CREATION OF DIGITAL UNIVERSITIES THROUGH INTERACTION OF HIGHER EDUCATION INSTITUTIONS AND ANALYSIS OF READINESS FOR DIGITALIZATION: AN EXAMPLE OF RUSSIA

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Abstract: *Current issues of restructuring the modern higher education in the Russian Federation are now increasingly being discussed at the state level. Training and forming the staff of the future is a strategic task that should be worked out and implemented in the short term. This task is the foundation and basis for the further development of the country's economy. New technological challenges within the national technological initiative being implemented in the Russian Federation, as well as changes in the formats of education, lead to significant restructuring and challenges for the universities of the future. The transformation of universities occurs not without the help of the state. Modernization and development of education roadmaps is carried out. The article analyses the current education system and new challenges in the context of the impact of digitalization on education and compares it with the updated education development roadmap. The central place of digital universities is highlighted as a link between the applicant and the employer. In 2019, in the framework of the national program "Digital Economy in the Russian Federation" and the federal project "Personnel for the Digital Economy", a competition was held for the provision of subsidies for the development of "Digital University" models. Based on the results of the selection, 5 leading universities of the Russian Federation received funding. The article discusses some educational models of the winners, their features of the transition from traditional to digital university. Focus is placed on the format of continuing education and the creation of a unified educational environment for a person throughout his life. There are presented the main features, problems and advantages in the formation and implementation of the "Digital University" in cooperation between universities of the 1st and 2nd waves of financing. The analysis of universities of the Russian Federation has been performed, on their readiness for the transition to digital transformation.*

Keywords: *digital university, personnel for the digital economy, digitalization, university interaction, exchange of best practices, educational technologies.*

INTRODUCTION

Formulation of the problem. In the age of digitalization, higher educational institutions (universities) have undergone this trend, as well. Digitalization in universities in the Russian Federation (RF) is at different levels, for example, in some, information and data are only collected, in some they are processed, and some universities build management and development on the basis of available data. Researchers of digital universities are already considering the basic issues of universities' transformation (Larionova & Krasik, 2019; Itinson, 2019; Shotylo et al., 2019; www.skolkovo.ru). The authors analyze the technologies of creating and developing digital universities, using the example of foreign universities, the introduction of new educational teaching methods, the information support used during the transition, as well as the managerial changes that occur in universities which undergo transformation and changes on the way to the perfect look of a modern digital university. For example, the main trends of Russian higher education since the mid-2010s have been aimed at internationalization, that is, the mobility of both students and teachers. A simultaneous trend is the localization or autonomy of universities, that is, independence, which is acquired at the expense of industrial partners. But both qualities are formed over the years. Advanced universities of the Russian Federation adopt the experience of promising universities of other countries. The introduction of some educational methods, the digitization of the educational process has led to the transformation of universities (Gibadullin & Karagodin, 2019; Tinyakova et al., 2019). The main regulatory documents in higher education, on which all universities of the Russian Federation rely, are the Law on Higher Education, Federal State Educational Standards, as well as some related regulatory documents. Due to the transformation of universities, it is necessary to change internal regulatory documents to introduce, for example, online education, distance learning, individual learning paths. Existing problems at universities impede the development of digitizing processes.

Purpose of the article. This article attempts to formulate directions for the creation of new digital universities in the Russian Federation through the collaboration and interaction of advanced universities and those that are also trying to transform themselves. Our main argument is that, based on the experience of universities that have already transformed and restructured their trajectory onto the digital path of development, as well as some of them also participated in the contest held by the Ministry of Science and Higher Education of the Russian Federation "Digital University" and received funding, they can help, by teaming up with universities of the so-called second wave, sharing digital services that are not found in other universities, thus not throwing them back, but, vice versa, supporting. In this way, a synergistic effect will be achieved.

RESEARCH METHODS

The article is based on the application of theoretical and empirical methods for analyzing the sources of the literature reviewed, conclusions drawn from a survey of universities of the Russian Federation, as well as a joint synthesis of materials from the Digital University personnel track, conducted at the Winter Island educational workshop on December 1-5, 2019 in Sochi, which was attended by universities participating in the contest "Digital University", as well as "University 20.35" - a leading university in the development and duplication of digital services (Degtyareva,

2018), as well as the Ministry of Science and Higher Education. The results of the brainstorming and strategic sessions in which the authors of the article took a direct part are the basis for the conclusions made.

RESULTS AND DISCUSSION

What tasks does the modern “Digital University” set for itself?

