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AmurCon 2021: International Scientific Conference**MODERN TRENDS IN THE MANAGEMENT OF RUSSIAN
UNIVERSITIES COMPETITIVENESS**

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Abstract

The topicality of the chosen paper is proved by the increase in the competitiveness of Russian universities in the global educational market. It either enhances the attractiveness of the national education system or increases the country's position in the world community. The educational services market is a complex system, remaining one of the most dynamically developing areas, which has recently undergone significant transformations. The purpose of the paper is to study current trends in higher education development and draw conclusions about the competitiveness of Russian universities in the educational services market. The main methods of the research were logical, monographic, deduction, induction, analogy, comparison, and analysis. Research results show that the positions of Russian universities in international rankings are analyzed, and the authors have proved that they can compete with other global universities. At the same time, it still is essential to make several management decisions to increase the competitiveness among the world's leading educational institutions. The authors concluded that the modernization of Russian education can be realized by complex projects accompanied by the creation and implementation of cutting-edge models, programs, and technologies. Thus, it is likely to increase the level of competitiveness of Russian universities not only at the national level but also in the international educational market more effectively.

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Keywords: Competitiveness of higher educational institutions, educational services market, higher education

1. Introduction

One of the principal system-forming institutions of society is education. The educational services market is a complex system, remaining one of the most dynamically developing areas, which has recently undergone significant transformations. Besides, society's demands for the quality of education are growing. Scientists have paid precise attention to the development of Russian higher education over the past 15 years, including the issues of strengthening cooperation between universities, scientific organizations, enterprises of the real sector of the economy, the development of university science, improving the education quality based on a practice-oriented approach, and the active introduction of modern technologies.

The higher education system is dependent directly on the school system and the labour market. The educational results obtained at the university depend on the knowledge level and skills that students received at the previous stage of education. In 2018, the Presidium of the Presidential Council for Strategic Development and National Projects approved the passport of the national project "Education" (Protocol No. 16 of December 24, 2018). The project implementation dates are 01.01.2019 – 12.30.2024. The main targets of the project:

1. To ensure the global competitiveness of Russian education;
2. To become one of the top 10 countries in the world in terms of the quality of general education;
3. To educate a well-developed and socially responsible person.

The globalization of education is aimed at unifying the education systems of different countries, education levels, and qualification frameworks, and there is also a trend towards openness in education, allowing you to get it from anywhere in the world. Information technologies and the digitalization of education contribute to the expansion of the globalization of education. National educational systems go beyond state borders, internationalization of education. The formation of the unified global educational space and educational services market appear (Konstantinova et al., 2021). These determine new competitive conditions for all players of the educational market; the transformation processes of higher education are actively underway; competition is increasing not only in academic and scientific work but also in creating innovations, used learning technologies, and the like.

2. Problem Statement

The subject of the research is the management system of the competitiveness of Russian educational institutions of higher education not only at the national level but also in the international academic market.

3. Research Questions

The system of managing the competitiveness of educational institutions of higher education includes the following components: the level of infrastructure, information and methodological support of the educational process, the teaching staff structure, the effectiveness of graduates' employment, scientific activity, extracurricular activities for university students, international activities, education provision to

persons with disabilities, the presence of the university in world rankings and several other criteria. Competitiveness due to innovative activity is a condition for long-term and sustainable economic development in the modern global knowledge economy.

4. Purpose of the Study

The purpose of the research is to study the current trends in the development of higher education and conclude the competitiveness of Russian universities in the educational services market.

5. Research Methods

The main research methods were logical, monographic, deduction, induction, analogy, comparison, and analysis. The state policy in the sphere of modernization and improvement of higher education, contributing to its quality improvement, the integration of Russian universities into the international educational space, has been thoroughly studied. We compared Russian universities in terms of their world rankings: ARWU, QS, THE. The paper presents the main criteria for the success and efficiency of functioning of Russian universities, which have already occupied positions in the world educational rankings, allowing other educational organizations to increase their competitiveness. The analysis of the Russian market of educational services made it possible to identify the main trends in the development of higher education in modern conditions.

