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### **ISSUES OF APPLICATION OF THE DIGITAL PLATFORM IN EDUCATIONAL ACTIVITIES**

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#### ***Abstract***

The Unified Digital Platform of Science and Higher Education was developed by the Ministry of Education and Science of Russia. It is aimed at implementing measures of the state policy involving the scientific and technical development of the Russian Federation. The purpose of the article is to analyze the development of the digital platform applied in educational activities, taking into account the digitalization of universities and the level of demand for specialists in the labor market. A favorable result may be an access of organizations to certified specialists, direct participation in innovative and scientific projects developed by universities, implementation of professional competencies into the curriculum, taking into account the specifics of enterprises, bodies and organizations, the employer's ability to select applicants based on the information about future specialists. The goal can be achieved by activating the digital platform of the university and implementing it by organizations, institutions, bodies that have concluded long-term labor contracts or are ready to conclude them in the future. The methodological basis of the article is results of the studies conducted by the Institute of Economics, Management and Law of Irkutsk National Research University. The novelty of the study is due to the theoretical justification and development of approaches to the transformation of digital platforms according to the Concept developed and approved by the Ministry of Science and Higher Education of the Russian Federation. The authors assessed the effectiveness of its implementation and identified current targets.

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**Keywords:** Digital economy, digital platform, e-education, university organizations.



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## **1. Introduction**

The digitalization of Russia causes dramatic changes, allows us to think, plan, build, modernize, respond in a timely manner and make decisions. In accordance with the Constitution of the Russian Federation, every citizen has the right to high-quality and affordable education. XXI century is the century of information technologies. Electronic databases are being implemented in all spheres of human life.

## **2. Problem Statement**

The authors aim to consider issues of implementation of the digital platform within a university.

## **3. Research Questions**

The Internet and information technologies are becoming more and more important. It should be borne in mind that in recent years, significant changes have taken place in the field of computerization of education. Informatization is a system of socio-pedagogical transformations related to the saturation of educational systems with information products, means and technologies. Informatization of education is implementation of information systems based on microprocessor technologies, information products and pedagogical technologies. If earlier scientists emphasized the economic and social spheres, now the concept of information society is being developed with an emphasis on the problems of education. Knowledge, information, and education are integrated into the knowledge system, without which the existence of the information society is impossible (Saba, 2012). The most important thing is the ability to process information and create new high-quality information on its basis, which serves as the basis for improving quality of intellectual activities. Researchers say that the complexity of using promising information infrastructures and technologies, their constant development and impact on all aspects of our lives requires the constant training of people, creation of a new education system, namely e-education. The key task is to design and create an educational information space and an educational environment based on the use of electronic and digital platforms in the educational process. In particular, the Decree of the President approved the Information Society Development Strategy until 2030 and the Program for implementing the President's Strategy "Digital Economy of the Russian Federation" (Archipova, 2018).

Five important areas of the Digital Economy program include the area "Human Resources and Education". Within this direction, it is necessary to train the staff who meet the requirements of the digital economy and have digital competencies. Article 16 of the Federal Law "On Education" provides for the implementation of educational programs using e-learning and distance learning technologies at the level of colleges and universities. E-learning (EL) is organization of educational activities using the information from the databases used for implementing educational programs, information technologies, technical means, information and telecommunication networks that transmit the information through communication lines, interaction of students and teachers (Stensaker, Maassen, Borgan, Oftebro, & Karseth, 2007). Thus, E-learning can be defined as the organization of the educational process using 1) information from the databases used for implementing educational programs; 2) information technologies used for information processing; 3) technical tools and information and telecommunication networks that

ensure the transfer of information, interaction of participants in the educational process, an independent search for tools, methods, training paths.

