

THE CURRENT STATE AND DEVELOPMENT TRENDS OF EDUCATION SYSTEMS IN RUSSIA AND CHINA DURING THE CORONAVIRUS PANDEMIC

O ESTADO ATUAL E AS TENDÊNCIAS DE DESENVOLVIMENTO DOS SISTEMAS DE EDUCAÇÃO NA RÚSSIA E NA CHINA DURANTE A PANDÊMICA DE CORONAVIRUS

EL ESTADO ACTUAL Y LAS TENDENCIAS DE DESARROLLO DE LOS SISTEMAS EDUCATIVOS EN RUSIA Y CHINA DURANTE LA PANDEMIA DEL CORONAVIRUS

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ABSTRACT: This article examines changes in the economic and managerial relations in education under pandemical conditions. The authors aimed to identify the key problems that arose after national governments introduced restrictive measures and there was a transition from traditional to distance learning. Also, the authors proposed recommendations for ensuring universal access to education as a prerequisite for sustainable economic growth. The methodological basis was the provisions of the public goods and human capital theories. These theories consider education as a public good and an area of human capital accumulation. The authors concluded that the economic crisis caused by the coronavirus pandemic decreased the quality of human capital and created prerequisites for introducing innovative education technologies. Furthermore, the authors established that the universal right to high-quality education with innovative technologies is a key condition for ensuring sustainable economic growth.

KEYWORDS: Human capital. Traditional and innovative educational technologies. Online learning platforms. Government regulation of education. Sustainable economic growth.

RESUMO: *Este artigo examina as mudanças nas relações econômicas e gerenciais na educação em condições pandêmicas. Os autores tiveram como objetivo identificar os principais problemas que surgiram depois que os governos nacionais introduziram medidas restritivas e houve uma transição do ensino tradicional para o ensino à distância. Além disso, os autores propuseram recomendações para garantir o acesso universal à educação como um pré-requisito para o crescimento econômico sustentável. A base metodológica foram as*

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disposições das teorias dos bens públicos e do capital humano. Essas teorias consideram a educação como um bem público e uma área de acumulação de capital humano. Os autores concluíram que a crise econômica causada pela pandemia do coronavírus diminuiu a qualidade do capital humano e criou pré-requisitos para a introdução de tecnologias educacionais inovadoras. Além disso, os autores estabeleceram que o direito universal à educação de alta qualidade com tecnologias inovadoras é uma condição fundamental para garantir o crescimento econômico sustentável.

PALAVRAS-CHAVE: *Capital humano. Tecnologias educacionais tradicionais e inovadoras. Plataformas de aprendizagem online. Regulamentação governamental da educação. Crescimento econômico sustentável.*

RESUMEN: *Este artículo examina los cambios en las relaciones económicas y de gestión en la educación en condiciones de pandemia. Los autores tenían como objetivo identificar los problemas clave que surgieron después de que los gobiernos nacionales introdujeron medidas restrictivas y hubo una transición de la educación tradicional a la educación a distancia. Además, los autores propusieron recomendaciones para garantizar el acceso universal a la educación como requisito previo para el crecimiento económico sostenible. La base metodológica fueron las disposiciones de las teorías de bienes públicos y capital humano. Estas teorías consideran la educación como un bien público y un área de acumulación de capital humano. Los autores concluyeron que la crisis económica causada por la pandemia de coronavirus disminuyó la calidad del capital humano y creó requisitos previos para la introducción de tecnologías educativas innovadoras. Además, los autores establecieron que el derecho universal a una educación de alta calidad con tecnologías innovadoras es una condición clave para garantizar un crecimiento económico sostenible.*

PALABRAS CLAVE: *Capital humano. Tecnologías educativas tradicionales e innovadoras. Plataformas de aprendizaje online. Regulación gubernamental de la educación. Crecimiento económico sustentable.*