At present, universities must train specialists who can work not only within one specialty. A student who graduates from a university, under the influence of rapidly changing trends, including the digital ones, can constantly change the type of activity, but for this it is necessary to have certain knowledge, supported by educational trajectories. Today, the task is set for society - the ability to build one’s educational trajectory throughout the whole life. The university in this context must learn to give the opportunity to choose an educational trajectory, and the student must understand why he needs it. The environment, at present, offers to choose from existing specialties and educational programs. But the very activity that the graduate faces is pushing him to further expand his knowledge and to receive self-education, which can be sufficiently obtained on open educational platforms, for example, such as Coursera, OpenEdu, EdX, Udacity, Stepik, Universarium and others. But having completed online courses on these platforms, one gets an electronic certificate that cannot be confirmed as a diploma of higher education. It is impossible to check the quality and reliability of educational content, and also to track that it was a particular student who completed the tasks. Thus, the employer, taking a person to work, primarily relies on a diploma. A large number of certificates and advanced training provided by the applicant can only scare off the employer. Free educational courses from leading digital organizations are at stake, for example, PJSC Sberbank teaches programming at its “School 21” (https://21-school.ru) completely free of charge. This school was created in the likeness of the French school of programming "Ecole 42". Thus, this educational initiative is an input filter for the search for super talented programmers who do not need a state diploma. Obtaining certificates from both schools, students are offered one hundred percent employment. This model is today the main competitor to higher education. Most universities in Russia still use the traditional approach to education. The formation of such narrowly targeted, free, convenient educational services shifts the direction of education towards on-line.

A digital university must accompany a person throughout his life. The roadmap proposed by the Ministry of Science and Higher Education of the Russian Federation at the educational workshop “Winter Island” suggests combining some services that will help classical universities integrate into this competition with the presented on-line content. The roadmap consists of three interconnected parts: admission to the university, higher education and continuing education. The first phase of the educational roadmap is admission to the university. Currently, there is a classical scheme for choosing a university and submitting documents. In the light of the digitalization of many processes, the entry phase has been digitized. In 2020, an experiment will be conducted in the Russian Federation to introduce the superservice “Admission to the university online” (https://www.gosuslugi.ru) in the pilot regions, which will allow full support on admission questions. The applicant will be able to align his capabilities when submitting documents. Thus, one can submit documents and enroll in the selected university, without leaving one’s home. The experiment will be developed and supplemented with certain options until 2023. The superservice options include:

- choice of the educational organization;
- submission of documents and applications;
- monitoring the competitive situation;
- additional entrance tests online;
- filing and consideration of the appeal;
- payment, in case of training under the contract;
- enrollment.

The comparison of the current situation of admission to the university with the use of the superservice “Admission to the university online” are presented in Figure 1. Despite the fact that the process of the stage of admission to a university is highly automated, by about 90%, which includes, for example, such basic data about an applicant as transmitting information about the results of the unified state exam (USE), individual achievements and the results of additional entrance examinations, there exist certain risks. These include unreliability of the results in the form of unverified or biased information; implicit tracking and talent assessment. When applying the super service “Admission to the university online”, these risks can be reduced. In the table 1 there are shown the positive effects for three categories of beneficiaries from the introduction of the superservice “Admission to the university online”.

Table 1. Positive effects of the introduction of the superservice "Admission to the university online"

Citizen	**Ministry of Science and Higher Education**	**Educational organization**
Lower transport and accommodation costs	Detailed Entrance statistics	Labor cost reduction
Up-to-date Contest documentation	Admission Check Digit Distribution Control (MCC)	Administrative load reduction
Educational loans		Providing reliable data