6. Findings

The challenges facing universities are multifaceted. One of the primary tasks is the first-class training of highly qualified staff who can solve professional tasks to help students realize themselves in the profession and be competitive in the labour market. Improving the efficiency and quality of education is one of the basic principles of state policy implementation (Nekrasova et al., 2020b). It is possible to evaluate a university that successfully functions in the educational services market, occupying high positions in the ranking of universities using various criteria of this study. Russia has been monitoring the effectiveness of educational institutions of higher education annually since 2013. Its purpose is to obtain complete and reliable information about the current state of all types of university activities necessary for making an informed management decision to improve the efficiency and quality of services in the sphere of education.

The primary purpose of monitoring the effectiveness of universities in 2013 was to identify a group of universities with "signs of inefficiency." Since 2014, non-state universities have been included in Performance Monitoring on a mandatory basis (Platonova et al., 2019). We should note that the efficient monitoring of universities is aimed not only at identifying a low-quality university segment but also at identifying groups of influential universities. They include both leading Russian universities focused on global education and research markets and some regional universities focused on solving regional problems.

Monitoring indicators are being revised in connection with trends in education development. On March 24, 2020, the Order of the Ministry of Science and Higher Education of the Russian Federation

No. 475 approved "Performance indicators of federal budgetary and autonomous educational institutions of higher education subordinate to the Ministry of Science and Higher Education of the Russian Federation" (as amended on August 5, 2021). The indicators are divided into two groups:

1. Performance indicators of institutions. These include indicators that characterize: the quality of education, international activity, scientific activity, and financial activity.

2. Performance indicators of heads of institutions.

On April 7, 2021, the Ministry of Science and Higher Education of the Russian Federation published information and analytical materials on the efficiency monitoring of educational institutions of higher education in 2020 (Monitoring ..., 2020). The monitoring comprised 1222 universities (including 316 non-governmental ones) together with 530 branches, ten federal universities, 29 national research universities, and 21 participants of Project "5-100".

The importance of evaluating the effectiveness of Russian universities is due to the increasing competition in the educational services markets, the results of which play a crucial role in creating and maintaining the university image as a market participant and are a factor in attracting a large number of applicants. An increase in the attractiveness of Russian universities in the global educational market not only improves the competitiveness of the national education system but also strengthens the country's position in the world community. International rankings are a significant component of assessing the country's economic development and human capital. The results of the rankings allow us to evaluate the condition of the domestic education system in the international educational market.

To ensure the high quality of Russian education following the changing needs of the population to ensure its competitiveness in the global education market, they launched Project "5-100" in 2012 by decree of the President of the Russian Federation, which was completed in 2020. The organizers chose 21 universities to participate in the project to increase the prestige of Russian universities in the global higher education market. One of the goals of the program was to select five Russian universities to get into the TOP 100 best world universities according to three rankings, which were among the well-known and influential international rankings of the best universities in the world (Danilova, 2019).

- AR ARWU (Academic Ranking of World Universities) - established in 2003 by the Institute of Higher Education of Shanghai University;
- QS World University Rankings (QS WUR) – developed by the British consulting company Quacquarelli Symonds in 2004;
- The Times Higher Education - calculated by The Times Higher Education magazine since 2010.

The indicators of academic productivity in university rankings are presented in Table 1.