Introduction

One of the consequences of the spreading coronavirus infection in 2020-2021 and the introduction of quarantine by governments was the crisis in education, affecting over 1.6 billion school and university students in 190 countries on all continents (NATIONS UNIES, 2020). This crisis had the strongest impact on the poor and vulnerable social groups (residents of rural areas, children with disabilities, internally displaced persons etc.) (SAKWA, 2021; SASSIN, 2020). It became harder to obtain professional and general cultural competencies and, consequently, these people faced a higher risk of social isolation. According to UN estimates, a long-term consequence of the COVID-19 pandemic is the inability of 23.8 million children and young people to get primary, secondary, or higher education, due to a drop in the standard of living and young people's need to start working. The negative

consequences of the sanitary crisis also include unavailability of school meals, which poses health risks for those who cannot study any longer, as well as heavier load on parents who must completely or partially stop working and spend additional time raising and educating their children. In addition to this, the budgetary financing of the education sector decreased due to the increasing budget deficit. Other negative consequences include increasing social inequality and interstate differentiation. All these trends confirm the qualitative changes in the education sector of different countries, which determines the relevance of research in this field.

The scientific hypothesis of this research is the assumption that the introduction of restrictive measures by governments due to the COVID-19 pandemic has led to a range of similar problems in national education systems. The research goal of this paper was to substantiate the strategic goals and instruments of state regulation in the education in Russia and China in the context of deteriorating macroeconomic conditions and the greater use of distance learning through information and communication technologies (ICT). In line with the goal, we set the following objectives:

- To analyze the provisions of the theory of public goods and the theory of human capital, which formed the methodological platform for examining the education sector;
- To determine the main problems that arose in education due to the transition from traditional to distance learning modes;
- To provide general recommendations aimed at ensuring universal access to high quality education in Russia and China.

Education and its role in the economic development of a country have traditionally been the focus of attention for many researchers of various economic schools and views. In accordance with the scientific hypothesis of the study, we performed the theoretical analysis of the impact of education on the directions and rates of the main macroeconomic indicators. J. Mintzer (1958), T. Schultz (1961), and G. Becker (1962) formulated the initial provisions of the concept of human capital in the 1950-1960s. The formation of the post-industrial economic structure and the emergence of a knowledge economy, in which human capital transforms from an ordinary into the key factor of economic growth, required the revision of some traditional ideas. As a result, education was recognized as an independent area of research and regulation. Alternative methodological approaches reveal the specifics of the

development and provision of education (BOURDON *et al.*, 1993), the composition of factors determining its effectiveness, and methodological approaches to determining the optimal amount of budget funding (JALLADE, 1973). They also outline the relationship and interdependence of education and other social sectors (COCHRANE *et al.*, 1980), as well as education in the context of the developing household economy (LEMENNICIER, 1988). One of the most significant directions in the evolution of the theory of education is research into the composition of factors of economic growth (ROMER, 1986). E. Phelps (BLAUG *et al.*, 2009) and K. Arrow (n.d.) attempted to adapt the provisions of the theory of human capital to the specifics of the modern stage of economic development. L. M. Borshch, A. R. Zharova (2019), T. V. Kokuytseva, and A. A. Shimansky (2020) examined some aspects of the accumulation of human capital and its use.

The theory of public goods by A. Marshall (1993), V. Pareto (BLAUG; PARETO, 2008), A. Pigou (BLAUG; PIGOU, 2008), and P. Samuelson (2019) made a significant contribution in the development of theoretical approaches exploring the mechanism of education functioning. This theory reflects the principles of the neoclassical concept (mainstream). According to its provisions, education has some features of public goods, which include wide availability, non-competitiveness, and non-exclusion from consumption. This theoretical and methodological approach to explaining the regularities of the education system functioning were considered by some Russian authors, including E. N. Zhiltsov, G.A. Akhinov (2018), and V. A. Anikin (2017). S. K. Baidybekova (ANIKIN, 2017) studied the instruments for managing human capital during the coronavirus pandemic. J. Wally and X. Zhao (2013) explored the specifics of the implementation of human capital in modern China.

