

## Distance education in universities: lessons from the pandemic

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**Abstract.** The development of distance education has been the focus of researchers over the past years, but due to the COVID-2019 pandemic, the use of distance learning has become a vital task for the education system. The massive forced transition of universities to distance learning has provided invaluable experience and made it possible to learn useful lessons. The purpose of the article is to analyze the organization of distance learning for students in a pandemic. The article focuses on the following questions: "To what extent were universities ready for the transition to distance learning?"; "Can distance learning be able to replace full-time education without reducing the quality of education?"; "Does the current e-education system meet the requirements for education in the 21st century?" The article is written on the basis of the results of questioning and interviewing students and teachers of four universities in Belgorod. In the course of the conducted socio-pedagogical research, it was found that Belgorod educational organizations of higher education (universities), relying on the previously created base of distance learning, were able to promptly organize the implementation of curricula remotely and successfully complete the academic year. At the same time, Belgorod universities do not consider distance education as a real alternative to the traditional one. The study also showed that modern e-education in the form in which it exists does not fully meet the requirements of the technological revolutions of the 21st century, since it is aimed only at the transfer of information and does not contribute to the formation of a creative personality with a high degree of mobility.

The new technological revolution we are facing is aimed "at least at transforming humanity" [10]. Revolutionary changes taking place in all spheres of society entail cardinal transformations in thinking, lifestyle, behavior and life strategies of a person. A modern person can no longer count on the sufficiency of the previously acquired knowledge, on the opportunity throughout his life to work in one place and according to the chosen profession "once and for all". He must be ready for the constant assimilation of

a huge flow of information, the mastery of more and more advanced innovative technologies, the likelihood of repeated changes in his entire way of life, including a change in the sphere of his professional activity. The tendency of education during one's life is becoming an integral part of modern reality.

The main qualities of a person that can enable him to successfully integrate into the living conditions of the era of the fourth industrial revolution are creativity and high mobility. Moreover, it should be not only professional, but personal mobility. In the formation of these qualities, the education occupies a leading position, but in order to cope with this task, a person needs to radically change.

Discussions have been going on continuously for several decades on the education characteristics in the conditions of new technological revolutions [2,5,13,19]. At the same time, the task of using the ever-increasing information and communication capabilities is becoming more and more obvious at the center of solving the problem of transforming education. Many researchers consider its solution, first of all, through the introduction of an electronic learning system (e-learning) [3,13,16,18,19].

Almost immediately with the advent of e-learning, questions began to be raised about the likelihood of replacing traditional education with it. But lively disputes on these issues for a long time were predominantly theoretical in nature, however, force majeure associated with the COVID-19 pandemic made it possible to provide a certain experimental basis for them.

According to UNESCO, due to the pandemic in March 2020, a significant part of educational institutions closed in 165 countries of the world, as a result of which more than 1.5 billion students were forced to leave classrooms and lecture halls. The education system as a whole is facing a serious crisis, which has no analogues on a global scale. The first question: "How not to paralyze education?" was universally quite successfully resolved in a short time. It was more difficult to solve the problems of maintaining the level and effectiveness of training, accelerated mastering of methods of large-scale use of e-learning opportunities. These tasks have become the subject of lively discussion by scientists and teachers at international, regional conferences and on the pages of magazines. With a difference in assessments of the possibilities of distance education, all experts recognized that the extreme transition of universities to work remotely allowed the higher education system to acquire valuable experience that can be used after the end of the pandemic and thanks to which a significant breakthrough towards e-education is possible [6,9].

In the situation of an urgent transfer of the education system to a distance form of work, each university was forced to solve the problems of organizing student education in its own way. The experience accumulated by universities during the first wave of the pandemic is extremely significant, and its comprehensive and, as possible, broader and deeper study is extremely important.

The purpose of the article is to analyze the organization of distance learning for university students in a pandemic. Also in the article, on the basis of the analysis carried out, answers are given to the questions: "To what extent were the universities ready for the transition to distance learning?"; "Can distance learning be able to replace full-time education without reducing the quality of education?", "Does the current e-education system meet the requirements for education in the 21st century?"

The article is written on the basis of the results of questioning and interviewing students and teachers (respectively N = 478; N = 127) of four universities in Belgorod: 3 state educational institutions of higher education, Belgorod State National Research University (NRU "BelGU"), ... V.G. Shukhov Belgorod State Technological University (V.G. Shukhov BSTU), V. Ya. Gorin Belgorod State Agrarian University. (Belgorod SAU) and one private - Belgorod University of Cooperation, Economics and Law (BUCEL). The work also uses data from the survey of the Russian Ministry of Education and Science together with the Institute of Social Analysis and Forecasting of the Russian Presidential Academy of National Economy and Public Administration (N = 33987) [8], the results of a secondary analysis of the data provided in the Analytical report "Lessons from the stress test": universities in the pandemic and after it; it was prepared at the Higher School of Economics [9].

Since March 17, 2020, as part of emergency measures to combat the COVID-19 pandemic, all Russian universities have switched to distant learning, but each of the universities did it differently, starting from the e-learning experience it had at that time. At the beginning of the pandemic, all studied

Belgorod universities worked using distance learning or e-learning systems, which made it possible to manage all types of education. The work on knowledge tests, assessment the results of students, providing them with educational and teaching material had already been established in universities, through distance learning / e-learning systems, as a rule. From the 2018/2019 academic year, Belgorod universities have begun to create online courses, but at the time of the widespread transition to distance learning, this work was still at the very beginning. The best prepared in this direction was BSTU named after V. G. Shukhov, which had general access courses and online lectures available for everyone on the YouTube channel, covering a significant number of disciplines.