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

Modern challenges require the modernization of the educational system of Russia. It is necessary to create an environment based on the principle of lifelong learning. This is possible due to the online technologies that eliminate barriers to the implementation of curricula. The concept of modernization of higher education determines the following characteristics of a university graduate: competitiveness in the labor market, competence, responsibility, ability to work effectively and meet international standards, readiness for a continuous professional growth, social and professional mobility. The development of these qualities is facilitated by electronic-digital forms of education, where the student plays the main role in the educational process. He is able to acquire practical skills, knowledge, build them into a logical chain, organize, make an organic part of his worldview, personal feeling. The effectiveness of quality education is achieved by activating the student himself (Wang, 2008).

One of the priority areas of the government program "Digital Economy" adopted in 2017 is the staff training in colleges and universities. The real digital transformation of this area is ongoing. In 2020–2022, the Government of the Russian Federation allocated more than 44 billion rubles to the federal project "Digital educational environment". The information is part of the draft federal budget for 2020 and 2021–2022. In 2020, 16.3 billion rubles will be allocated for the project, 16 billion rubles will be allocated in 2021, and 12 billion rubles – in 2022. The goal of the Digital Education Environment project is to create a modern and secure digital education environment by 2024 (Kirkwood & Price, 2005).

According to the draft budget, the Ministry of Communications of Russia will receive about 93.2 billion rubles in 2020. In 2021, the Ministry's budget will be 135.8 billion rubles, and in 2022 – 189.3 billion rubles. It is planned to spend 169.9 million rubles on the subsidies to budget, autonomous and other non-profit organizations within the national project "Digital Economy" in 2020. In 2021, they want to spend 169.2 million rubles for these purposes, and in 2022, the sum will be 50.8 million rubles. The project "The digital educational environment" involves the creation of a federal information resource [online.edu.ru](http://online.edu.ru), which will provide citizens with a free access to online courses from various online educational platforms on a "one-stop-shop" basis (Turkova, 2018). In 2018, this resource was integrated with the Unified Identification and Authentication System.

#### **5. Research Methods**

The widespread interpretation of digital education as a process of learning digital competencies, preparing human capital for the digital economy reduces this concept to the digital technology. An analogy with generally accepted categories such as "technical", "economic", "medical" education is difficult, since the subject area cannot be divided. According to the study conducted by Ayfors Rus LLC (AIC's partner in), only 10 % of the population do not know about online learning. At the same time, 25 % of Russians have experience in obtaining knowledge using modern information and communication technologies. 88 % of students surveyed, 84 % of university and college teachers, and 80% of companies

are positive about the implementation of online technologies in the educational process, which indicates a positive trend. At the same time, 66 % of the companies surveyed agree that the development of online education is one of the key conditions for modernizing vocational education. (<http://neorusedu.ru/news/bolshinstvo-rossiyan-uvereno>). According to the study, 85 % of the adult (+25 years old) population are positive about the implementation of online technologies in the educational process. 64 % consider that quality of training will improve.

## **6. Findings**

In addition to the platform of the digital educational environment, another similar resource is being created – the platform of continuing education. The difference between the platforms is that the first one is aimed at additional education from different organizations, and the second one can be used to run academic online university courses, and students of one educational institution will have access to courses of other institutions.

The role of Russian higher educational institutions is to provide the digital economy with appropriate educational and research programs and staff. Otherwise, the educational and research tasks of the digital economy will go to the private sector, Russian non-governmental organizations, and foreign providers and digital educational platforms.

Currently, some university courses have been translated into an electronic form and do not require personal presence of students, teachers in classrooms (Dmitriyevskaya, 2015). This method is used for teaching first- and second-year correspondence students of Irkutsk National Research Technical University (hereinafter – INRTU).

New approaches to the implementation of educational programs based on online technologies have been developed (virtual academic mobility and individual learning paths, namely project-based learning).