Having analyzed the publications, we concluded that at present many authors consider methodological approaches to education from the perspective of progressive macroeconomic dynamics, the mechanism of educational organizations funding, and the role of the state in education. However, the structural transformation of the economy driven by the development of technology and socio-economic relations calls for further research on the patterns of the education sector functioning. These studies are of particular importance for adjusting government regulation to changes in education in the context of the deteriorating macroeconomic environment due to the coronavirus pandemic. In this regard, inter-country analysis is especially significant as it allows studying the experience of different states for its further application in modern Russia.

Materials and Methods

The assumptions and conclusions of this research rely on the provisions of the theory of public goods and the theory of human capital, which represent the methodological platform for this research into education. In line with the research hypothesis, we applied a set of general scientific and special research methods. The latter included the method of analyzing data of the official statistics of the Russian Federation and the People's Republic of China, research and educational organizations, and international organizations on the state of the education sector and its influence on the dynamics of economic indicators. In addition to this, we performed content analysis, which enabled us to determine the content of key research categories and the composition of generally applicable indicators of the education system development in Russia and China. Next, we reviewed publications on the research topic. In addition, we used such methods as correlation and regression analysis, factor analysis, and the method of main components. To process the statistical data, we applied the SPSS Statistics software.

During the empirical testing of the formulated hypothesis, we used methodological materials and data published by the territorial bodies of the Federal State Statistics Service: the methodology for calculating the indicator "Education level" for the reporting period (GOVERNMENT OF RUSSIAN FEDERATION, 2019); the data on the number of students enrolled in the programs training skilled workers and staff (FEDERAL STATE STATISTICAL SERVICE, 2018), the data on educational online platforms developed in China and recommended for global use (UNESCO INSTITUTE FOR INFORMATION TECHNOLOGIES IN EDUCATION, 2021), the data on the admission, number of students and graduates in the organizations of higher education (MINISTRY OF SCIENCE AND HIGHER EDUCATION OF THE RUSSIAN FEDERATION, 2021), the data on the quality of education in Russia's regions (FEDERAL SERVICE FOR SUPERVISION IN EDUCATION AND SCIENCE, 2021), National Research University Higher School of Economics (the data on the development of general, secondary vocational, higher education, vocational training, and additional education in the Russian Federation) (GOKHBERG *et al.*, 2020), the data on the level of digital maturity of Russian regions (MINISTRY OF DIGITAL DEVELOPMENT, COMMUNICATIONS, AND MASS MEDIA OF THE RUSSIAN FEDERATION, 2021), and the materials from websites of periodicals (the data on the number of exchange students in China) (XINHUA NEWS, 2019).

Results and Discussion

We performed the comparative analysis and established that despite certain differences in the structure of the educational system and in the content of educational programs in Russia and China, the spread of coronavirus infection and the introduction of restrictive measures by state caused similar problems and contradictory consequences. As a result, it was necessary to develop and implement measures to maintain the quality of education. Considering the similarity of the problems, we consider it viable to use the experience of the countries that were the first to face the consequences of the COVID-19 pandemic. In this regard, the experience of qualitative transformation of educational processes may be useful for the Russian government, educational organizations, and for all interested parties.

Having analyzed the changes in the area studied, we established that the crisis fostered the development and introduction of innovations in education. This refers to the systematic application of information and communication technologies by educational institutions, the adaptation of educational technologies to the needs arising the present stage of social development. At the same time, the transition to distance learning partially eliminated the risk of closing educational institutions and increased cooperation among educational organizations, the state, employers, external providers of content and services, public organizations, and all interested parties. This partnership has resulted in new or improved educational programs and tools for their implementation. Developing distance technologies provided wider access to a range of educational products, which creates conditions for further training and retraining of the staff. The latter is of relevance in the modern economy, in which lifelong education is a prerequisite for the accumulation and effective use of human capital, as well as the competitiveness of businesses. The relatively low cost of distance learning makes these educational services more accessible to people, which is vital during the crisis and decreasing living standards. This, in turn, allows bridging the gap between the labor market and the market for traditional educational services and, therefore, reduces the risk of job loss. Research shows a growing interest using online services and digital learning materials for self-education during the lockdown. In this regard, we should reassess the role of teachers in the life of society and acknowledge the importance of ensuring the health of the staff of educational organizations as a factor in the well-being of the younger generation and their families.

