Problems of On-line Education in Modern Russia and Ways to Minimize Them

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ABSTRACT

Having passed a long way of development, distance learning from the category of innovation is going to the one of common sight. The gap in space and (until modern phase) in time has been the intact sign of each stage of its development. Distance learning is also characterized by the presence of technology, dialogue between the learner and the trainer, a high proportion of self-study, formal organization. As it is demonstrated by our study, distance learning in higher education, has a number of problems. To solve them, we proposed the subject-centered approach, since there are always people behind all economic, political, legal, pedagogical, psychological problems of distance learning. After identifying the main difficulties, the ways to minimize them were proposed: permanent two-way communication between teachers and students, instructors and students, teachers and instructors; encouragement and support of communication between students, conducting face-to-face meetings between students and teachers; duplication of academic and organizational information; interaction of students with students-tutors.

Keywords: : distance education, distance education, e-learning, distance learning, remote problem/eLearning, minimizing the difficulties of distance/e-learning

1. INTRODUCTION

Modern online education is one of the fastest growing ways of learning all over the world. online education is actively developing in the framework of modern higher education in Russian Federation; however, it inevitably faces a number of problems. One of the ways to minimize them is the subject-centered (personality-centered) approach in the development of online education. This is due to the fact, that the many organizational, economic, pedagogical, and psychological problems of online education are based on features of a particular persons. Considering the peculiarities of the history of the development of distance education, mentality, educational traditions, personal motivation, life circumstances, helps minimize problems of the online education.

The goal of the study

This article will identify some of the difficulties of developing online education in Russia and suggest ways to minimize them. To do this the first part of the article briefly describes the development of distance education and its features in Russia. The second part of the article presents a discussion about the content of online education, distance education and reveals the features of understanding online education, distance education in Russia. The third part discusses the problems associated with the development of online education in Russia and suggests ways to minimize them.

The question about the relationship between distance education, online education, e-learning education is debatable. In this article, "distance education" denotes the type of education that existed before the advent of new information and computer technologies and was asymmetric in time. "Online education" means the modern type of distance education and involves the use of modern technologies and the possibility of a synchronous communication between students and professors.

History of distance education

Distance learning began its development in the 18th century [1], and, accordingly, has continued about three hundred years. The earliest form of it is the education through postal correspondence, "postal/correspondent education". In 1728, in "Boston Gazette", the public was offered classes on stenography, assignments for which were sent by mail [1]. In 1840, the pioneer of distance learning, Isaac Piman, an English teacher, organized shorthand training in England by sending postcards. Students received brief instructions, shorthand Bible passages, and sent back for verification. The advantages of postal education were the ability to study at a distance, to study at a convenient time and, of course, at a low cost.

In Russia, such "correspondence education", unlike Europe, appeared later - in the second half of the 19th century. Its initiators are scientists, thinkers, public figures: V.A. Myakotin, V.I. Semevsky, V.D. Sipovsky. Their aim was to increase the elementary literacy of the population. However, distance learning by correspondence was not widespread. There were several reasons for this: firstly, long distances and large territory; secondly, lack of interest, motivation; thirdly, distrust from potential students.

The first case of distance education introduction into the university system was at the University of London in 1828. The first educational institution in the United States that offered distance educational programs was Illinois Wesleyan College (now Illinois Wesleyan University, Bloomington) in 1874 [2].

In Russia, professional distance education appeared at the end of the 19th century. A peculiar and the only officially recognized form of distance education in pre-revolutionary Russia was "externship". This form was created for those who wanted to get an education in any professional field on their own. To help them, special methodological centers were created: "The Commission for the Organization of Home Reading" ("Комиссия по организации домашнего чтения", Moscow, 1893) and "The Department for the Promotion of Self-Education" ("Отдел для содействия самообразования", St. Petersburg, 1984). Their activity consisted of distribution of training materials, programs, written consultations. Most of their materials were based on universities courses.

In addition to publishing their own teaching materials, the activities of the methodological centers included compilation of reading programs for self-education in the natural and human sciences in two cycles (encyclopedic and specialized), as well as the management of home reading through correspondence with those who were interested in deepening their knowledge. Members of different classes and different levels of education could get assistance [3]. Distance education was aimed, on one hand, to improve professional knowledge, and on the other, to increase general education. This work was based on the voluntary work of professors and donations from philanthropists.

Another goal of the activity of methodological centers was to democratize the educational process and move it beyond the framework of the state bureaucratic machine. Since the state did not participate in the activities of the methodological centers, they were quite free in the choice of programs, literature and in the content of consultations.