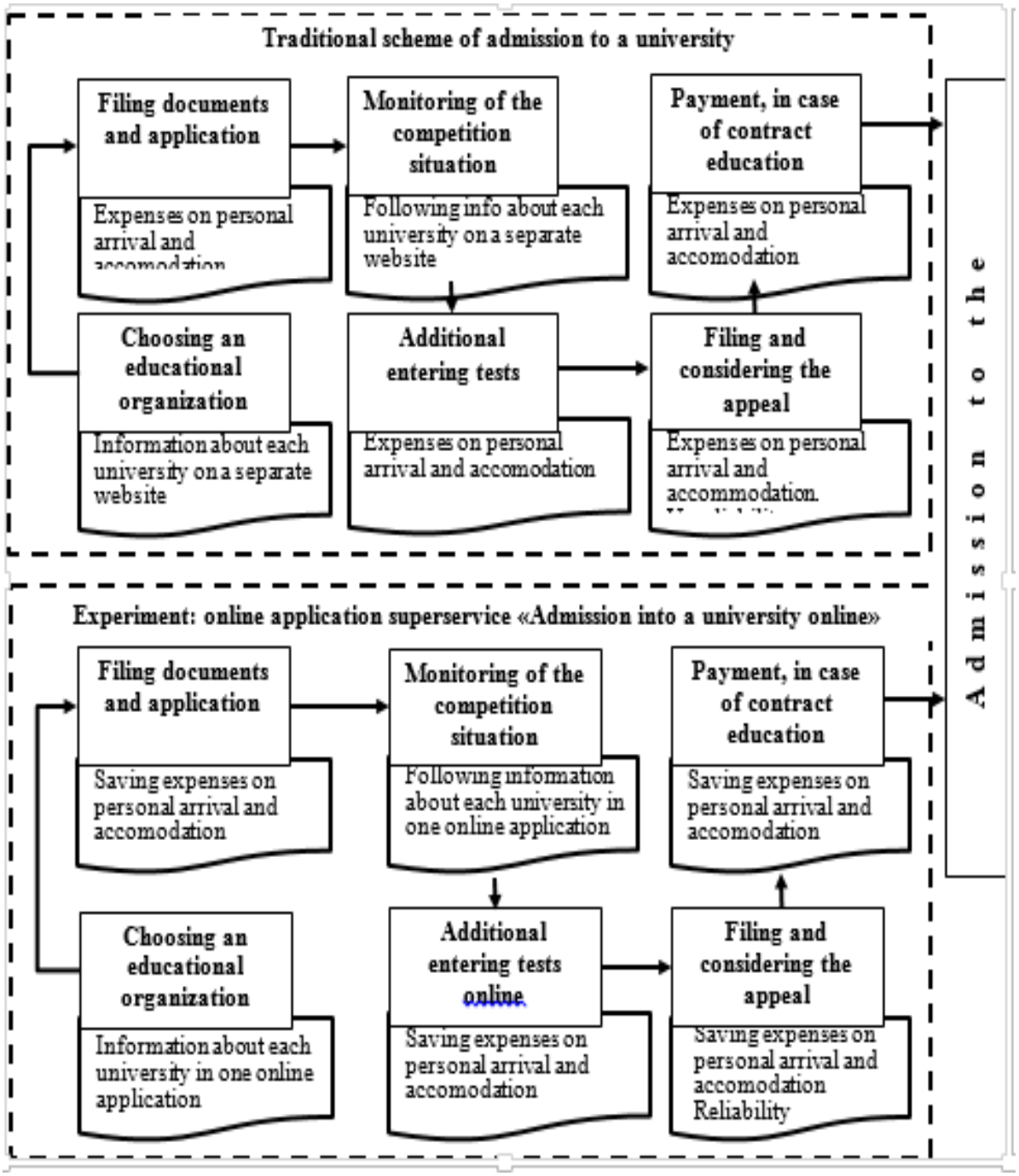

Figure 1. Comparison of options for admission to a university without and with the use of the superservice "Admission to a university online"

The second phase of the educational track's roadmap is university education. It should be noted here that in contrast to traditional training, in which an applicant enters a specific direction and educational program, this phase of modern education includes blocks created in the form of a platform: a modern digital educational environment (MDEE), at the input of which there is data from the Federal Information System "Federal Register of Information on Documents about Education and (or) about Qualifications, Documents on Training" (FRI DEQDT) and Digital University (DU). These blocks in this model are interconnected (Fig. 2.).