During the lockdown restrictions, the industry of education technology, or EdTech (distance learning), was developing rapidly since about 1.5 billion students began to learn

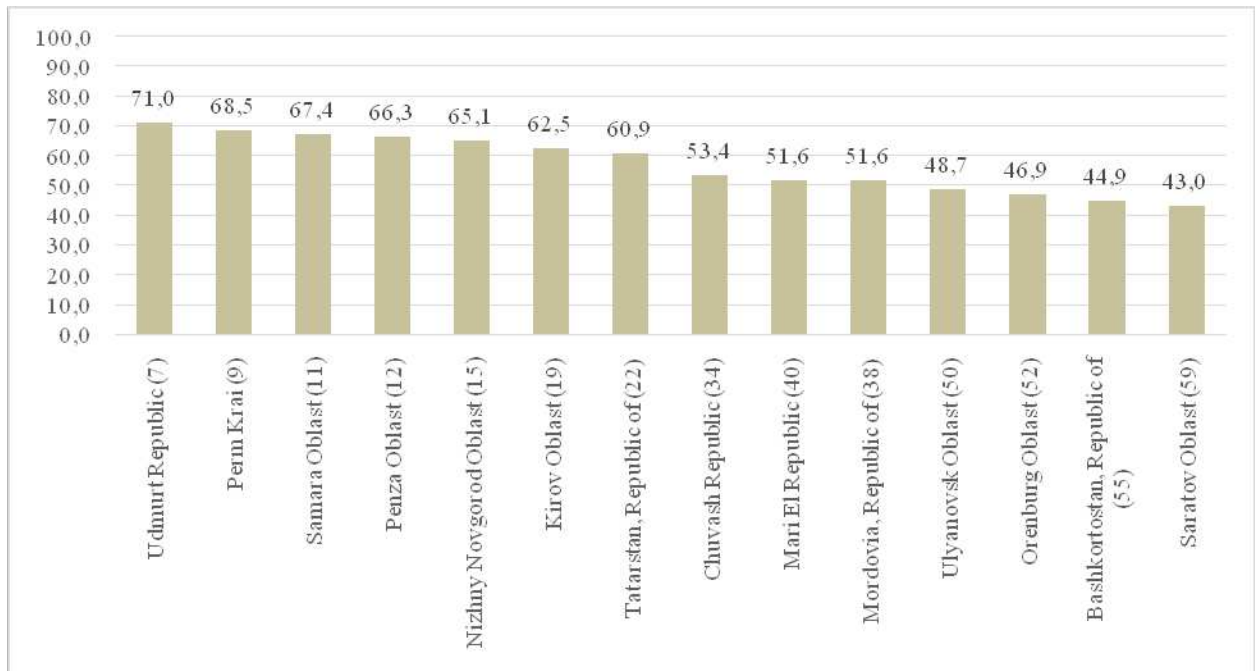
remotely (BUSINESS PLANNER, 2021). In the previous years, this segment of the high-tech market developed at a steady pace and, according to expert estimates, the volume of investments was supposed to reach USD 350 billion by 2025. However, at present, the potential volume of the market is estimated at USD 1 trillion (FORBES RUSSIA EDUCATION, 2021). At the same time, the widespread use of distance technologies has demonstrated that they may bring about long-term benefits, provided all interested parties are continuously improving it. If the access to educational resources is limited, teachers lack information and communication competencies, or public educational institutions do not receive adequate budgetary funding for the introduction of ICT and professional development of teachers, it is impossible to fully realize the potential of distance learning technologies, which negatively affects the quality of education.

Education is traditionally considered a public good. Thus, the state plays the leading role in financing the activities of educational institutions and ensuring universal access to it. The right to education is one of the fundamental human rights. Its observance is crucial element of other constitutional rights of citizens, as well as sustainable development of the state. Under the conditions of the sanitary crisis, the state secures the right to education by strengthening the guarantee to provide it. This is done by equal access to Internet resources, as well as by overcoming the increased inequality in learning opportunities.