The result of the project will be a comprehensive description of the optimal models for using online courses in the educational process which can be implemented in Russian universities. In the future, this will improve the quality and effectiveness of educational programs, expand the opportunities for students to create individual educational paths. This can lead to the creation of a digital educational environment (DEE) as an open set of information systems designed to solve various educational tasks. The word "open" means the ability and right of any user to use different information systems as part of the DEE, replace them or add new ones. Conditions and rules should be provided in the DEE logic. The environment is fundamentally different from the system which includes completely different elements: coordinated and duplicating, competing and even antagonistic. This allows the environment to develop more dynamically. It is impossible to predict which of the elements of the environment will turn out to be more tenacious, which will die off or be divided. The system, unlike the environment, is created for specific purposes and in a coordinated unity. The rapid change in the external conditions and the technologies leads to an extremely low efficiency of investments in these systems. Since the justification of budget costs is demonstrated by the application practice, educational organizations are forced to use these systems.

Let us examine the design of the digital platform and possibilities of its application in the university. The digital platform is an information space that unites participants and optimizes their

interaction reducing time and resource load. N.V. Dneprovskaya defines the digital platforms as “a system of algorithmized mutually beneficial relationships of independent participants in the economic sector reducing transaction costs due to the use of an IT package”. Due to the promising implementation of information technologies in the educational sphere, as part of the grant of the Scientific Council of INRTU, one of the authors created the “Digital platform of professions as a new educational format” in the BITRIX INRTU system. The main goal of this digital platform is to create a special unified university information system that will provide direct contacts with employers (authorities, organizations, etc.), where students could receive information on educational, industrial and undergraduate internships for the development of professional skills. The employer can see graduates, offer internships, contact with graduates and offer jobs. The electronic record keeping is not only an objective need. It is an integral part of the goals and objectives of digitalization.

It is necessary to identify participants in the platform: scientific and pedagogical workers, the information department (technical support), the internship department, external organizations, enterprises, institutions, government bodies and students. On the basis of this digital platform, the above persons are registered. Everyone has equal access to personal data, can upload documents, create personal accounts. Each student can choose a company which is suitable for his future profession, and the company can read student’s portfolios, observing Federal Law 152 “On Personal Data”. In the future, students may refuse to cooperate with the company, and the company may choose a more suitable student.

A positive result of this platform is a large number of companies, a possibility to conclude long-term contracts, hold master classes, participate in open days, present companies, conduct questionnaires, lecture, etc. The creation of the “Digital platform of professions as a new educational format” meets the following principles: unity, openness, accessibility, responsibility, sufficiency, usefulness. The unity is the coordinated application of digital technologies that solve problems of internship and employment of graduates. Openness is the freedom to expand the digital platform for all institutions within the university, including the mutual exchange of data. Accessibility is the unlimited right of both commercial and non-profit organizations to conclude agreements with the university. Responsibility is the right, duty and ability of each entity to solve informatization tasks, coordinate data exchange tasks with related information systems. Usefulness is the formation of new features and / or reduction of user labor. Following these principles, it is possible to highlight the positive aspects for each subject using the digital platform in educational activities.

## **7. Conclusion**

The digital platform will combine the already created information systems, including those created on the base of the AIS University automated information system. Innovative solutions in the field of digital technologies, the experience of mastering pedagogical practices of implementation of Internet technologies in the educational process are required for the development of digital education in the educational environment. In the era of digitalization, universities are facing the challenge of implementing digital technologies into the educational environment, which allows students to be taught much more efficiently. The effectiveness of IT application in education depends on administrative tasks of the university according to the “road map”. The results of the study aimed at assessing the readiness of

INRTU for e-education show that only individual university departments have passed the stages of automation, informatization, and are moving to the digital economy. A small part of the departments is at the initial stage of informatization, which implies the formation of the university IT infrastructure, automation of educational and administrative processes. For full participation in the digital economy through training, it is necessary to take measures to support informatization processes in the universities in order to create a more favorable digital educational environment. Leading positions can be achieved only through developing digital platforms and e-education. This approach will provide a new level of interaction between various organizations, universities and students (graduates). All university events based on the digital platform will be modernized in order to implement the national program “Digital Economy of the Russian Federation”.

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