Distance vocational training was attractive for the same reasons as individual postal education: the opportunity to study at a convenient time, to do it at a distance and at a lower cost.

The next stage in the development of distance education is associated with the development of radio. Radio use in the learning process reached the biggest popularity in Europe and in Latin America. This is due to the low level of development of the postal service and lower literacy of the population than in the United States. The use of radio in the process of distance learning has several advantages: a large audience coverage, the ability to change content quickly, low cost.

The first university, which was officially approved as a center for distance education, was the University of Wisconsin-Extension in 1906. Fifteen years later, the first licensed radio station for educational broadcasting was organized there. By the beginning of 1930s, 73 educational institutions in the United States already had licenses for educational broadcasting [4].

The first experience of television broadcasting for educational purposes in the United States dates to the period of 1932-1937 at the University of Iowa. The use of television proved itself in the military training and became popular in universities: the University of Iowa, Kansas, and the University of Michigan [5]. The use of radio and television in the educational process expanded in the 60s and 70s. Television was being used in direct learning (face to face) to illustrate, explain, confirm, or, as an option, in independent home schooling. Starting in the second half of the 20th century, the use of video lectures has become the standard way of distance learning. The video lectures are mostly used to study foreign languages, and, since the 70s, parcels with cassettes are being actively sent across Europe and the USA.

In Russia, the development of distance education was largely affected by the political and economic factors. After the revolution of 1917 to speed up development of production it was necessary to train a large number of people. The fulfillment of this goal was complicated by two factors. Firstly, existing educational institutions of the traditional type could not dramatically increase the number of students. Secondly, it was impossible to "tear away" many people out of the production process so that they could be trained.

To solve this problem, a specific form of distance education was organized – extramural ("заочное", "zaochnoe") education. The content and organizational principles of this type of distance education were determined in 1929 by the board of the People's Commissariat of the RSFSR. To develop distance education, special training centers had been created in the higher education system: the Leningrad Industrial Institute (1929), the All-Union Distance-Learning Institute of Finance and Economics (1930).

The peculiarity of extramural education was in the combination of the traditional (face-to-face) education and distance education. At the beginning of the academic year, it was necessary to attend the introductory classes. They explained the substantive features of the course, the requirements for assignments completion. Then the student studied the learning material, completed tasks and sent them in by mail. At the end of the year, the student came back and took exams and tests. This kind of education ("zaochnoe" education) was popular and by 1929 included about 40,000 people who studied in 17 special institutions and special departments in 383 higher education institutions. By 1955, the number of institutes had increased to 22, and the number of faculties to 600.

Along with the development of professional "zaochnoe" education in Russia, educational broadcasting was being actively developed. In 1928, the first university, in which training was carried out using radio broadcasts, was created. It was later transformed into the Institute of distance learning by radio.

In the '60s, radio was replaced by television: training programs were broadcast for students, and televised versions of lectures were developed. Since the '80s, training audio and video tapes have been recorded. Even though these technologies did not have "feedback", they increased the level of perception of educational material.

A breakthrough in distance education in Russia begins in the mid-'90s. It is associated with the use of new information and computer technologies. Higher educational institutions actively use computers, e-mail, interactive message boards, videoconferencing, audio-conferencing. By the end of the '90s, more than 200 educational institutions were using new information and computer technologies reached by the end of the '90s

The development of online education in Russia has gone through three stages since the beginning of the '90s. The first stage (initial) involved the use of new teaching aids: presentations, electronic textbooks, testing programs. The next stage (technological) is characterized by a higher technological level of educational material: electronic means of training, organization and support of the educational process were created, various models of e-learning management were developed, approaches to assess the quality and effectiveness of e-learning were developed. The third stage of development (complex) of electronic education is defined by the development of integrated software systems for the implementation of the full cycle of the educational process: content management, delivery of training materials, all types of certification of students, support for the educational environment, etc.

Features of the development of distance education in Russia

manifest in the fact that it developed mainly as a professional distance education. First in the form of postal vocational training, then as correspondence professional training. The development of online education began in the '90s and went through three main stages in its development: initial, technological, complex.

2. THE MAIN CONTENT

The definition of distance / on-line education
In recent decades, online education all over the world stopped being an innovation, "bleeding edge", and has become one of the main types of education. In the process of developing of online education, means, methods, algorithms, and training technologies have changed. The attitude to online education of the participants in this process and stakeholders has also changed. Moreover, the ratio of distance and online education is changing. The permanent feature is the spatial (and, usually, time) gap between the professor and the students. Until the beginning of the 21st century, online education was understood as a type of education in which a combination of technologies is actively used, including audio, video, computer and the Internet [6]. Currently it is mainly the procedural online education [7]. Despite the popularity of online education and its wide distribution, there is no single answer to the question: "what is online education?".