Table 1. The Indicators of Academic Productivity in University Rankings ARWU, QS WUR, THE

ARWU (Academic Ranking of World Universities)
1. Q1 - The number of influential journal publications is an important measure of the research output of the universities in the corresponding subject. Q1 is the number of papers published by an institution in an Academic Subject in journals with Q1 Journal Impact Factor Quartile over five years. Data sources are Web of Science and InCites.
2. IC – International collaboration is an indicator used to evaluate the level of international collaboration in the respective subject between institutions. The ratio of the number of publications that have been found with at least two different countries in addresses of the authors to the total number of publications in the respective subject for an institution over five years. The data source is InCites.
3. CNCI – Category Normalized Citation Impact is the ratio of citations of papers published to the average citations of papers in the same category, the same year and same type of journal publication, by an institution in an Academic Subject over five years. A CNCI value of 1 represents world-average performance. The data source is InCites.
4. Top is the number of papers published in Top Journals in an Academic Subject for an institution over five years. Top Journals are nominated by distinguished scholars through Shanghai Ranking’s Academic Excellence Survey.
5. AWARD –the total number of staff of an institution who has won a significant award in a particular subject area since 1981. It is measured based on the Academic Survey of experts from the field of higher education.
QS World University Rankings
1. Academic reputation is a weighting metric of 40%. It is measured based on the Academic Survey of experts from the field of higher education regarding teaching and research quality at the world’s universities.
2. Employer reputation is 10%. The Employer Reputation metric is based on the Employer Survey to identify those institutions from which they source the most competent, innovative, and effective graduates.
3. Faculty/Student Ratio is 20%. Measuring teacher/student ratios is the most effective proxy metric for teaching quality.
4. International faculty ratio/International student ratio is 5% each.
5. International student ratio is 5%.
6. Citations per faculty is 20%. The institutional research quality is measured using Citations per Faculty metric. It is a ratio of the total number of citations received by all papers produced by an institution over five years by the number of faculty members at that institution
The Times Higher Education
1. Teaching (the learning environment) is 30%. This metric includes reputation survey: 15%, Staff-to-student ratio: 4.5%, Doctorate-to-bachelor’s ratio: 2.25%, Doctorates-awarded- to-academic-staff ratio: 6%, Institutional income: 2.25%.
2. Research (volume, income and reputation) is 30%. This metric includes Reputation survey: 18%, Research income: 6%, Research productivity: 6%.
3. Citations (research influence) is 30%. This metric includes the quality of research and citation volume of research (the ratio of average citation of university publications per average citation in the world)
4. International outlook (staff, students, research) is 7.5%. This metric includes International-to-domestic-student ratio: 2.5%, International-to-domestic-staff ratio: 2.5%. The proportion of a university’s total research journal publications that have at least one international co-author and reward higher volumes. This indicator uses the same five-year window. Foreigners-students - citizens of the country ratio- 2.5%.
5. Industry income (knowledge transfer) is 2.5%. – This category seeks to capture such knowledge-transfer activity by looking at how much research income an institution earns from industry, scaled against the number of academic staff it employs.

Source: Compiled by the authors based on materials from world rankings websites (Academic..., 2020; Quacquarelli..., 2020; The World..., 2020).

The evaluation mechanisms used in rankings and monitoring differ in the evaluation strategy, procedures, and results. Both evaluation systems measure various aspects of the university's activities, taking into account indicators that allow quantitative and, in some cases, qualitative assessment.

Each ranking has its specific tasks and its performance indicators. In some cases, the emphasis is on scientific achievements (university, staff, graduates), in other cases, on the University's international outlook and mobility development, and the like. The educational institution has the right to choose the ranking systems to be assessed depending on its mission, goals, and objectives (Navodnov et al., 2019).

Research data of the positions of Russian universities in international rankings 2020 is presented in Table 2.