The impact of education on the level of economy digitalization manifests itself in the direct relationship between quality indicators and the share of ICT in various spheres of social life. This correlation is because graduates of educational organizations possess information and communication competencies that are necessary for the effective implementation of human capital, regardless of the area of its use.

Working on this research, we performed a comparative analysis of the level of education in the regions of the Volga Federal District (VFD). To assess the quality of education, we used an indicator estimated for the corresponding component of the Human Development Index. We evaluated this component using the average value of the expected duration of training among school children, as well as the average duration of adults training, that is, people aged 15 years and older (FEDERAL SERVICE FOR SUPERVISION OF EDUCATION AND SCIENCE, 2021). The resulting indicator represents the availability of education. Next, we used it to rank the regions of the Volga Federal District (Figure 1).

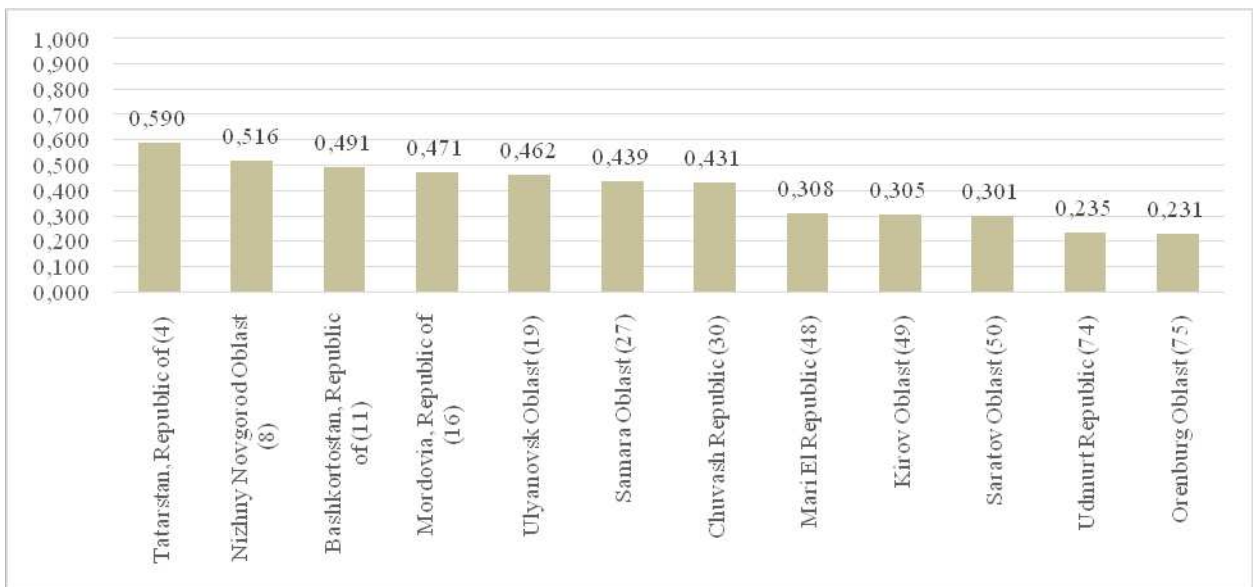
Figure 1 - Ranking of the regions in the Volga Federal District by the quality of education for 2020



Source: Federal Service for Supervision in Education and Science (2021)

The development of the digital environment in the regions of the Volga Federal District (digital maturity of the federal subjects of the Russian Federation) in 2020 reflects the degree of the introduction of ICT in traditional areas of human activity such as health care, general education, urban economy, construction, public transport, and public administration. We calculated this indicator using the data from the Ministry of Digital Development, Communications, and Mass Media of the Russian Federation (2021) (Figure 2).

