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# Current Global Development Trends and their Impact on the Educational and Economic Systems

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***Abstract*---**We live in a period of rapid transformations of public institutions caused by the greater momentum of many social, economic, political and technological processes. In this paper, both general and special scientific research methods are used. An expert approach, a content analysis method, a sociological survey, and statistical tools for processing the results were used as special methods. We also conducted an analysis of empirical materials based on the results of a survey of expert groups: university students and lecturers, business representatives and civil servants. Results: The contradictions in the development of the world economy were identified. Along with globalization, there is a tendency towards anti-globalization as cultural differences create greater distance between nations. Another reason for the disintegration of the world's educational and economic systems is the coronavirus. All the abovementioned conditions have led to an increasing role of digital technologies in education and the economy. However, there are certain contradictions in this process as well. Distance education


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allows for the exchange of knowledge regardless of geographic location and national boundaries.

***Keywords*---**digitalization, education, global challenges, protectionism.

## Introduction

Education, along with science, has been one of the pillars of national security for many centuries. The literacy of the population depended on its quality and coverage, and hence, in many respects, its productivity. An educated person could offer more social products than an uneducated one. In the past, this encouraged some rulers to give the population at least some basic knowledge. Naturally, one cannot claim that this was a common trend for all the rulers of the past centuries, yet it can be noticed that the world gradually came to understand this fact during its development.

At the same time, due to various circumstances, the development of the educational system has been a very slow process. The closed nature of the world economy, internal political disputes and differences, lack of a teacher training system and a well-coordinated educational system, and other reasons did not allow a significant rise in the population's education to happen in a short time (Medvedeva & Mitina, 2021; Movchan & Yakovleva, 2020).

In this regard, the eighteenth and twentieth centuries became a turning point. The industrial revolution that was initiated in Western Europe and then spread to other countries associated with the rise of a large industry designed for mass demand required a significant number of educated, highly qualified specialists and technicians.

In fact, it was during this period that the race between countries for the quality of the educational process began (Waychunas, 2020; Isaikina et al., 2021; Balganova, 2021; Puryaev, 2020; Vlasyuk et al., 2020). The lack of monitoring studies in this area during those years does not prevent the identification of the educational mechanism’s effectiveness. It is enough to examine the production indicators of a particular country. A notable example is the Soviet Union where the educational system practically built from the ground up very soon became one of the leading ones in the world (Kolupaev et al., 2018; Belousova et al., 2021; Akhmadeev et al., 2019). This system worked like clockwork, annually releasing thousands of specialists who filled the vacancies necessary for the country, which in turn positively affected labor productivity.

However, over the past decade, the world has undergone many important epochal processes that have subjected the educational sphere to an unprecedented transformation. The process of globalization that has continued since the end of the twentieth century was supplemented by digitalization, and in 2020 the world faced a new challenge - the coronavirus pandemic, which changed the idea of both the educational system and the entire social structure (Ritter & Pedersen, 2020; Eller et al., 2020). Turning a blind eye to such conditions becomes not only senseless but also dangerous for national security in terms of education. The

governments of the leading countries of the world face the necessity to adequately respond to these challenges. The purpose of the presented research is to identify the most relevant global trends in education development and to provide guidance for improving the future economic activity of society (Kourilsky & Walstad, 1998; Daniëls et al., 2019).

**Methods**

In this research, we used general scientific research methods such as analysis and synthesis, deduction and induction, the connection between logical and historical processes, the search for cause-and-effect relationships, and the dialectical method of cognition.

Two methods were utilized as special methods;

First, the method of expert assessments was applied. Questionnaires were developed for interviewing experts and totally about 100 experts were interviewed. Private rights and privacy of personal data have not been violated. Among the experts were representatives of the educational sector and the real economic sector, as well as students and representatives of government officials. The objective of the study was to identify the most relevant trends in the development of the economy and education depending on various factors of economic life. As a result, the pool of experts was divided into four survey groups: students, teachers, entrepreneurs, and civil servants. The number of respondents was equal in each group. It was necessary to find out which of the suggested future trends are relevant for a particular expert group and what these opinions are influenced by. This approach allowed for developing a research hypothesis according to which the relevance of future changes for the actors of educational and economic relations depends on the scope of the actor's economic activity. At the same time, the development of an effective policy in order to use future changes for the successful solution of educational and economic problems depends on a comprehensive consideration of the interests of all representatives of the society's economic life.