Table 2. The positions of Russian Universities in international rankings, 2020

№	The Positions	The Name of the Russian University
ARWU (top-500)		
1	97	Lomonosov Moscow State University
2	301-400	Saint Petersburg State University
3	401-500	Moscow Institute of Physics and Technology
QS World University Rankings (top-500)		
1	82	Lomonosov Moscow State University
2	231	Novosibirsk State University
3	234	Saint Petersburg State University
4	268	Tomsk State University
5	284	Bauman Moscow State Technical University
6	302	Moscow Institute of Physics and Technology
7	322	HSE University
8	329	National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)
9	364	Ural Federal University
10	366	MGIMO University
11	387	National Research Tomsk Polytechnic University
12	392	Kazan (Volga region) Federal University
13	392	RUDN University
14	436	ITMO University
15	439	Peter the Great Saint-Petersburg Polytechnic University
16	451	The National University of Science and Technology MISIS
The Times Higher Education (top-500)		
1	174	Lomonosov Moscow State University
2	201-250	Moscow Institute of Physics and Technology
3	251-300	HSE University
4	301-350	Peter the Great Saint-Petersburg Polytechnic University
5	401-500	Bauman Moscow State Technical University
6	401-500	National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)
7	401-500	Saint Petersburg Mining University

Source: compiled by the authors based on materials from world rankings websites (Academic, 2020; Quacquarelli, 2020; The World, 2020)

The analysis of the positions of Russian universities in international rankings has shown that they can compete with other global universities.

According to the Times Higher Education (THE) University rankings 2020, 5 educational institutions out of 39 Russian universities improved their results, and 31 retained their positions. Lomonosov Moscow State University (Lomonosov Moscow State University) managed to improve its

results by 15 points. Peter the Great Saint-Petersburg Polytechnic University moved from group 501-600 to group 301-350, Bauman Moscow State Technical University advanced from group 801-1000 to group 401-500 (Zaitseva, 2020).

In 2021 nineteen Russian universities were included in 29 ARWU subject rankings. Subject rankings were formed for 54 subjects grouped into five areas. They were sciences, engineering sciences, life sciences, medical sciences, and social sciences. Lomonosov Moscow State University was among the top Russian universities in the number of "positions" in ranking lists. In 2020, the university was included in 12 rankings. National Research University "Higher School of Economics" and National Research ITMO University (formerly the LIFMO - Leningrad Institute of Fine Mechanics and Optics) were included in 8 rankings (Zaitseva, 2020).

In the QS WUR-2021 ranking among Russian universities, Lomonosov Moscow State University took the highest 74th position. At the end of the year, the university advanced by ten lines. This university's results have become the best over the last nine years. The university scored 77.3 points for the academic reputation, 82.8 points for the employer reputation, 99.8 points for the faculty/student ratio, and 76.8 points for the International student ratio. Lomonosov Moscow State University's final score was 65.9 points (Valuyskaya, 2020).

Russia was represented in the rankings by 48 universities.

In the QS WUR-2021 World University Rankings, Russia held 10th place (Figure 1).

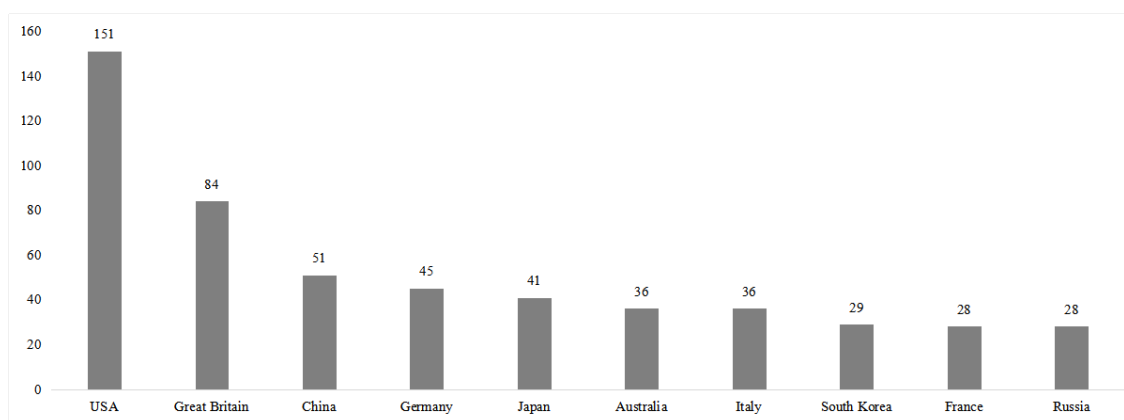


Figure 1. The number of universities in the World University Rankings in the QSWUR-2021 (top-10)

Among the leading countries were the USA, Great Britain, and China. The Massachusetts Institute of Technology (MIT) in the USA was ranked the first in the rankings receiving the final result of 100 points for the ninth year in a row. Stanford University in the USA took second place (98.4 points), and Harvard University in the USA took third place (97.9 points) for three consecutive years (Valuyskaya, 2020).

