Digitalization as the “new normal” of higher education

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Abstract. The research emphasis of the article is focused on the urgent problem of digitalization of education. Depending on the degree of development of states, the digitalization of education is uneven. In the context of the COVID 19 pandemic, digitalization has accelerated, consolidated and approved the distance learning system, while revealing a number of problems: insufficient technology, lack of appropriate software, unprofessional teaching staff, unwillingness of students to study using distance learning technologies, etc. The article highlights the main barriers to the development and promotion of digitalization of the Russian educational environment in the “new reality”. The dependence of the digitalization of the Russian educational environment on internal and external factors determining the competitiveness of universities in providing their services in a digital format is determined. Analysis of the work of higher school teachers during the period of distance learning revealed some patterns. Teachers used traditional forms of work even when switching to a distance format; a significant part of communications with students was carried out through e-mail and popular training sites. Sometimes work with students was limited to issuing a mandatory task, which must be solved on the proposed portals. Some large higher educational institutions have their own specialized corporate portals through which work with students is carried out: lectures, webinars, tests and tests are held. Attention is focused on the gamification of educational activities as an effective teaching tool. A low degree of student involvement in the educational process, weak motivation and the inability to organize effective control of students' knowledge are stated. To enhance the effect of digitalization in education, the above barriers should be removed.

1. Introduction
The digitalization of education in general and higher education in particular has become a worldwide trend. Although in each state, this process rather unevenly and differentially affects the educational environment, depending on its financial, regulatory, organizational, technical, qualification and content support. Today, digitalization of education is caused by the “digital divide”, “global digital divide”, “technological digital divide”, “new digital divide” [1], which in turn characterize not only the level of accessibility of people, educational organizations, states to digital technologies, sources, devices; active and passive use of such technologies, but also competitiveness, the nature of interaction in the educational environment of universities and teachers.
In modern conditions of the pandemic, the “digital revolution” has accelerated, consolidated and approved the distance learning system in the activities of the education system. If, before the spread of coronavirus in the world, educational technologies in Russia were gradually, variably, voluntarily changed in the context of the popularization of digitalization, then at the time of the general introduction of self-isolation, quarantine, they become mandatory, necessary, and in demand.

In this aspect, digitalization of education approves the remote learning format, and creates the foundations, according to the head of the Ministry of Science and Higher Education V.N. Falkov, for the "new normal" of the functioning of higher educational institutions, namely the emergence of "national platforms of online courses, distance admission to universities" [2]. However, to understand the effective digitalization of education in the "new reality", it is important to highlight the main barriers to its development and promotion, as well as the prospects for the implementation of digital educational technologies.

2. Materials and methods

Based on the results of the theoretical analysis, the main barriers to the development and promotion of digitalization of the Russian educational environment in the "new reality" should be identified.

- Insufficient level of qualifications of teachers to work online as a format of new communication: lack or low level of educational services offered, distance interactive learning products; lack of an individual language for distance learning, a low level of knowledge of a foreign language by teachers of general education and higher institutions.
- Technical equipment: lack of technical equipment for some trainers and trainees.
- From the point of view of V. N. Yuzhakov, A. A. Efremov, there are legal and educational barriers to digitalization and digital transformation of higher education in Russia, which are expressed in the absence of a clear distinction between barriers and restrictions on the implementation, use, development of breakthrough digital technologies, as well as determining the normative content of their types; non-orientation of state programs, plans, projects to eliminate legal and organizational barriers to digitalization in education; it is not determined "what breakthrough digital technologies will be applied" [3].
- Low competitiveness of universities at the international level: late entry into the global educational market, acceptance of a secondary role in this market, “copying, adjusting to European and American standards for the transmission of knowledge and systems for assessing scientific achievements” [4].

Thus, the dependence of the digitalization of the Russian educational environment on internal and external factors that determine the competitiveness of universities in the provision of their services in a digital format is determined.

Also, these barriers to digitalization of education are indirectly confirmed by the results of a sociological study organized by the NAFI Analytical Center in 2020 at the initial stage of transfer to distance learning among teachers of Russian institutions of general and higher education in March 2020. 68% of surveyed school teachers believe that the school education system is not ready for the transition to distance learning, 24% believe that schools are ready for the transition. The share of more optimistic assessments among university teachers is higher: a third (35%) believe that the higher education system is ready to transfer classes to a remote format, 53% hold the opposite opinion [5]. These figures look alarming, especially when considering the general education sector.

In addition, the analysis of the work of higher education teachers during the period of distance learning revealed some patterns. So, basically, teachers use traditional forms of work even when switching to a distance format, a significant part of communication with students is carried out through e-mail and popular training sites (for example, the free portal "ReshueEGE", Yandex tutor, etc.). Unfortunately, an analysis of forums and communities in social networks shows that often work with students comes down to issuing a mandatory task that must be solved on the indicated portals. The
situation in the field of higher education differs in a positive way, as a rule, higher educational institutions have their own specialized corporate portals through which work with students is carried out: lectures, webinars, tests and tests are held.

The analysis of gamification, the use of games aimed at teamwork, showed the possibility of stimulating the competitive mood of students, which positively affects the assimilation of information. Of course, when using competition as a method, it is necessary to apply a differentiated approach to determining the content of the activity and the nature of the competition. Competition can be manifested in the system of building individual and group ratings based on the results of the work performed and the tasks solved. Other criteria for constructing ratings, specific to a particular type of educational activity, can also be used.

It is worth noting that when ranking students' results in order to build the final rating, it is necessary to take into account the ethical aspect: those at the end of the list may have less motivation even more due to the awareness of the lack of knowledge they have. In this regard, it seems expedient to display a rating of only high results, for example, to build a rating of the first 10% of students with the highest scores.