Secondly, the method of content analysis was applied. It is based on the analysis of official literature and identification of the most cited phenomena of the world and questions that attract the researchers. Scientific articles from educational and economical journals were studied by keywords - future development trends. In total, 200 scientific articles from the Scopus citation base journals as of 2020 were studied. As a result, a group of the most cited and used concepts was identified - trends of future development: globalization, digitalization, coronavirus, uncertainty (Hendriarto, 2021; Harianto & Sari, 2021).

Also, statistical research methods were used to analyze and visually represent the results of the expert survey on the key trends of future development identified by content analysis.

## Results

*Challenge 1. Globalization or Anti-Globalization?*

The second half of the twentieth century was the time of the actual emergence and development of the globalization process in Europe, which later on became worldwide.

Globalization is commonly understood as "the process of global economic, political, cultural and religious integration and unification" (Glebov & Milaeva, 2010). According to L. Grinin, "the main consequence of this is the global division of labor, large-scale migration of capital, labor, production resources; standardized legislation, economic and technological processes, as well as the convergence and fusion of cultures of different countries (Rinartha & Suryasa, 2017). This is an objective process that is systemic, that is, it covers all aspects of society. As a result of globalization, the world is becoming more connected and more dependent on all its actors" (Grinin, 2005).

The Swiss Economic Institute (KOF) systematically analyzes the globalization level of the world's economies. In recent years, countries such as Switzerland, the Netherlands, Belgium, Sweden, the UK, Austria, Germany, Denmark, Finland, and France have taken the top positions on this indicator. At the end of the list are countries such as Afghanistan, Puerto Rico, Somalia, and Eritrea. The KOF Index of Globalisation (KOFIG) is a composite index used to measure the rate of globalization in each country of the world and to compare countries along different dimensions (Rating, 2021).

The KOFIG values are closely linked to indicators of education performance. Most often, countries that are better integrated into the world also hold leading positions in the ratings of education performance of the countries. A unified educational space, based on the idea of receiving education in any country and applying the obtained degree in any national economy, is being formed in the world (Ginaya et al., 2020; Bahri, 2017). This system is characterized by the possibility of internships, scientific and educational exchanges, as well as the flexibility of the educational process, the simultaneous use of modern and traditional teaching methods, the use of massive open online courses (MOOC), and much more.

The start of the coronavirus pandemic has somewhat changed the globalization direction, which makes one think about the possible beginning of the anti-globalization process in many fields including education. This idea, in particular, is reflected by Professor A. Auzan, the Dean of the Faculty of Economics of Moscow State University, who points out that "in the process of teaching about globalization in universities, we misled you when we said that this is a linear progressive process... Globalization begins to pull everyone together, yet cultural distance pushes countries apart" (Auzan, 2021).

It seems inappropriate to talk about anti-globalization when there is a possibility to obtain necessary professional skills using open educational resources on the Internet, which is a result of digital technologies development. However, the

lockdown introduced in many countries in 2020 has clearly shown being physically present was not allowed during international educational programs. Albeit temporarily, students have lost the opportunity to travel to other countries, but the technical capacity to study via the Internet does not exist in every country, etc.

All this highlights the fragility of the global educational system, thus, the next waves of the pandemic can destroy educational ties between countries and the established educational structure. The results obtained through the empirical research are presented in Figure 1.