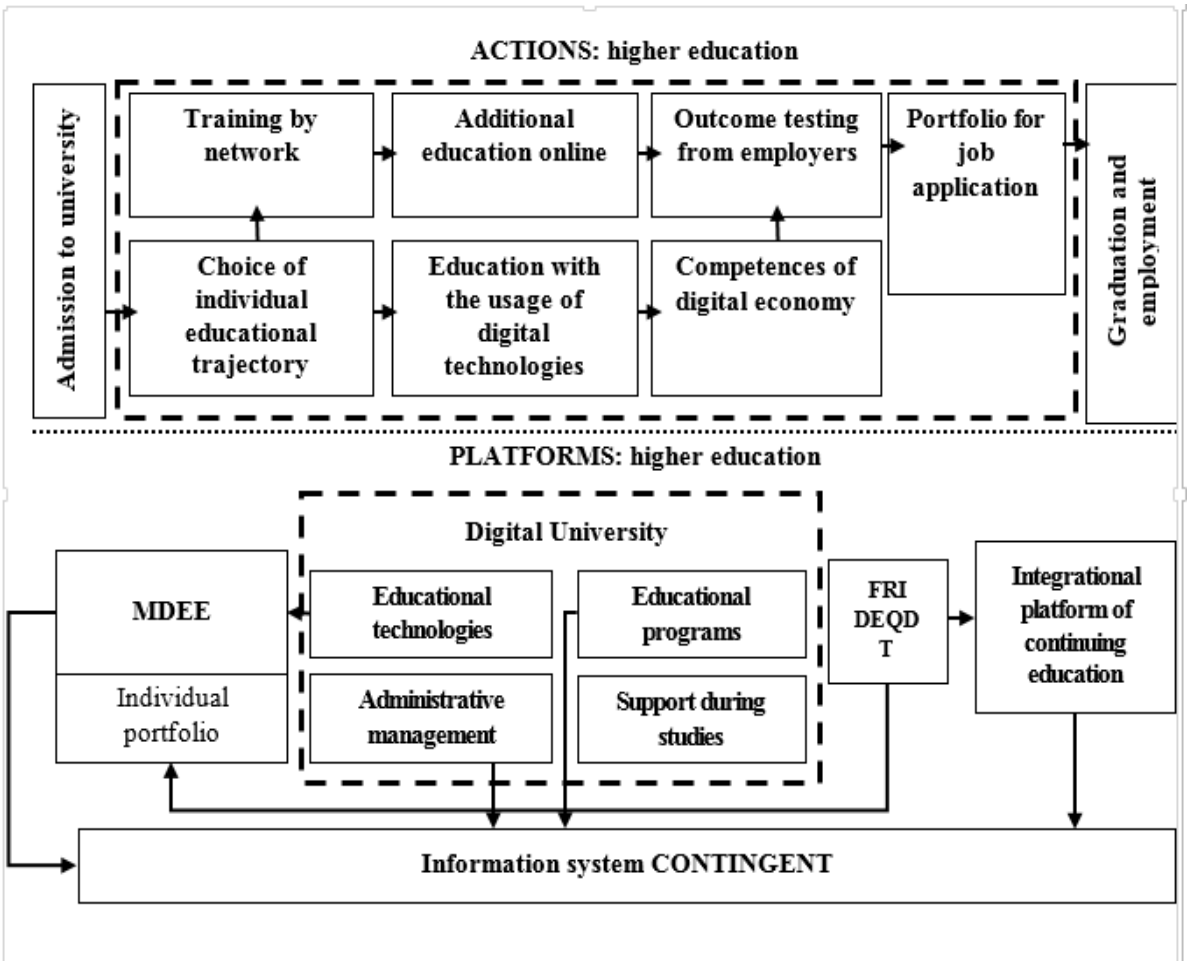

Figure 2. Higher education of the future - actions and platform solutions

An applicant entering a higher education institution will be able to choose an individual educational trajectory, which is formed by MDEE with the use of online training, additional online training, and exit testing from employers is added, on the basis of which a portfolio for employment is formed. A digital university will allow the use of training using digital technologies, as well as develop the competencies of the digital economy (Zhukov et al., 2017; Sharipov et al., 2017), since it has certain educational technologies based on existing educational programs. Digitization of the current state of this block today is represented by different indicators. So, for example, digitization of the network training format today is at the level of 15%. Only student and partner data are available. Additional training in online format - 15%. There are data on the competencies for which enrollment occurs, data on students and teachers. The concept of exit testing from employers in the current education system is completely absent. According to the indicators of the portfolio for employment, digitization can be up to 90%. It is possible to collect data into a competency profile, which includes profiles of social, scientific and other activities. The individual portfolio is now also digitized by 90%, which includes data on academic performance, personal data, methods of passing practices and topics of final qualification works. Table 2 shows the positive effects that can be presented to three groups of beneficiaries from the use of platform solutions at the stage of higher education.

Table 2. The positive effects of the use of platform solutions in the second stage of the personnel track roadmap: higher education

Citizen	**Ministry of Science and Higher Education**	**Educational organization**
Providing learning variability	Data collection automation	Faculty personnel optimization (faculty)
Availability of studying at leading universities in specialized subjects in a network form	Data for the redistribution of CCPs	Extrabudgetary funds from the implementation of training modules in a network form
Confirmation of learning results relevant to the employer	Increasing the number of educational programs in a network form	Improving the competitiveness of the university
Use of effective modern educational formats	Enhancing academic mobility	Digitalization of administrative activities
Obtaining modern competencies relevant to employers	Improving the quality of education	Improving the effectiveness of the educational process

The third block of the education track's roadmap is “continuing education”. This block will consider post-employment needs in self-education for building a career strategy, professional retraining and advanced training (Beresnev et al., 2019). In Figure 3 there are displayed schematically the main elements of actions and platform solutions that can solve the set problem of lifelong education. The current standing in this block is represented by the following values. For the employment of graduates, only 50% of the digitized data are available, which represent the base of practices and internships, employers, as well as the student rating. Self-education is represented by 10% of digitized data in the form of electronic scientific and technical libraries, independent work in coworking, at a boiling point, etc.