QS WUR also presented the "World University Rankings: BRICS" (World University Rankings: BRICS is a group of five major developing countries: Brazil, Russia, India, China, South Africa (Brazil, Russia, India, China, South Africa). In 2020, six Russian universities entered the top 20 of these rankings. Lomonosov Moscow State University was ranked first in the prestigious rankings. St. Petersburg State University was ranked 2nd, and Novosibirsk State University was ranked 3rd. Russian universities are

leading in terms of such indicators as the International student ratio and employer reputation. When compiling the ranking, QS WUR evaluated universities in eight criteria: the academic reputation of the university, the employer reputation, the faculty/student ratio, the International faculty ratio/ International student ratio, the doctorate-to-bachelor's ratio, the number of publications per academic staff member and citations per article.

An analysis of the positions of Russian universities in the world rankings showed that by 2020 the top-level goal of Project "5-100" was not achieved, although it had a positive impact on the higher education development in the Russian Federation. Many of the universities participating in the project occupy high positions in the rankings of subject areas (Danilova, 2019).

Project "5-100" resulted in the following changes that have taken place in the universities participating in it:

- the number of international projects has increased;
- the number of international staff has increased in the state;
- bilingual programs have become available to attract more international students;
- the share of international students increased by 2.6 times per institution;
- Research activity and development have increased (Danilova, 2019).

According to Russian experts, Project "5-100" has improved the competitiveness of the leading universities of the Russian Federation. An integrated approach to Project "5-100" implementation has made it possible to increase the educational and research potential of both universities and the country. The universities participating in Project "5-100" have built a management system introducing the best world practices, rejuvenating the staff, increasing the staff competencies, increasing the brand recognition of universities abroad. The active development of science in the universities participating in Project "5-100," researching the most relevant topics on the world stage, opening new laboratories, collaborating with leading world scholars, contributed significantly to strengthening the position of Russian science in the world. These results indicate the effectiveness of the state-initiated program to support Russian higher education. Project "5-100" has proved that such initiatives contribute to the scientific, educational, and intellectual country's potential. Both international and Russian experience shows that projects are an effective tool to solve strategic problems in the face of constant changes. They also eliminate imperfections inherent in a market economy (Nekrasova et al., 2020b).

We should like to note that Russian universities have become among the world leaders in areas where they did not have strong enough positions before: sociology, politics, and international relations, economics, and econometrics, history, computer science (informatics), mining engineering, mechanical engineering, automation and management, education, and the like.

Project "5-100" was completed in 2020. In April 2021, at a meeting held by the association "Global Universities," scholars presented the prospects for further development in the field of higher education. Project "5-100" was replaced by a new large-scale state-funded program of support and development of universities, "Priority 2030". The Decree of the Government of the Russian Federation "On measures for the implementation of the strategic Academic leadership program "Priority 2030" dated May 13, 2021 No. 729 was approved:

1. Rules for the selection of educational institutions of higher education to support the development programs of educational institutions of higher education in the framework of the implementation of the strategic academic leadership program "Priority 2030";

2. Rules for grant granting in the form of subsidies from the federal budget to support programs for the development of educational institutions of higher education (Program..., 2021).

"Priority 2030" program will concentrate resources to ensure the contribution of Russian universities to achieving the national development goals of the Russian Federation. A brief description of the program is presented in Table 3.