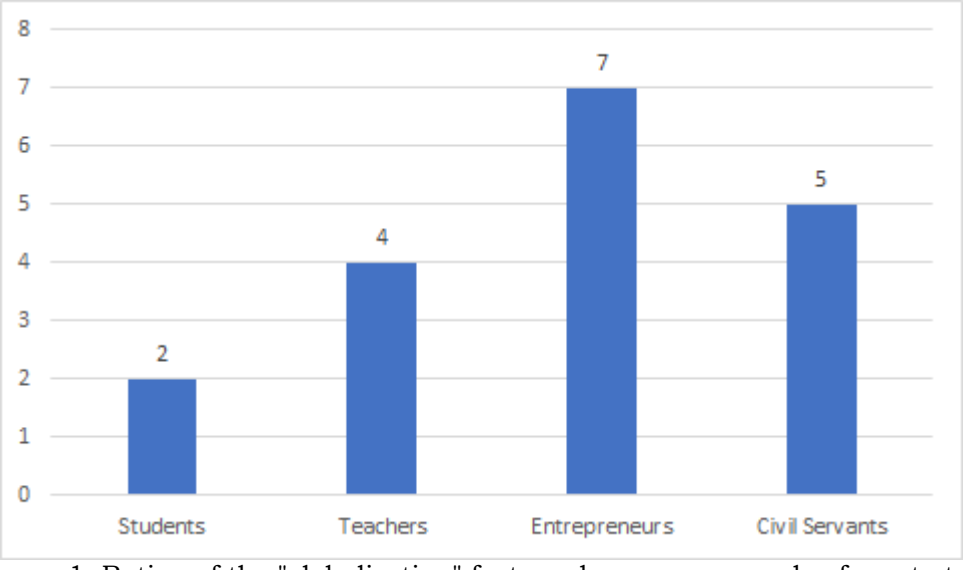


Figure 1. Rating of the "globalization" factor relevance on a scale of one to ten (1 - less significant, 2 - more significant)

It can be seen that at the present time the factor of globalization is the most significant for representatives of the real economy. This is due to the fact that entrepreneurs most frequently face the influence of globalization (Genys & Krikštolaitis, 2020; Avdeev et al., 2020; Dudukalov et al., 2021; Panova et al., 2020). The reasons behind this are foreign competitors, the national currency volatility, the high dependence of monetary policy on imports of raw materials and hydrocarbons. Civil servants are less dependent on this factor since their personal income does not depend on the activities of foreign counterparties directly. Nevertheless, the ranks given by civil servants are relatively high, which indicates the indirect impact of globalization on the implementation of internal government tasks, such as tax collection, funding of social sectors, improving the well-being of the population, and increasing the quality of life. Students and teachers rated the factor “globalization” lower than other expert groups. This can be explained by the present closed nature of the educational system and low levels of visits abroad and student exchange.

*Challenge 2. Digitalization*

About 10-15 years ago, the concept of "digitalization" was used only by limited groups of specialists closely involved in computer technology and programming. This term was proposed for the first time in the mid-1990s when N. Negroponte, the researcher from the University of Massachusetts, introduced the concept of "digital economy". And now, years later, the majority of people realize that the world has entered a new phase of social relations based on the digitalization of almost all economic areas.

The generally accepted definition of the term “digitalization” is not established yet. For instance, T. Nikulina and E. Starichenko define it as “a new era based on big data and technologies related to it” (Nikulina & Starichenko, 2018). T. Fomicheva and V. Kataeva understand digitalization as “the transformation of information into digital form, which further leads to cost optimization and the development of new opportunities” (Fomicheva et al., 2019). Some researchers see it as "the introduction of digital technologies in various spheres of life to improve its quality and develop the economy."

The Network Readiness Index reveals the degree of digitalization of the world economy. It is based on such criteria as technology, human resources, management, and influence (the last point refers to the quality of the economy and life). According to the results of this rating, Russia took 48th place in 2020. Among the top ten countries are Sweden, Denmark, Singapore, the Netherlands, Switzerland, Finland, Norway, the USA, Germany, the UK (Assessment, 2021). It should be noted that almost the same countries were indicated in the first table reflecting the index of globalization.