During training sessions (both in offline and online formats), it seems effective to conduct speed quizzes with the determination of the correct answer. Interesting opportunities are presented by the English-language sites Kahoot.com and Mentimeter.com. Despite their popularity in the world, these tools are just beginning to be introduced in the Russian educational environment, which is partly due to the low level of knowledge of foreign languages among teachers. Both sites give students the opportunity to participate in the game, which the teacher conducts using his mobile phone, answers to the questions of the participants appear on the screen and provide an opportunity to take part in the general team competition. Questions can be of different difficulty levels of different types: single choice, multiple choice, guess the picture, write a word. The quizzes display the top three winners on the screen, which stimulates and motivates children for further victories.

In the process of carrying out educational activities, it is possible to gamify individual educational trajectory of students. For some students, the use of competitions is an ineffective and unused tool for various individual reasons, therefore, they need a personalized approach.

Classic game mechanics involve building games with scoring and advancing through the game world with certain tasks. Interesting opportunities for creating such games are offered by social networks, in particular, the popular social network VKontakte. Using third-party programs created specifically for this social network, such as Senler (a platform for organizing mass and automatic sending of VKontakte private messages on behalf of communities), Autopilot (a platform that opens up advanced opportunities for creating game universes and gamification of learning), you can create high-quality educational content for schools and universities.

It should be noted that these programs are paid and require certain knowledge to compose a game mechanism. With their help, you can create a complex game with a branched scenario in which the player can choose actions, for example, solve a test or study formulas. After the completed action, the program automatically praises the student, which also has a positive effect on motivation. It is possible to change the course of the game depending on the student's actions, which gives him an additional incentive to study a certain subject.

The assignment of a badge system is an interesting tool, with the help of which a student identifies himself as having reached a higher level. These badges are assigned on an individual basis, regardless of the speed of the student passing the game scenario.

Due to the commercialization of a number of programs and the complex procedure for introducing innovations into higher educational institutions, companies in the field of additional education use these tools. It should be noted that it is possible to integrate most of the tools used into a single educational complex. The English-language site Integrator allows you to display data received by Google Sheets into a bot created in the Telegram messenger. In practice, for training, this means the following: the student passes the test in Google forms, and the teacher or methodologist receives a notification about
this in a special bot. This helps to simplify the interaction between students and teachers, facilitates control and communication between participants in the educational process.

Of course, for the implementation of the digital education tools indicated in the article, it is necessary to take into account that some of the tools are suitable only for certain groups of students or for studying specific subjects, but one cannot deny the opportunities and prospects that open up to digital education in the modern era.

3. Results
Let's note the promising auxiliary tools that can be used in the field of organizing digital education to improve the distance work. Google forms, OnlineTestPad and other platforms that allow creating tests, have great potential for organizing the control of students' knowledge. In most of these programs, it is possible to create tests with different types of questions (single choice, multiple choice, correlating positions, writing text in a line, writing text in a paragraph, etc.), there is an automated check of answers, but note that some operations must be performed manually. So, when assigning marks to a task with several correct answers, an incorrect interpretation may occur, since the program accepts one answer as correct. Several test platforms have already filled this gap.

The serious challenges that distance education faces are the low degree of student involvement in the educational process itself, weak motivation and the lack of the ability to organize effective control of students' knowledge. Do not forget about the age characteristics of students, which affect the assimilation of information received in a distance format. In conditions of distance work, students are often distracted, unable to concentrate, as a result, their degree of receptivity to useful information decreases. One of the non-trivial solutions to the above problems can be the use of gamification (gamification) in the educational process.

4. Discussion
Along with the above barriers to the development of digitalization of education, the advantages of higher education in a digital format are also highlighted: availability of education in time; the absence of territorial restrictions on the training of highly qualified teachers of the country's leading universities according to the author's curricula; choice of a teacher by students, various ways of presenting material and monitoring the assimilation of knowledge, economic benefits.

In general, the problems of the development of digitalization of higher education prevail over the advantages. However, researchers highlight the requirements of digital reality to the system of national education as postulates that determine the adaptive characteristics of education in the future: setting thinking; stimulation of risk, namely innovation, business, economic, financial and civic activity; speed of orientation and decision making; personalization [6].

It should be borne in mind that, within the framework of the digital university model, digital technologies are already successfully used mainly in organizing work with applicants, managing the educational process, digital administration of the activities of scientific and pedagogical workers and university employees, and introducing the corporate information system of the university [7]. That is, experience is present, and the “new normal” in the format of innovation appeared before the pandemic in the context of strategies for the superiority and survival of higher education institutions. For more than 10 years in some universities, e-learning centers have been functioning. They were created on the basis of network interaction, which made it possible to produce, implement and disseminate innovative information educational technologies [8].

The above-mentioned barriers and advantages relate not only to the digitalization of Russian education, but also to the electronic educational environment of other states, which makes it possible to note their universal nature. However, given the prevalence of problems over the advantages in the “new normal” of the functioning of universities, it is inappropriate to completely abandon traditional offline education.
5. Conclusion

During the pandemic, when the demand for the use of the distance learning system has sharply increased, there was, first of all, a deficit in the qualifications of teachers in the use of digital technologies, as a presentation of educational material, in creating motivation for students in obtaining knowledge, conditions of interactivity, technical capabilities. At the same time students' distrust of educational platforms also arose. That is, the following conclusion suggests itself: before universities enter the global educational market through the use of digital technologies, it is necessary to eliminate the above-mentioned root causes that hinder the development of digitalization of higher education.

But in any case, reality itself, namely the “new normal”, forces the transition to a digital model of the educational process and the activities of higher educational institutions, that is, changes are overdue. At the same time, the development for the subsequent application of EduScram and Agile technologies, assessment, gamification, storytelling is significant and promising for the organization of educational activities.

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