Figure 2 – Ranking of the regions in the Volga Federal District by the level of digital maturity for 2020



Source: Ministry of Digital Development, Communications, and Mass Media of the Russian Federation (2021)

We analyzed the correspondence between the accessibility of education and the indicators of the sub-index of general education and digital maturity at the regional level and made a table of correlation dependence (Table 1):

Table 1 – VFD regions and Correlation coefficients

VFD regions	Correlation coefficients
Bashkortostan, Republic of	0.857191379
Mari El Republic	0.876470899
Mordovia, Republic of	0.809986694
Tatarstan, Republic of	0.819793894
Udmurt Republic	0.801837629
Chuvash Republic	0.725338598
Kirov Oblast	0.700052288
Nizhny Novgorod Oblast	0.692550976
Orenburg Oblast	0.824606598
Penza Oblast	0.894849114
Perm Krai	0.780013021
Samara Oblast	0.884195146
Saratov Oblast	0.8196188
Ulyanovsk Oblast	0.797837248

Source: Devised by the authors

The obtained correlation coefficients demonstrate that there is a strong dependency between the studied indicators. However, these results do not allow concluding that education is at a high level and accessible due to the developing digital environment. Thus, the

decreased availability of education during the coronavirus pandemic may hinder scientific and technological progress, which will limit the recovery economic growth after the removal of anti-Covid measures.

The actions that will solve the above tasks might include:

- Constant monitoring of the spreading coronavirus infection at the national level and motivating citizens to vaccinate against COVID-19;
- Preparing educational institutions to open when the lockdown is over and implementing measures to ensure the safety of students and staff of educational organizations;
- Allocating funds to maintain (increase) the share of budgetary financing of education;
- Promoting inclusive education;
- Providing opportunities for students to catch up on the missed classes;
- Creating global educational online platforms;
- Using public management tools to increase the efficiency of education management and individual educational organizations;
- Improving the quality of educational services in line with the strategic guidelines of society and priority areas of scientific and technological development;
- Conducting constant monitoring of the state of the educational sector, which involves adjusting the system of indicators and methods of calculating them, including indicators assessing the accessibility of distance technologies, as well as students' access to personal computers and mobile applications.

The content of these activities varies depending on the economic, social, institutional, and other conditions in different countries (regions). Despite the urgency of introducing restrictions on traditional education all over the world and switching to distance learning, there are considerable differences in the tools used and the consequences of this decision for national educational systems.

According to official data, “about 80% of Russian universities and 100% of the universities under the Ministry have completely switched to the remote learning mode” (INTERFAX EDUCATION, 2021). To adapt management tools to these new conditions, the Ministry of Education and Science of the Russian Federation created a Working Group that was to organize educational activities considering the restricting measures against the spreading COVID-19 infection on the territory of the Russian Federation. This group

developed Recommendations on the organization of the learning process for higher professional and additional professional education (MINISTRY OF SCIENCE AND HIGHER EDUCATION OF THE RUSSIAN FEDERATION, 2021). The specialists of the Global Universities Association, which unites the participants of the Project 5-100, analyzed and generalized the practices of the leading institutions of higher education under the conditions of the pandemic (GLOBAL UNIVERSITIES ASSOCIATION, 2021). The National Research University Higher School of Economics regularly monitored the situation in the Russian and international systems of higher education (HIGHER SCHOOL OF ECONOMICS, 2021; GOKHBERG *et al.*, 2020). An important step towards overcoming the consequences of the restrictive measures is the program aimed at promoting the employment of university students, implemented in 2020 at the initiative of the Ministry of Education and Science of Russia.

In the Russian Federation, more than 16 million schoolchildren had to switch to homeschooling due to the lockdown (TASS, 2021). In the 2020-2021 academic year, restrictive measures for full-time education were introduced locally, depending on the sanitary and epidemiological situation in the territory where schools, colleges, and universities were located. One of the problems in the transition to distance education in Russia is the fact that the teaching staff does not have the sufficient level of information and communication competencies, which negatively affects the quality of education and makes it necessary to retrain the teachers. There are not many technical specialists at universities, so it is hard to provide support to all teachers and to implement on-standard solutions. Here, LMS platforms (e-learning platforms) or delivering content to learners by email seems to be the best options. The transition to distance learning negatively affects the learners' motivation. To solve this problem, in 2020, Russian universities organized training courses for the teaching staff. All universities created an electronic educational environment – “a virtual infrastructure, including digital platforms, project learning, virtual laboratories, and platforms for teaching a foreign language, and giving access to electronic library resources and services” (TASS, 2021).