Under the influence of digitalization, the educational system primarily faces changes in systems of communications and obtaining information. This leads to the changes in demand and supply of the labor force in the labor market (Alekseev, 2019; Ismagilov, 2019; Kildeeva etal., 2021; Panischev et al., 2020; Makhmutova, 2019; Nurgaliev et al., 2019; Badretdinov, 2019; Agumbayeva et al., 2019; Elveny et al., 2021; Kuzmin et al., 2016). Today, both employees and employers face fewer information barriers for obtaining information about vacancies and events taking place in the labor market. On the one hand, this leads to a narrowing of the window of opportunities for applicants for vacancies as the number of applicants increases. On the other hand, it allows employers to choose the “best of the best” candidates (Sharipov et al., 2019). In turn, this aspect determines the choice of professional training, as the employees need to select those vacancies that the market needs and keep obtaining new skills throughout life (Ibragimov et al., 2019).

Together with the changes in market demands, the educational system is also transforming. When schools are less susceptible to transformations and mainly operate according to a traditional format, the higher educational institutions have to move away from classical, or Soviet, education, by using the methods of Western education, creating their own innovative techniques and using massive open education online courses. The results obtained through the empirical research are presented in Figure 2.

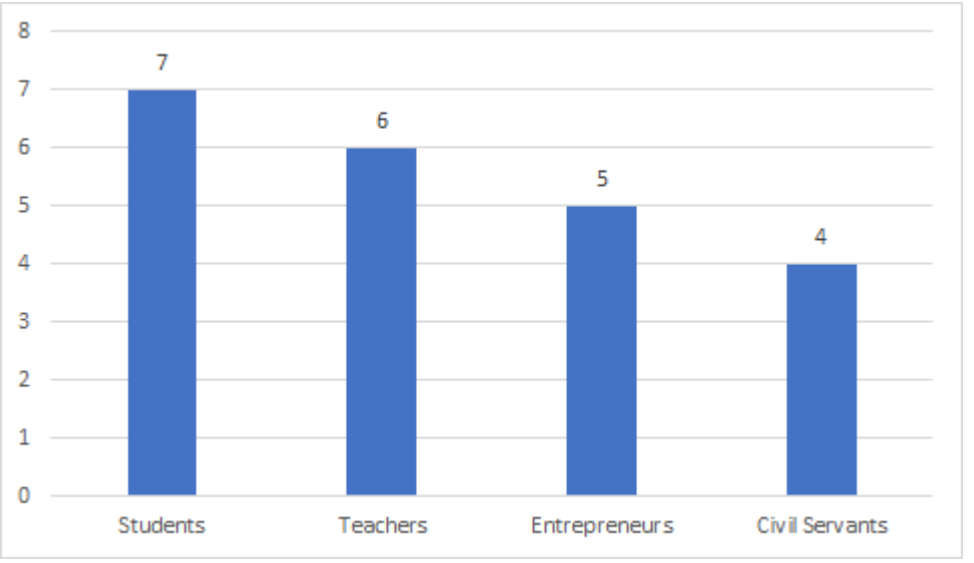


Figure 2. Rating of the "digitalization" factor relevance on a scale of one to ten (1 - less significant, 2 - more significant)

Digitalization is the most significant factor among students. This can be explained by the fact that the younger generation is most susceptible to new digital technologies. Students quickly understand the digital environment and see the prospects for using digital technologies for personal development and income generation. At the same time, the teachers also highlight the importance of digital technologies. Most likely that this is the result of a sudden transition of the entire educational system to distance learning during the coronavirus pandemic. This has led to a new wave of interest in distance technologies in education, and the rate of their use is expected to increase. Entrepreneurs and civil servants gave the lowest ratings to digitalization as a future trend, as most of them have a conservative lifestyle and gradually begin to use digital technologies when these digital technologies begin to replace traditional forms of market and management transactions. This is a gradually progressing process for them. Perhaps this is the reason for the low competitiveness of Russian business as a result of low susceptibility to any kind of innovation, as well as unwillingness to be creative. The latter reason is more relevant for civil servants, as their activity is limited by strict standards and regulations.

*Challenge 3. Coronavirus pandemic*

The global economy and many traditional values have been hit by the coronavirus. In fact, it was the pandemic that intensified the process of digitalization and pushed back the process of globalization. Today, everyone understands that the world will never be the way it was two years ago.