One of the first detailed ways of understanding what distance education denotes at the present stage, was proposed by D. Keegan. The author sees the essence of the distance education in the separation of professor and student, which was made possible thanks to technological advances. And as a result, the student is freed from the need to "travel to a certain place, at a specific time, to meet a given person for advanced training" (a fixed place, at a fixed time, to meet a fixed person, in order to be trained) [8]. Keegan formulated the basic elements of online education. On one hand, they together reveal the essence of online education. On the other hand, they allow it to be distinguished from other types of education.

In addition to the separation of the student and lecturer outlined above, the following aspects are important: the organization that provides online education; technical means; dialog between the student and the professor. In the organization's activities, online education can be the main and the only type of education, or one of many types of education. The presence of an official organization distinguishes distance education from various options for private online training. The next important component is the various technical means, including audio, video materials, websites, printed materials, etc. Fundamentally important for online education is the ability for the student and the teacher to communicate. And, if in the early stages the dialog was practically non-existent or was minimized, then in modern conditions it plays a big role in the successful adaptation of the student to distance learning. A positive role is played not only by the dialog between the student and the teacher, but also the dialog with instructors, facilitators, and the dialog between the students. In traditional education, dialog with teachers is also important, but in online education it is necessary, firstly, because of what makes learning effective. Secondly, it minimizes the psychological problems that the student has.

The student's independent educational work plays the decisive role in the education process. It is the summary of their motivation, the ability to correctly manage time (time-management), the skills of mastering, analyzing, systematizing information, the ability to reason using arguments, the affinity for rational skepticism, reflection (critical thinking)

G. Greenberg in 1998 defined distance education as a planned teaching / learning process that utilizes a wide range of technologies to reach students at a distance, and which is designed to create the interaction between students and the certification of passed training [9].

In modern studies, the definition of distance learning also emphasizes the need for spatial separation of the teacher and the student [10] and indicates the need for technology [11]. Compared to the definitions created before 21st century, more emphasis is placed on the individual preferences of the student, on his ability to study at his chosen time, on the chosen place, on the interactive nature of the interaction between the teacher and the student [12], and also on the necessity and significance of communication between students.

The definition of distance / on-line education in Russia
In Russian-language specialized literature, the question of what distance learning is - a form of training [13, 14] or educational technology - has not yet been resolved [15, 16]. However, the Federal Law "On Education in the Russian Federation" in the Article 16th "Implementation of educational programs using e-learning and distance learning technologies" clearly defines that online education is a process, a form of learning, and distance technologies are specifically the underlying technologies. "Online education is understood as the organization of educational activities using the information contained in the databases and information used in the implementation of educational programs and providing information processing, technical equipment, as well as information and telecommunication networks that ensure the transmission of this information through communication lines, the interaction of students and teachers. Educational distance technologies are understood as educational techniques, implemented mainly with the use of information and telecommunication networks with indirect (at a distance) interaction of students and teachers" [17].

The operating procedure of online educational and distance educational technologies in the implementation of educational programs is described in Order of the Ministry of Education and Science of Russia No. 816 of 08/23/2017 [18]. In this order, when they are specified, online and distance educational technologies are listed with a comma. From the text of the document it is clear that online, distance educational technologies can be used by organizations in the process of implementing educational activities, both in full and in part. The organization's responsibility is to ensure that the level of training of the pedagogical, scientific, educational, auxiliary, administrative and economic employees of the organization is appropriate for the "applied technologies"; organizations independently determine the procedure for providing educational and methodological assistance to students, including in the form of individual consultations provided remotely using information and telecommunication technologies". Also, the organization must create the conditions "for the functioning of the electronic information and educational environment, which ensures the students' comprehension of educational programs or their parts in full, regardless of the location of the students". The organization has the right to implement "educational programs or parts thereof exclusively with the use of e-learning, distance learning technologies ... in the form of online courses ... achieving and evaluating education outcomes by organizing educational activities for the functioning of the electronic information and educational environment that provides students with the educational programs or their parts in full regardless of the location of students". The completion of the program or its part is confirmed by a corresponding document and (or) qualification or part in the form of online courses.

The text of the aforementioned documents does not provide an unambiguous understanding of the relationship between online and distance technology. On one hand, distance educational technology is part of online education. On the other hand, a comma-separated listing of "online" and "distance educational technologies" suggests that they are something different. And given that distance educational technologies may not be related to online education at all, we get another, third version of the relationship between online and distance educational technologies.