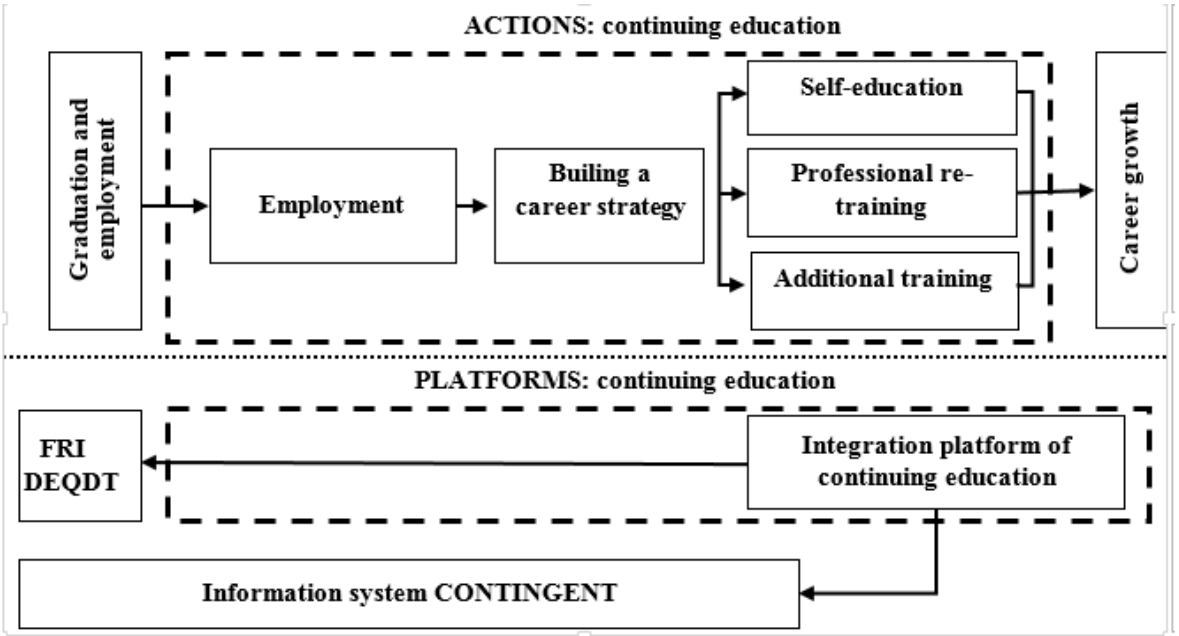

Figure 3. Continuing education - Actions and platform solutions

In the table 3, there are presented the positive effects of implementing a platform solution - an integration platform for continuing education for three groups of beneficiaries.

Table 3. Positive effects of implementing a platform solution - integration platform for continuing education

Citizen	**Ministry of Science and Higher Education**	**Educational organization**
Ability to determine personal trajectory of professional development	Promotion of continuing professional education	Improving the competitive advantage of graduates in the labor market
Ability to remain specialists in demand in the labor market for citizens of pre-retirement age and retired workers	Introduction to the regulatory field of commercial educational products	Simplification of the processes of accepting payment and enrollment for studies in continuing education programs (VET)
The ability to smartly choose a suitable educational program	Synchronization of educational standards with labor market demands	The ability to attract additional extrabudgetary funds through the implementation of educational programs.

According to the results of the strategic session held on the “Winter Island” personnel track, problems were identified with the digitization of the existing three stages of the roadmap. Thus, after analyzing the presented scheme for the development of education, one can conclude that the “Digital University” occupies a central place. The existing potential should be aimed at developing the existing digital services available at leading universities. The state supports these initiatives (Tinyakova & Morozova, 2018) and in the framework of the national program “Digital Economy in the Russian Federation” and the federal project “Personnel for the Digital Economy”, a contest was held in 2019 for the provision of subsidies for the development of “Digital University” models. 43 universities submitted applications, 5 became winners:

- Federal State Autonomous Educational Institution of Higher Education “National Research University Higher School of Economics”.
- FSAEI HE “Ural Federal University named after the first President of Russia B.N. Yeltsin.”
- FSAEI HE "St. Petersburg National Research University of Information Technologies, Mechanics and Optics".
- FSAEI HE “Tomsk National Research State University”.
- FSAEI HE First Moscow State Medical University named after I.M. Sechenov.

Winners' experience: differences between educational models

Consider the educational digital transformation of the FSAEI HE First Moscow State Medical University named after I.M. Sechenov. The twenty-first century dictates changes in education, including medical education. Earlier, a whole stream of

students attended the demonstration operation, but now, in the age of the introduction of digital and information technologies, for example, AR / VR, one can learn by being present and acting in real time on the simulator. The beginning of the transformation of this university is built on a team led by the rector and the first vice-rector, as well as 12 other curators of various digital transformation projects. The team developed a plan in which the following questions were set:

- Where do we want to be?
- Who is our orientator?
- Why are we going there?
- What is the time frame?
- What resources are there?
- By what metrics will we realize that we are where we planned to be?

According to these questions, a schedule and matrix of responsibility for achieving the objectives were developed. The next step was the rebranding of the university's style and logo, which reflects the changes that occur with the introduction of digitalization. All university activities and processes have undergone digitalization, such as:

- Educational activities (training, admission, employment);
- Research activities;
- Translation activities;
- The following service processes have also undergone changes:
- Accounting and finance;
- Legal service;
- Resource management.
- Separately, attention should be paid to the institute of electronic medical education, operating at the university. The main objectives of the institute are:
- Development of a strategy for the introduction of digital technologies into education;
- Creating a system of independent assessment of student knowledge and certification of teachers;
- Formation of a national accreditation system for medical specialists;
- Integration of distance education programs into the system of continuing medical education.
- The basic principles of the institute are: free access; verified information; use of simulation technologies; independent assessment of knowledge.
- The digital educational environment is presented at the university with the following content:
- LMS - (Sechenov. Online; Moodle; Canvas; Coursera; Stepik; Udemy; Google and others);
- Content (massive open online courses (MOOCs); small closed online courses (SPOCs); AR / VR courses; podcasts; long-reads;
- Analytics (adaptive educational path; portfolio; machine learning);
- Support (electronic dean's office; student's personal account).