The coronavirus pandemic has shown two trends affecting the global educational process. On the one hand, the coronavirus epidemic has reduced working hours up to 12% which has caused massive, or cyclical in some countries, unemployment. On the other hand, it has revealed some positive developments as

well. Thus, the cost of education has been steadily increasing in the world for many decades, and one of the reasons was the influence of globalization. In the United States, tuition fees increased by 62% between 2000 and 2012. As a result, the total amount of student loans in the country was more than $ 1.56 trillion in 2019 (The Impact, 2021). Despite this, the level of satisfaction with the quality of educational services has been declining. The new conditions require modern institutions, methods and tools for its development that traditional educational institutions cannot provide simultaneously (Panischevet al., 2020; Goryushkina, 2021). In these conditions, the EdTech companies began to play the role of spreading knowledge, thereby lowering the importance of the previous leaders in the new conditions and creating healthy competition in the world market of educational services (Panischev et al., 2020). The results obtained through the empirical research are presented in Figure 3.

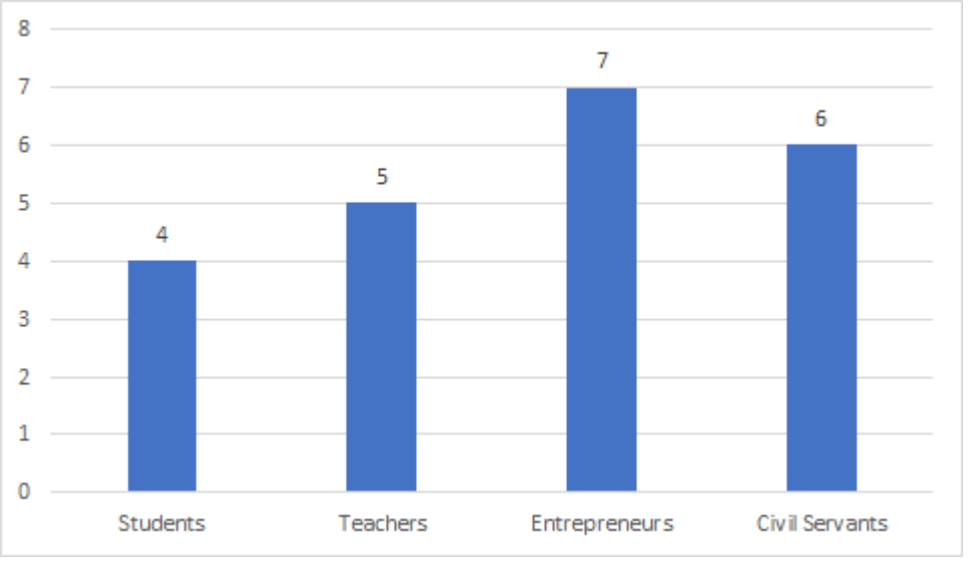


Figure 3. Rating of the "coronavirus" factor relevance on a scale of one to ten (1 - less significant, 2 - more significant)

The opposite case can be seen in the results of a survey of experts on the factor "coronavirus". Here, the greatest concern about the influence of this factor is experienced by entrepreneurs as they have not yet recovered from financial losses after the introduction of restrictions on economic relations. Despite the fact that the worst consequences of the first waves of coronavirus are already over, entrepreneurs still feel defenseless and lack full-fledged government support in the event of a new pandemic. Being the younger generation, students got financially affected least of all during the spread of the coronavirus, thus, they do not give high ratings to the relevance of this factor. Similar ratings are given by teachers, who managed to maintain their income in most cases and could relatively easily switch to a distance work format. Civil servants, who are placed within the rigid framework of the orders from the sanitary and epidemiological services and who have also switched to a distance work format while maintaining their income, give the “coronavirus” factor average ratings.

*Challenge 4. Uncertainty*

We have named this section “uncertainty” for a reason: there are many other modern challenges affecting the global educational sphere. These include, for example, the increasing militarization levels, the emergence of Generation Z, the power of artificial intelligence, the post-pandemic economy, etc.