In general, in the conditions of remote work with students, Belgorod universities had such resources as distance learning / e-learning systems as tools for establishing the educational process, previously recorded online lectures covering about 10% of the subjects, a small number of their own open courses, the possibility to work in ZOOM and the use of MOOCs on the Open Education platforms and Coursera, personal e-mail of teachers and students.

The study showed that the possibilities of distance learning systems, ZOOM and their combination were most widely and actively used in Belgorod universities. At the same time, if distance learning / e-learning systems were used by some universities as the only and sufficient one, then ZOOM, as a rule, was combined with distance learning systems. The use of these tools in the distance learning received different assessments from the respondents. Thus, 82% of teachers and 46% of students indicated a decrease in the quality of education when using only distance learning systems; ZOOM combined with distance learning systems - respectively 54% and 22%. At the same time, 12% of teachers answered that work in ZOOM in combination with distance learning systems, had a chance to increase its effectiveness while improving of the technical and methodological components. At the same time, teachers (78%) and students (62%) noted a significant increase in the workload when working in ZOOM in combination with distance learning systems. In interviews, the teachers described in detail the algorithm of work in ZOOM, which clearly demonstrated its complexity and labor intensity.

But in general, assessing the conduct of classes through videoconferences in ZOOM as the most effective in the force majeure conditions of a pandemic, the teachers noted that: firstly, classes in ZOOM increase the intellectual, emotional and psychological load of teachers, and they are also more expensive in terms of preparation time ; secondly, they require radical changes in the methodology for their implementation; thirdly, today classes in ZOOM are, at best, only a tracing of traditional classes, all the available possibilities of the service, as a rule, are not used due to the short time of work experience with the service.

One of the most effective forms of e-education, according to many researchers, is massive open online courses (MOOCs) located on the platforms Open Education, Coursera and others. Large expectations were associated with massive open online courses at one time, and they were seen as an opportunity to expand access to high-quality education and, to a certain extent, as a resource for transforming education towards the needs of society in the 21st century [4,11,15,17].

However, during the pandemic, teachers of Belgorod universities practically did not use massive open online courses. The refusal from widespread use of MOOCs in the educational process was explained by the lack of MOOCs in the discipline, the inconsistency of the MOOC topics with the discipline's work program approved in a particular university, the need to pay for tuition, since not all online courses were free in the pandemic, and also not always sufficient level of the MOOCs themselves, etc.

Thus, in the context of the COVID-19 pandemic, Belgorod universities used the capabilities of distance learning systems, ZOOM and their combination to organize distance learning for students. And although each of the studied Belgorod universities had a certain specificity in their use, it did not affect the overall assessment of distance learning by teachers and students. The overwhelming majority of teachers (79%) and students (64%) noted the impossibility of fully replacing full-time education with distance learning. Among the shortcomings of the latter, the following were most often mentioned: inaccessibility of direct communication between students and teachers, students among themselves; lack of control over the development of educational material and student involvement in the work; frequent

technical problems; difficulty in organizing time and workplace. 89% of teachers noted an increase in workload and a decrease in satisfaction with their work; 76% - lack of confidence in their work, lack of necessary competencies and special methodological skills. The largest percentage (82%) of students were dissatisfied with the “lack of real student life”.

There is a direct interaction of all its participants in the real pedagogical process. Its effectiveness is largely determined by the level and timeliness of the corrective action, the level of reflection, and the personal influence of teachers on students.

The opinion of Belgorod teachers and students about the disadvantages of distance learning coincides with the opinion of respondents from other foreign and Russian studies [6,7,9,14]

Among the positive aspects of the distance learning, teachers and students indicated, first of all, the saving of time spent earlier on getting ready and moving, on the chance to spend more time with relatives, as well as to spend the freed-up time on acquiring additional knowledge, skills and rest.

In contrast to other students, a predominantly positive attitude towards the introduction of full distance learning was expressed by correspondence students, whose form of study, by definition, already presupposes a partially remote character. Among the useful features of distance learning, organized in the context of the pandemic, they noted the possibility of “not being interrupted for a long time from work and home”, watching video lectures at a convenient time for them, more active contact with teachers through distance learning systems or personal mail.

In general, the analysis of the data of the study showed that Belgorod universities, like the vast majority of universities in the country, relying on the already created distance learning base, were able to quickly organize the implementation of curricula remotely and successfully complete the academic year. However, the transition to full distance learning was perceived in universities only as a temporary measure, and distance is not considered by them as a real alternative to the traditional one. The main reasons for this opinion are the methodological and often technical unpreparedness of all participants in the educational process in the university to use digital technologies; lower quality of education in fact; limitation and reduction of social and educational functions of modern education. At the same time, the radical transition to distance in the context of the COVID-19 pandemic provided valuable experience in organizing distance learning and demonstrated the rigor of expanding its further use.

Ultimately, the analysis showed that the distance education in the form in which it exists today is primarily aimed at transferring information, the communication component is poorly represented, the personality of the teacher is practically not reflected and the individuality of the student is not taken into account. It does not contribute to the generation of a person who is creative and capable of a high degree of maneuverability and, as a result, cannot be evaluated as an education that is fully appropriate and the only possible one in the 21st century.

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