As noted above, many authors, despite the substantial variety of options for determining distance education, agree that the only significant sign of distance education is the separation of the student and the teacher in space and/or time [19]. This separation persists in online education.

There are several reasons which significantly complicate the answer to the question of what distance education in general and online education is in particular. The most significant of such reasons are connected, in my opinion, with the fact that the technical means of distance education have changed dramatically: postcards, radio, television, the Internet, etc. Secondly, distance education at the present stage is carried out in a wide variety of formats: audio and video lectures, compact discs, online education, etc. Thirdly, the scope of distance education is also quite wide: courses on the study of a new subject / knowledge, in-depth study of a subject, the development of a comprehensive, specialized program in the framework of general education, higher education and more. Fourth, to date, many distance education models have been formed.

Some problems of distance / online education
Difficulties of a theoretical nature are associated with the issues of content, stages, features of distance learning and online education. Practical difficulties are associated with the process of implementation, distribution and replication of these types of education. An analysis of the difficulties that arise in the process of developing online education is necessary for their further minimization.

As a rule, when the complexities and problems of distance / online education are being discussed, much attention is paid to the technological component, technical means, legal support, and the economic component. Of course, these problems exist, and they need to be solved. However, each educational process, each type of training, is primarily carried out by people. And the success or failure of any educational project largely depends on their behavior, attitudes, actions. In the framework of distance / online education, the significant figures are: teachers; administration; instructors; technical support personnel; students.

The general misconception at the initial stage was the lack of understanding that online training is fundamentally different from traditional training (face-to-face). More generally: online education differs from traditional education. At the previous stages of distance education, the difference was understandable and was considered in corresponding training, education using radio and television. With the advent of "high tech", an incorrect opinion was formed that the more online education looks like traditional, the better. If you replicate in an authentic form the methods, means, material used in traditional teaching, then the success of online is ensured. Subsequently, it was found that online education is a special type of education in which the functions of the student and the teacher are very different from the traditional ones [20].

The next "weak link" in online education turned out to be the teachers who were not ready to work in online education. They did not possess teaching methods, algorithms for checking results, did not understand the specifics of online education. Moreover, many of them were not psychologically ready and perceived online education as something secondary and / or poor-quality. The teachers, as S. Serritt, notes, were ultimately demoralized, forced to work in poor conditions, and even experienced personal and professional deprivation [21]. If the teacher is not motivated, has a negative attitude towards the educational process, and, moreover, is not very well versed in teaching technologies, then he, in principle, cannot intrigue students.

Representatives of the administration and employees of the methodological departments also often did not recognize online education as an independent full-fledged type of education. This led to the fact that appropriate conditions were not being created for the implementation of online education: there were no standards, programs, and the functions of students and teachers were not defined. The task that can be solved only at the administrative level - creating conditions - was not being solved [22].

The next important link in the process of online education is instructors. Successful practical implementation of online education is determined by the qualifications, knowledge, communication skills of instructors. The instructor must be able to apply both their own knowledge and experience, have the skills to use the specific technology, and be able to adapt the existing technology to the needs of a particular educational project, that is, change the method of organizing and providing the material [23].

The role of administration representatives, teachers, instructors in the successful development of online education is not being questioned. But the education process can be "turned on" only thanks to the work of programmers (technicians). Not only their "technical role" is important, but so is the "emotional" one. According to a study by R. Olenski [24], technical workers influence the success or failure of the online education process. In the first case, their activity is aimed at creating a positive attitude, interest, confidence in success, at reducing negative emotions and anxiety. In the second case, the disinterested, and even more so negative attitude of the technicians towards the online education has a negative impact on the participants: it reduces motivation, increases uncertainty, and increases the level of negation of the importance of online education

The representatives of the administration, the teachers, the instructors, and the technicians - all of them, ultimately, are focused, in their activities, on students. In order to minimize the problems encountered by students in the process of online education, consider the student's point of view.

One of the first difficulties of online education is because not all students "respond" due to their personal characteristics to this type of training. Necessary characteristics are autonomy, independence, plasticity [25]. As noted by D. Hardy and M. Boaz [26], students of distance education should, more than traditional students, be able to manage their own time, be able to work individually and in a group.

The above difficulties are solved quite successfully in the United States and in Europe both on theoretical and practical levels. In modern Russia, given the peculiarities of the development of online education in our country, the following problems have practically not been resolved to date:
- the lack of specifically developed online educational content, that is, the content of courses;

- lack of technical readiness of teachers for the work in online education: poor level of knowledge of methods, algorithms, programs, controls, and more;
- poor psychological readiness of students and trainers to work in online education: low motivation, unclear goals, negative attitude, weak time management skills and more;
- lack of support, as there are few specialists in universities (methodologists, tutors, consultants) in the field of online education, providing qualified support to teachers and students in the learning process;
- lack of the necessary regulatory framework in the field of online education;
- legal underdevelopment of the copyright and, consequently, the reluctance of teachers to expose their resources to the public domain;
- lack of support from the leadership of universities (until recently, when this became part of the state educational policy).