At the same time, no one knows which of the challenges will become decisive in a year or a decade. But as current events show, any of them (or new ones) can become decisive and shape the subsequent educational track. In fact, we are witnessing a process when the world has entered a phase of uncertainty, which has previously existed only in some countries at certain development stages, and today it affects the whole of humanity.

The challenges considered earlier are intertwined elements of a single challenge, which, on the one hand, can contribute to an exponential growth of global education, or, on the other hand, become fatal for it. The task of any national economy in these conditions is to offer effective methods to preserve national educational identity and contribute to progressive development.

If we simply disregard existing challenges, it will lead to a gradual deterioration of the education sector. In the long term, the current safe conditions created for science and education will not be able to compete with the knowledge that will be supported by finances and human resources from all around the world. The gradual deterioration of the entire educational system can happen. We assume that, perhaps, the government would be able to focus on the development of separate scientific fields, but this would become a single manifestation of the country’s progress.

At the same time, complete infusion into the global educational system would not lead to exponential development rates of education and science but it may lead to a drain of highly qualified staff and the intellectual product itself due to their movement to countries that can afford to purchase these resources. In these conditions, the governments of the countries need to strike a balance between educational independence, global education and the uncertainty of the future. The results obtained through the empirical research are presented in Figure 4.

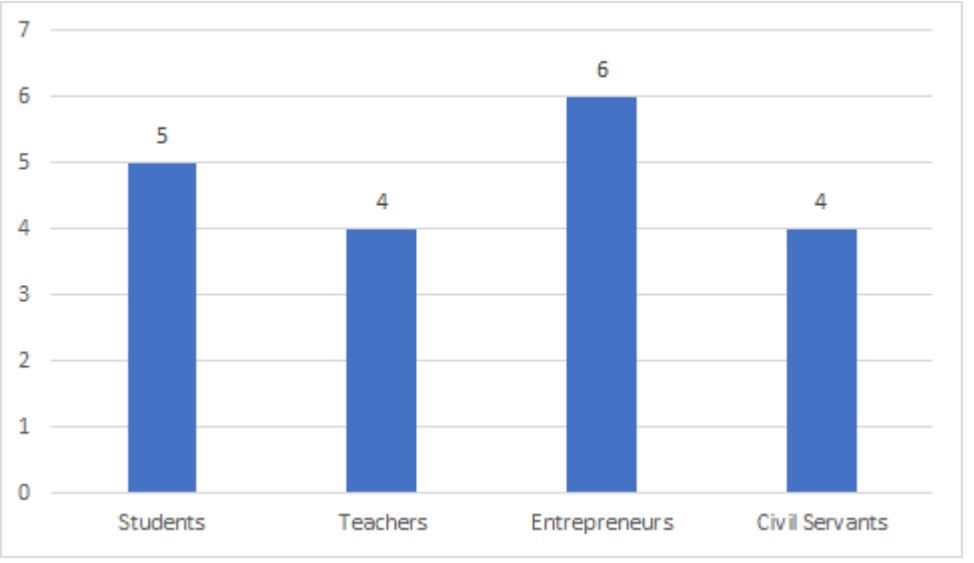


Figure 4. Rating of the "uncertainty" factor relevance on a scale of one to ten (1 - less significant, 2 - more significant)

Relatively similar ratings of the uncertainty factor were given by all the expert groups. Only students and entrepreneurs see an increased risk level from this factor. As students are not specialists yet, they do not have a stable and high income and are afraid of uncertainty. Entrepreneurs risk their investments, the safety and effective return of which strongly depends on the favorable environment of the future market. Thus, the uncertainty level is quite high in this case. Lecturers and civil servants were less susceptible to the “uncertainty” factor. This is explained by the fact that these expert groups rely on the established state educational and other standards. The standard serves as a prescription for future action and thus reduces the level of uncertainty. Accordingly, for civil servants working in the three-year budget planning conditions and state strategic programs, the uncertainty level is also reduced.