All reviewed digital services leave and collect a digital track or portfolio of the student. Curriculum for educational programs include offline modules, online modules, modules of strategic partners and internships. About 16% of the students' learning time is spent on internships, university MOOCs, and partner courses. The university has an independent assessment of the quality of education, which is carried out to monitor the passage of educational courses. Also, a network system of cooperation between medical universities is used, which allows for joint examination

of materials, development of a regulatory framework, standards, requirements and recommendations, as well as sharing of resources (sharing economy). The university uses a system of continuing medical education, which is represented by accredited relevant training modules in various fields. Another digital module is the existing career management and employment assistance portal, which helps to build a professional path in the field of medicine and pharmaceuticals. Additional and supporting services at the university are:

- Electronic dean's office (information about students, contractual work, performance analysis, attestation commissions, schedule, debt management, etc.);
- Single window services (a personal profile of a student (and of an applicant) and electronic queue, notification system);
- Electronic document management.

Having analyzed the main elements of the educational model of the medical university, one can conclude that it is already introducing the basic digital services presented in the roadmap developed by the Ministry of Science and Higher Education in order to consider itself the "Digital University" on a full scale. For the digital transformation of this university, according to the head of the center of medical information systems and technologies A. Vetluzhsky, it took the following:

- "A strong leader and a motivated team;
- The processes are built and described;
- The plan is formed;
- Resources are available and reserved (financial, human, technical, regulatory, etc.)
- Ongoing feedback analysis is conducted."

Another winner of the contest was FSAEI HE "Ural Federal University named after the first President of Russia B.N. Yeltsin" (UrFU). We will consider the digital transformation of the educational and scientific process at this university. Three sides are involved in educational digital transformation: students; University; market participants. Together, they participate in the creation of educational programs (EP). The university's educational program includes a dynamic competency model that, on the one hand, takes into consideration the needs of employers, and on the other, the competencies that students want to receive. The educational program also includes problematic events, for example, a meeting with the leaders of industrial partners. An integral part is the introduction of project education, the topics of projects are formed based on proposals from market participants or partners. The core program remains the basics - these are basic subjects that are necessary to obtain general cultural and professional competencies. The structure of study at the university includes:

- Traditional courses;
- Online courses;
- Inverted courses;
- Third-party courses.

The roles of each participant in the development of the university's EP cannot be divided. Each side plays an undeniable role. An industrial partner who participates in the creation of a specific educational program can take an active part both in proposing topics for project education, participate in educational activities, and most importantly, assess the competencies acquired by students. The university structures and fills the educational space, as well as evaluates the acquired competencies. It is possible for a student to choose educational activities for mastering the desired competencies at an affordable level and at a suitable pace, as well as to form a digital

portfolio with independent confirmation of mastered competencies. In the digital transformation of the scientific unit of this university, the additional electronic service "Researcher's console" is used, which helps to unite the researcher, student and the base of scientific equipment, a database of results of previous studies. External non-university databases that also participate in this service are international citation databases, research analytics database, as well as a system for promoting results. In this interaction, the researcher recruits a scientific group of students who work together on promising research topics. This service helps participants to find the necessary information, articles, magazines on topics of interest, as well as conferences. The main achievements of UrFU in the transition to the "Digital University" model:

- The first Russian university to accredit educational programs with various models for incorporating online courses of partner universities.
- The University actively interacts with the University 20.35.
- A simulator of professional activities for managing the University has been developed and is being actively proposed when introducing online technologies into educational activities.
- A model for managing the cost of implementing educational programs with the inclusion of online courses has been developed.
- Creation of a research portal forming a digital profile of the university's research and teaching staff.

Thus, having analyzed the educational model of UrFU, one can see the correlation with the developed roadmap of the Ministry of Science and Higher Education. The main effect for this university according to the words of the first vice-rector for economics and strategic development D.G. Sandler in the transition to the digit is "a qualitative leap in the development of educational trajectories through the collection and analysis of data and tried and tested decision-making mechanisms". A third example of a university operating under the "Digital University" model is the "Saint-Petersburg National Research University of Information Technologies, Mechanics and Optics" (ITMO). Currently, the university is an environment for attracting and developing talents, science and entrepreneurship. The University sets medium-term goals, to which it should come by 2027. ITMO takes part in existing national projects "Education", "Science" and "Digital Economy". As well as the previous 2 universities, ITMO builds its activities in three directions: student, teacher and employer. The "Digital University" model is based on data consumed by a network of research centers. There occurs an active interaction with the educational space, but digital services, personnel and the results of intellectual activity (RIA) are the basis for the development of digital economy enterprises, scientific and professional organizations, as well as universities. These three foundations are the basis that ITMO has developed, and includes the following digital services in the "Digital University" model:

- University management;
- Personnel management;
- Science;
- Single window services;
- Smart finance;
- Smart campus;
- Infrastructure management;
- Talent management;
- Education;

- Security management;
- Electronic document management;
- Communications management.