The urgent moving of students to remote learning without the necessary support by the creators of online courses concealed the advantages of innovative educational technologies and negatively affected the quality of education (INTERFAX EDUCATION, 2021; PRATIWI, 2020). The easing of restrictive measures in 2021 does not mean a complete abandonment of distance learning, but implies a combination of different learning modes, which is a positive phenomenon. The analysis of the results of the final state certification and

experimental studies on the results of the midterm assessment in the 2019-2020 academic year showed that the effectiveness of distance learning is comparable to the results of traditional forms of education (INTERFAX EDUCATION, 2021).

The pandemic contributed to the development of the EdTech sector (distance learning technologies) in the Russian Federation. For instance, in 2020, the income of companies from selling software and introducing digital educational systems amounted to about RUB 34 billion, which is 113% more than that in 2019. This market segment in Russia is developing faster than abroad (BUSINESS PLANNER, 2021). Many Russian companies are developing EdTech and are offering online platforms (Mail.ru, Yandex, Sber, and Skyeng). In addition to this, there are actively developing large educational platforms that focus on school education, IT training, and foreign languages.

In this study, we focused on the experience of organizing the learning process under the conditions of the coronavirus pandemic in the People's Republic of China, which demonstrates fast economic development. The program for education development implemented in China is based on the principle of advanced education. It implies that the effectiveness of education is assessed from the perspective of its availability to various social groups. Another essential assessment criterion is how well the outcomes of this sector correspond to the goals of socio-economic development and improve people's quality of life.

Realizing the key role of education in solving current and long-term problems of economic development, China aims to develop and implement a set of measures to restore the educational sector and the country's status in the international academic arena. Increased inequality due to the structural reform of the economy revealed the greater role of human capital in solving social problems (LI; YU, 2014). In 2015, China launched a new foreign economic strategy "One Belt, One Road", which stimulated Chinese universities to invite exchange students, while the state encouraged its citizens to study abroad. According to official data, in 2018, 492,185 foreign students from 196 countries and regions studied in China, which is 35% more than the same figure for 2014. These students were enrolled at 1,004 universities in 31 provincial administrative units of the country. Most exchange students came from Asian countries (South Korea – 31.3%, Thailand – 10.2%, Pakistan – 8.3%, and India – 8.1%). The share of Russian students estimated 8% (XINHUA NEWS, 2021; STUDY IN CHINA, 2021). In 2018, about 63,000 students received scholarships from the Chinese government.

At the beginning of the pandemic, China had some advantages over other states, since it had been actively introducing distance technologies into the national education system at

the turn of the 20th and 21st centuries. However, the achieved level of using information technologies was not enough for remote learning. Therefore, the state and enterprises had to take part in the organization of the educational processes in the virtual space. According to official figures, “in the first half of 2020, 1.08 million teachers from more than 1,450 universities across the country conducted more than 17 million online courses, most of which were basic courses from the best Chinese universities” (JIAO, 2020, p. 35). EdTech enterprises developed 110 platforms for online learning. At the same time, the UNESCO Institute for Information Technologies in Education recommended two educational online platforms (XuetangX and iCourse International) to students from all over the world. These platforms were created with the support of the Ministry of Education of China and the National Commission of China for UNESCO (UNESCO INSTITUTE FOR INFORMATION TECHNOLOGIES IN EDUCATION, 2021). To ensure the accessibility of education, many universities (for example, Beijing University) offered online courses and learning resources free of charge.

Four basic models of online learning evolved due to the development of remote access technologies. They are blended learning MOOC (massive open online course) and SPOC (small private online course), online training in real time, training based on recording and broadcasting, and distance education. The wider use of information technologies in education allowed moving several educational activities from the traditional to online mode. For example, distance video interviews at entrance examinations to a university and a post-graduate course, online defense of dissertations by masters and graduate students have become popular.

In China, education has faced a range of challenges during the implemented restrictive measures, for instance:

- Insufficient level of information and communication competencies of older teachers;
- Students found it hard to adapt to new technologies, as some of them lacked self-control skills, which negatively affected the learning outcomes;
- Increased traffic caused technical failures;
- The lack of standards and experience in promoting distance learning technologies complicated the introduction and use of educational online platforms;
- The lack of Internet access in remote regions of China.