A special group is made up of the communicative and psychological problems of online education: establishing interpersonal contacts between the participants in the training, identifying and taking into account the individual characteristics of the information perception among students, determining personal education strategies, updating and maintaining learning motivation; teacher's compliance with the selected and used teaching technologies.

A study conducted in 2018-19 among students of the faculty of social work, clinical psychology and management of the Novosibirsk State Medical University of the Ministry of Health of Russian Federation made it possible to specify the problems that arise in online education. The study involved 93 (N-93) respondents studying for the specialty "Bachelor of Social Work", 03.39.02 "Social Work". Education is carried out in absentia using distance learning technologies. Out of 93 respondents, 70 people (75.3%) are female, 23 - male (24.7), aged 21 to 58 years.

Most of the respondents (88.2%) experienced difficulties in the learning process all the time, and only 11.8% did not experience difficulties in the educational process. The greatest difficulties were associated with the process of adaptation to training, that is, at the initial stage (70% of respondents), and they were associated with the need to balance work, study, family (68%). In other words, the correct distribution of time causes the main problems.

The second most important problem is the lack of constant contact with the teacher (43%). In expert interviews conducted with faculty teachers, lack of contact was also indicated as one of the main difficulties. Teachers are accustomed to "work with the audience", receive a response in the form of encouragement, or signals of misunderstanding of the material. The move to "teaching in a vacuum" is very difficult.

The next problem is the lack or inability to communicate with each other (15%). It is important for a student to "feel his involvement in the student community", to be "involved in the process of joint learning", "to be part of the team", to know "that I'm not the only one suffering here". Joint activity, communication between students and the teacher is necessary as part of online education for project activities. Formal and informal involvement in the process of online education requires great efforts on the part of students and teachers, as there are no habitual, natural behavioral signals, eye contact, non-verbal communication.

The greatest assistance in adapting to online education and the learning process itself was provided by the curator, dean's staff (methodologists) - 22%, interaction with teachers - 17%.

However, according to students, they would prefer more real-time interaction

Respondents objectively evaluate both the difficulties and advantages of online education. Among the advantages of online education, the main ones are "on-the-job training without separation from the family and job" (44%), as well as the opportunity to "study anytime, anywhere (40%). The importance of personal motivation ("desire to study", "the need to improve the professional level") was noted by more than half of the respondents (63%).

Among the factors that, according to the respondents, will contribute to the optimization of the educational process, the introduction of tutoring is the best, that is, the help from student tutors (55%). Respondents believe this will reduce organizational, educational, and "even personal problems". This indicates a lack of communication on the horizontal, student line of interaction.

Another important factor is the "optimal organization of the educational process" (46%). It involves considering the personality of the student: temporal, family, educational. A significant factor in successful adaptation and training is also the increase in interaction with the teacher (synchronously and asynchronously).

3. CONCLUSION

The first step towards minimizing the problems, associated with online education, is their diagnosis, that is, conducting questionnaires and expert interviews. This helps to identify the problems of specific groups of students to develop further strategies to minimize them.

The problem of the lack of interpersonal communication between students and between the lecturer (teacher) - student is minimized in two directions. The first one. Students of the first set (seniors) organize informal communication through social networks, phone chats. In this process, curators - methodological workers of the dean's office help them. Each student enrolled in a study is assigned a student tutor. His task is to advise on educational and organizational issues. The second one. Student communication with teachers is carried out continuously through e-mail, Skype, phone. In addition, student meetings are held to minimize communication deficits (formal and informal). For those who do not have the opportunity to attend in person, information is transmitted through modern means of communication.

For the clear and profound understanding of the regulation of the educational process, its features, methodological manuals are developed: a manual for the preparation of presentations, a manual for conducting a sociological survey, a manual for writing and designing graduation qualification paper and other. Each student is provided with the educational materials that are also duplicated in the Modular Object-Oriented Dynamic Learning Environment (MOODLE) system.

In order to promptly resolve the problems associated with the educational process, the course curator, dean's office employees actively interact with students, are always accessible by phone, and actively use e-mail to exchange information quickly.

It is also important to consider the different levels of computer and information technology skills, as well as the presence / absence of personal computers. This problem is minimized by providing access to computers at the faculty and conducting computer literacy courses.

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