After analyzing the activities during the transition to the "Digital University" model, similar blocks with a higher education roadmap are also traced. The main difference in ITMO is the focus on science to a greater extent. But this is confirmed by the direction of the university's activities. There is no ideal model for building a "Digital University". Each model is individual and promising (Ejdys et al., 2018; Tinyakova & Morozova, 2018). But for the further development of higher education, it is necessary to replicate the best practices. It is important that the universities that will become the "satellites" of the winners in 2020, and there will be 15 more, that is, 3 "satellite" universities per 1 "leader" university, were able to use the rich experience available at "Digital Universities". The set of competencies of specialists of the future should be developed based on existing tested tools (Sergeeva et al., 2019).

Collaboration of universities in the implementation of the Digital University model

As a result of the discussion at the educational workshop "Digital University" in the educational track "Winter Island", which was attended by 37 universities of the Russian Federation, including universities which are winners of the competition, contest participating universities and the 20.35 University, goals were set, objectives were developed as well as problems they may encounter were identified.

The goals of this discussion were:

- Discussion and development of a vision for the "Digital University" model;
- Transition of universities from competition to cooperation;
- Discussion of the first joint steps.
- The objectives of this discussion were:
- Organization of a platform for communication and interaction;
- Acquaintance of teams of universities with best practices from leaders in the development of a digital university;
- Popularization of the "Digital University" model.

The problems of this discussion were:

- Lack of a common understanding of the model of cooperation in the formation and implementation of the "Digital University" by universities of the 1st and 2nd wave;
- Lack of a clear understanding of the benefits of collaboration in implementing the digital university model;
- High competition for the best students.

Following a discussion of 37 participating universities, 29 digital services were offered, including 5 from the University 20.35, which can be used in collaboration of the universities, while the average demand coefficient for the top 10 services made up 9.8. Tangible effects for citizens and the economy of the Russian Federation during collaboration in the "Digital University" model:

- Students gain access to support services - a digital tutor. The effect is measured by the number of digital network services; the number of mastered programs.
- Students receive network project teamwork, which is measured by the number of collaborative projects.
- Faculty - improving the professional level and demand. It is estimated by wage growth.
- Academic researchers - improving the quality and quantity of scientific

research. Indices, ratings, grant amounts are measured.

- Administrative personnel - improving the effectiveness of the university's work and brand value. Budget optimization is being evaluated.
- The state receives an increase in global competitiveness, which is expressed by the number of universities in world rankings.

Implementation of the services provided by universities will ensure the fulfilment of key parameters of the federal project "Personnel for the Digital Economy" (FP). To fulfil the FP indicator "Training and retraining of specialists in the competencies of the digital economy under the programs of continuing professional education", 1 million specialists who have been trained in the competencies of the digital economy will be trained. 40% will be the share of the population with digital skills. For this, the proposed 8 services will be used, the key to which are: a digital center for assessing and developing competencies; virtual project office. To fulfil the indicator "Training on online digital literacy development programs", 800 thousand people a year will be trained. For this, 12 services will be used, where the key ones will be: a virtual mobility platform; intellectual system for assessing the quality of educational programs. To solve the problem of the FP "Admission to higher education programs in the field of information technology" 120,000 people a year will be accepted. Six services will be used, where the key ones are: an online platform for hosting and maintaining OP, a network interaction service. In turn, the 19 proposed services relate to end-to-end FP products. Their application will also find its place.

- Risks for the implementation of a collaboration project may include:
- Violation of the stated principles by the participants in the collaboration;
- Reputational risks - loss of position by leading universities of collaboration;
- Outflow and redistribution of students, since the collaboration is transparent, and students can move to a more effective part of the collaboration;
- Technological risks: information security - the risk of loss or leakage of information.

Analysis of current university readiness for digital transformation

Having considered the experience of the leading universities of the Russian Federation, it is necessary to analyze how much the rest of the educational institutions are ready for digital transformation in comparison with the leading universities which are the winners. To do this, a survey was conducted (Survey, 2020), consisting of 6 questions, in which 80 respondents from 25 universities of the Russian Federation took part. Categories of employees were divided as follows: 9 survey participants belonged to the administrative and managerial staff, and 71 to the teaching staff. Respondents answered questions regarding the implementation and participation in the digital transformation of the university. The assessment was carried out on a ten-point scale, where 0 is the minimum value of the indicator, and 10 is the highest degree of presence of the studied indicator. The survey results are presented in Fig. 4. The dashed line marks the indicators of leading universities which are the winners of digital transformation. The solid line is the responses of 80 respondents.