Table 3. A brief description of the program "Priority 2030"

Title	Description
Objective	<p>To form in Russia more than 100 progressive modern universities - centers of scientific, technological, and socio-economic development of the country</p> <p>For the country:</p> <ul style="list-style-type: none"> - increasing the share of Russian science in the global research and development market - ensuring the attractiveness of employment in Russia for leading scholars and promising young researchers - staffing of priority areas of development of science, technology, economic sectors, and social sphere - using the scientific, educational and innovative potential of universities to shorten the period of innovation introduced into the economy of the country and the subjects of the Russian Federation <p>For universities:</p> <ul style="list-style-type: none"> - increasing the scientific and technological potential of Russian universities to create new technologies, industries, and competitive products <ul style="list-style-type: none"> - expansion of interinstitutional networking - integration of university science with scientific organizations and the real sector of the economy <ul style="list-style-type: none"> - development of international cooperation
Tasks	<p>For society:</p> <ul style="list-style-type: none"> - providing conditions for the digital competencies and skills formation in the sphere of digital technologies among students, including students of IT specialties - improving the quality and demand for educational, scientific, technical, and social services of Russian universities <p>Improving the competitiveness of Russia in the field of education, science, and technology</p> <p>Transformation of existing approaches to higher education and creation in Russia of a large group of universities successfully competing in the global education, science, and technology market</p> <p>Dissemination of the best practices of research, educational and innovative activities</p> <p>Integration of the educational process with the research, technological and innovative activities of the university</p> <p>Creating favorable conditions for the development and successful realization of personal potential</p> <p>Improving life quality and creating conditions for self-realization</p>
Program implementation period	Until 2030

Source: Compiled by the authors according to (Chernyshenko & Falkov, 2021)

Modern universities are undergoing a transformation being influenced by many significant factors. Since such a transformation concerns the entire complex of their principal functions, we can talk about changes in the models of modern universities that occur while preserving their classical models.

Despite the multiplicity of models, the fundamental trend determining the changes of the modern educational institution is its transition from the University model 1.0 to the University model 4.0.:

1. University 1.0. Represents the classical model of the educational institution, is engaged only in educational activities and is a source of new knowledge; provides a graduate's training for economic sectors.

2. University 2.0. A research university that simultaneously performs two missions: teaching and research. These functions include generating new knowledge through research and consulting services for market players. The central mission of such a university is the reproduction of new knowledge, and staff training is integrated into the scientific process.

3. University 3.0. Apart from teaching and research, such a university implements a new function. It is the commercialization of knowledge and technologies. The university manages intellectual property rights, forms an entrepreneurial ecosystem, promising technology markets, and turns into a platform for creating economic superiority of the country at the global level.

4. University 4.0 – University of the future. It is not just education, science, and innovation. The university is a foundation for all social structures integration and a basis for scholars, teachers, students, business organizations, authorities, and urban communities' cooperation to solve development problems, reduce social and economic costs and support human capital development. The use of digital tools (artificial intelligence, data analysis, management based on big data) will allow people to track educational results at all stages of communication of students and get feedback from the customer (business, science, government, and the like) will allow them to react almost instantly and change educational programs (adaptive learning, or individual educational programs). This approach makes it possible to solve the problem of training high-quality specialists with the set of competencies that are in demand at the moment and to predict the labour market demand for the future (Konstantinova et al., 2021).

Education is one of the priorities of the socio-economic development of the country. Current social processes establish the regulation of improving higher education. The main goal of higher education should be to ensure personal growth. The country's education system improvement should consider social requirements, the introduction of project methods, the identification of competitors, and leaders' support who can successfully implement new approaches to higher education management and interdisciplinary decision-making (Turkulets et al., 2018).

It is necessary to change the methodology for universities evaluation, where performance indicators and corresponding efficiency indicators will be highlighted (the results/costs ratio). A correct assessment indicates comparability of universities in terms of expected performance and the implemented "target function": federal, national research, reference universities, or "ordinary" universities (Romanov, 2021).

