutions ensured accessibility for all created

electronic courses. This approach also has a “side” effect: during use, a joint examination of the content of the developed electronic courses is carried out, which positively affects, inter alia, their quality.

## 7. Conclusion

Education is a fairly conservative field of activity, based on traditional forms, methods and means of organizing training. However, rapid social and scientific-technological transformations led to the transformation of the learning process into a more flexible and dynamic process. This is directly related to the introduction of new digital technologies in education. Distance educational technologies, as one of the components of modernization and digitalization of education, are beginning to enter education more and more actively, which, unfortunately, is facilitated by recent events in the world related to the pandemic.

The approach considered in the article on the introduction of pre-school education in educational activities has become a technology that is actively used by the staff of the Center for Distance Learning Technologies of the IRO. At the moment, DO has been introduced and is actively used in more than 70 educational organizations of the Sverdlovsk region, more than 40,000 students (teachers and students) are connected to the system.

The approach to creating electronic courses proposed in the study, from our point of view, has prospects, since it allows us to solve one of the most serious problems. The mechanisms for modifying educational information (which changes annually quite intensively) in electronic courses are not yet obvious. This, as a rule, requires serious financial costs: for example, which is worth remaking video courses, simulators, etc. facilities. The approach, involving the orientation on the labor costs of teachers, in this sense is justified. Yes, the video quality will not be so high (although technology is being improved). Yes, trainings will be conducted on the basis of ready-made templates (artificial intelligence will very soon come to school). But unequivocally, our teachers will solve pedagogical problems no less qualitatively.

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