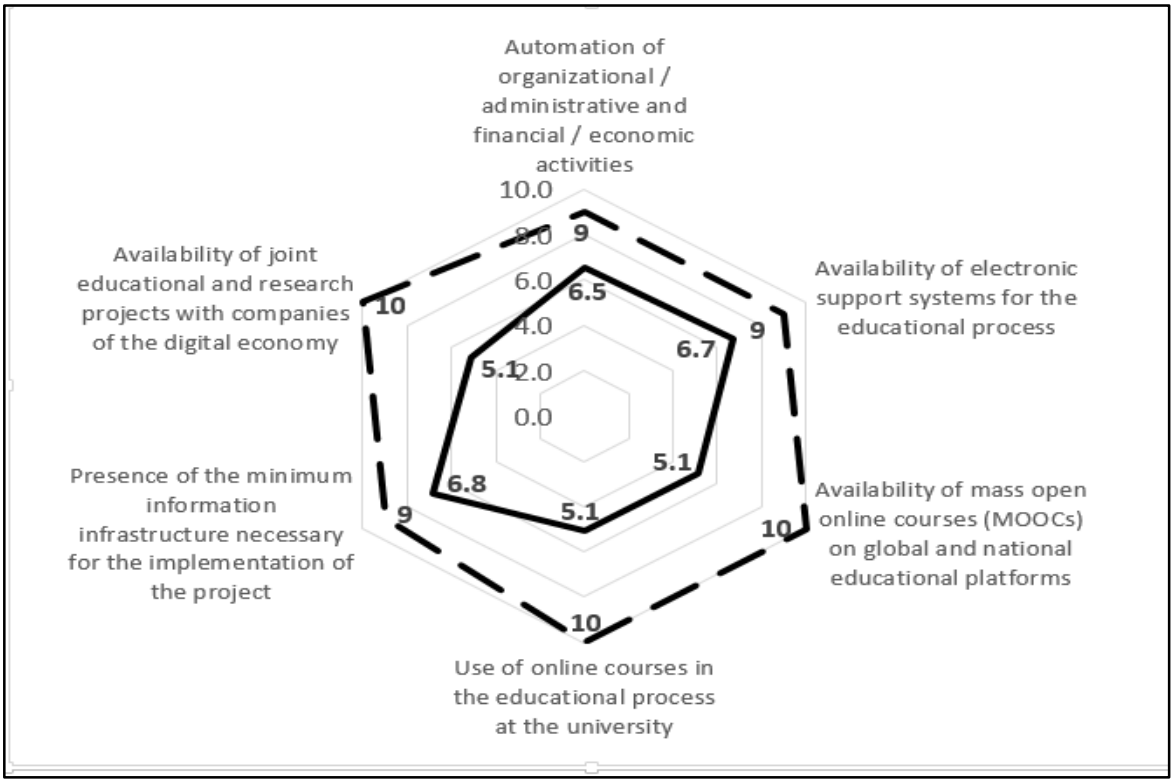

Figure 4. Analysis of the current readiness of Russian universities for digital transformation (compiled by the authors according to the study)

The results of the reference group of universities can be interpreted as generally positive by the average score. The best indicators in terms of the average value of the assessment of indicators - 6.8 points out of 10 - were received as the answer to the question "Presence of the minimum information infrastructure necessary for the implementation of the project", 6.7 points - "Availability of electronic support systems for the educational process", 6.5 points - "Automation of organizational / administrative and financial / economic activities", 5.1 points - "Availability of mass open online courses (MOOCs) on global and national educational platforms", "Availability of joint educational and research projects with companies of the digital economy" and "Use of online courses in the educational process at the university". Comparing the assessment of the leading universities (winners) with the reference group, one has to admit the fact that the universities of the Russian Federation are half ready for digital transformation.

CONCLUSIONS AND PROSPECTS FOR FURTHER RESEARCH

The article analyzes the current state of higher education in the Russian Federation. The advantages of the new education development roadmap presented by the Ministry of Science and Higher Education of the Russian Federation are considered. The role of the "Digital University" in this roadmap is substantiated. The main digital services are presented that can improve the performance of the main beneficiaries: applicants, universities and the state. Conclusions are drawn for each block of the higher education roadmap and the positive effects of the introduction of the considered digital services and platform solutions are presented: "Admission to the university online", MDEE, "Digital University" and the integration platform for continuing education. Descriptions are given, of three educational models of

universities which are winners of the competition for the provision of subsidies for the development of the "Digital University" models, carried out as part of the national program "Digital Economy in the Russian Federation" and the federal project "Personnel for the Digital Economy". A comparison of the developed models with the new roadmap for the development of education is presented. Within this study, conclusions are presented that the winners universities presented independent projects that are different from each other, but each model gives its own idea of the "Digital University". The authors participated in the personnel track of the educational workshop "Winter Island" that took place on December 1-4, 2019 in Sochi and took part in the discussion of the goals, objectives and problems that such a model of education may encounter. As part of the four-day digital stream, 29 digital services were offered that are available at universities, which must be replicated for the successful distribution of the "Digital University" model and there must be received a synergistic effect from this. The second wave of "satellite" universities that will join this model in 2020 will be able to use them on special conditions. In turn, an analysis was made of the current readiness of Russian universities for digital transformation, and according to the results of a survey, it was concluded that Russian universities are ready for such changes, but only by half. Limitations in the article are due to the speculative nature of the materials presented in it. Our task was to consider the features of the "Digital University" model, embed it in the roadmap of the educational track, replicate successful results and, as a consequence, obtain a positive development of this model, which can bring a significant effect in the digital age.

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