In current conditions, the international market of educational services is actively developing, becoming more accessible, opening up terrific prospects, but, at the same time, the competition between

universities is increasing at an accelerated pace. Russian and international universities' competitiveness means following modern trends in the development of higher education.

These include the following:

1. Globalization of higher education. It means the gradual transformation of various educational systems into a single pan-European and then global while maintaining differences due to traditions and culture. Information technologies and the digitalization of education contribute to the expansion of the globalization of education. We should like to note that the pandemic has made adjustments to the globalization scale at a higher education level, limiting the possibilities of international academic mobility. Mobility is one of the essential mechanisms of this process, and it mobilizes national education systems for increased demand from local students, previously focused on foreign universities. Two trends in the education systems of different countries were identified as leading in the pandemic: disruption of the educational process and forced transition to distance learning. Previous free choice of online education or hybrid formats (mixed – online and offline) in the pandemic was replaced by forced and obliged online education (Radina & Balakina, 2021).

2. Digitalization of higher education. It opens up extensive opportunities for students to access educational information resources and builds individual educational trajectories. It allows:

- to introduce digital tools and technologies into traditional educational programs and academic disciplines;
- form mixed learning models;
- develop the online education market;
- optimize the teacher and student interaction and interaction between all educational process participants;
- change the management approach to educational organizations, make the educational organizations' activities transparent.

3. Internationalization of education is an integration of international and intercultural aspects process into the goals and methods of higher education provision. It assumes:

- students' and teaching staff's mobility for educational purposes;
- the adaptability of educational programs and institutional mobility;
- formation of new international standards of academic programs;
- integration of international work into the curricula and educational standards;
- institutional partnership: the creation of strategic educational associations.

Internationalization has become an integral component of higher education. We can trace its priority in state policy, university development strategies, and international agreements. Higher education systems throughout their history have included elements of international activities, but internationalization as a concept and a strategic factor is a pretty new phenomenon. Its emergence was due to the need for higher education systems at the systemic and institutional level to meet the needs of a knowledge-based society and economy in the context of increasing globalization (Hans, 2019).

4. Democratization of higher education. It manifests itself in everyone's rights to education expansion, opportunities for self-organization and rights to choose ways of educational activity, the diversity of educational systems, and forms of education. There is a reduction in state functions in

education regulation, the development of public administration, self-government, and the autonomy of educational organizations.

5. Continuity of education. It is not only caused by the acceleration of technical, technological, and information progress. Socio-economic and demographic development peculiarities also influence this process.

Thus, continuing education becomes an integral development factor in a dynamically changing society. Universities need to respond to these processes promptly and provide proactive responses, creating competitive conditions for lifelong learning. It is possible through the development of additional educational programs in various fields, the provision of practice-oriented training, and the orientation of educational programs to the needs of the labour market (Konstantinova et al., 2021).

7. Conclusion

We should like to note that the Government of the Russian Federation has taken significant measures to modernize, improve higher education and its quality, and integrate Russian universities into the international educational space in recent years. Higher education is turning from transferring knowledge into a powerful mechanism for adjusting society to a rapidly changing economic and social environment. Social innovations are becoming crucial development elements as social processes are more and more dynamic.

Education development is seen as a condition and prerequisite for the qualitative development of the economy and social sphere. Human capital plays an increasingly important role in the modern economy. It is what justifies the increase in budget investments in the education system. The complexity of human relations is growing, which requires a new level of socialization of the younger generation. The complexity of the education system is also increasing, which imposes new requirements on teaching staff, their qualifications, and management quality in this area.

Thus, we can draw the following conclusion. A set of complex projects related by goals and objectives allows us to realize promising breakthrough developments to create and implement advanced models, programs, technologies, and education solutions and use financial resources most effectively and efficiently. It is possible to achieve the goals, solve the problems of socio-economic development of the Russian Federation, and increase the competitiveness of Russian universities not only at the national level but also in the international educational market (Nekrasova et al., 2020a).

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