To ensure the quality of education and to attract foreign students, the state and educational organizations are planning a range of post-Covid measures, including:

- Opening entry to China with student visas (in compliance with quarantine and other measures);
- Simpler entry to the country for vaccinated students (primarily for those vaccinated with the Chinese vaccine);
- Regulation of prices for educational services to motivate international students;
- Establishing special funds for foreigners and increasing scholarship funds;
- Development of partnership programs with leading international universities and stimulating student exchange;
- Development of online learning systems (STUDY IN CHINA, 2021).

The state of higher education in the country demonstrates that China can solve these problems. For instance, in 2021, 51 Chinese universities were included in the QS World University Rankings, with four universities in the top 50. According to Times Higher Education (THE WORLD UNIVERSITY RANKINGS, 2021), China is already ahead of many popular countries among students, including the United States and the United Kingdom, in terms of teaching, research, and internationality.

According to experts, “national education in China is currently moving to the level of advanced international standards, which manifests itself in the changing structure and content, improving the quality of the teaching staff, increasing the volume of budget funding for educational institutions and research activities” (NOVIKOVA; USHAKOVA, 2017). The availability and large scale of education, the compliance of educational programs of all levels with a unified national strategy for modernization are the fundamental principles of its functioning.

Conclusion

The research demonstrated that COVID-19 has affected the organization of educational processes at all levels.

1. Education focused on internationalization, which necessitated finding new educational technologies for teaching foreign students outside the country where the university was located, as well as developing new forms of interaction with foreign

educational organizations and government bodies in order to create and introduce new educational programs.

2. Amendments to the normative legal acts regulating education and adding provisions regarding distance learning, the procedure for conducting entrance exams, and final state certification using information technologies.

3. Moving to online training and development of online platforms, which allowed increasing the number and enriching the content of educational programs, as well as changed the requirements for teachers' professional competencies.

4. Expanding interuniversity research cooperation (including that at the international level) to generalize the experience on organizing educational and other forms of economic activity during the lockdown.

5. The search for tools that would increase the efficiency of financial resources used under the conditions of budget deficit, decreased budgetary funding and income from extra-budgetary activities due to falling household incomes and lower incomes from other forms of entrepreneurial activity of educational organizations (income from R&D, renting out premises, etc.).

Having conducted the research, we established that despite certain differences in the structure of the education system and in the content of educational programs in Russia and China, these countries faced similar problems that arose due to the restrictions imposed by national governments. This implies that there is a general strategy for improving the quality of education and ensuring its accessibility, which requires certain adaptation to the specifics of the national education. The instruments for the implementation of this strategy should include:

- Developing remote educational technologies and creating conditions (material and institutional) for their implementation and application;
- Increasing the level of professional, information, and communication competencies of the teaching staff;
- Boosting motivation for distance learning;
- Improving information educational platforms and mechanisms for their management;
- Increasing the role of the state as the controller over the quality of educational products and their compliance with the target guidelines for social development;
- Creating the infrastructure of education and technical conditions providing access to educational products for the residents of remote areas and vulnerable social groups.

Thus, the restrictive measures in education due to COVID-19 and the massive introduction of online technologies created objective prerequisites for qualitative changes in the content of education and determined its development trends in the long term. The implementation of new opportunities provided by innovative learning technologies will increase the role of education in ensuring sustainable socio-economic development of the country.

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How to reference this article

AKSENOV G.; KHADIULLINA G.; TUFETULOV A. The current state and development trends of education systems in Russia and China during the coronavirus pandemic. **Revista online de Política e Gestão Educacional**, Araraquara, v. 26, n. 00, e022010, Jan./Dec. 2022. e-ISSN: 1519-9029. DOI: <https://doi.org/10.22633/rpge.v26i00.16455>

Submitted: 01/11/2021

Required revisions: 20/12/2021

Approved: 17/02/2022

Published: 31/03/2022