**Discussion**

Let's consider the main opinions of scientists in relation to such future trends as globalization, digitalization, coronavirus, uncertainty. The scientific literature notes the direct impact of globalization on the digital economy development. In order to ensure leadership in the global competitive process, it is proposed to introduce standards for digital infrastructure, use cloud storage, and develop digital platforms and digital clusters (Imamov, 2020). It is also proposed to solve the problem of information security, which confirms the conclusions of the authors about the complexity of the ongoing changes. Thus, applying so-called "filters" in the interaction of the domestic economy and education with the global environment is necessary.

Other scientists emphasize the controversial nature of the way globalization influences the quality of the educational process. On the one hand, learning opportunities around the world are increasing with the help of digital technologies

and massive open online courses. On the other hand, the quality of education decreases due to the use of generalized digital teaching methods and moving away from classical pedagogical methods as well as from systematic feedback between teacher and student (Atiaja, 2019; Rahman, 2018). Once again, this emphasizes the complexity of digital education that the authors highlighted as one of the global challenges of our time.

Scientists state that it is impossible to achieve direct integration of global educational programs and national standards (Alshebou, 2018; Pashina, 2021; Yemelyanov et al., 2020). In this regard, it is necessary to take into account the peculiarities of the national educational system and available global educational programs. This again demonstrates that the trend indicated by the authors aims not only towards globalization but also towards anti-globalization (Medvedev, 2015; Caujape-Castells et al., 2010). Cultural differences push countries apart, while the trend towards the digital exchange of information pulls everyone together. The problem is that the concepts of digitalization and globalization are interrelated and they reinforce each other.

According to scientific reports, the decreasing quality of education is a result of the forced transition to digital education during the coronavirus pandemic. Not always, the distance learning format can fully replace the traditional form of education based on empirical research and physical experiments (Chertoff, 2020). At the same time, scientists state that quarantine and coronavirus have led not only quantitative changes in current human activities but also forced qualitative changes in the existing rules and procedures. This applies to the processes of personnel training, document management and quality control at enterprises and organizations. Other scientists highlight the psychological deterioration of a person during the period of sanitary restrictions in the coronavirus pandemic (Hung, 2021). These conditions negatively affect the educational process, reduce academic performance and the learning capacities of students. This is also a challenge for the modern educational system.

Scientists are also worried about the increasing uncertainty in the modern world. Globalization, digitalization and the coronavirus are fueling uncertainty. This leads to the fact that the model of international integration must be reconsidered (Barros Leal Farias, 2020). There are examples of increased isolationism (and not only due to the coronavirus) in individual countries, including developed countries. A specific example is the UK's exit from the European Union. This leads to an increase in uncertainty in the work of the World Trade Organization, collective security bodies and a unified digital environment. Further, the coronavirus intensifies the disintegration and return to the protectionism of national educational and economic systems. There is no single vision of world development and this further increases the uncertainty (Potter & Burney, 2002; Levinson, 2017; Barattieri et al., 2021).

Ultimately, all this can lead to the emergence of a new model of the world order (Hunter, 2018). As noted in scientific articles, there is still no understanding of the future global system of relationships between people, organizations and states. The uncertainty level of this issue is extremely high. Thus, all the propositions and conclusions set out in this study by the authors were confirmed

by the scientific literature and articles of other researchers on education and economics.

## Conclusions

In this article, we identified the most relevant future trends affecting educational and economic systems, such as globalization, digitalization, coronavirus and uncertainty. Different actors of the social and economic system respond in various ways to the above-mentioned trends. Thus, state policy to reduce the negative impact of the described trends should be based on an integrated approach to take into account the interests of all actors of educational and economic activity. The positive experience with globalization, digitalization and uncertainty is possible only on the basis of understanding the essence of these processes as well as striking a balance between educational (economic) independence and modernization of the economic life of society by importing the most effective global experience. The coronavirus pandemic has pushed the entire world to reconsider its standards of safety, attitude towards multiculturalism and erasing geographic boundaries. This led to a new wave of nationalization and the search for unique ways of countries' development while increasing their isolation from all external impacts. The world is becoming more complex and each person is already connected with the external environment by means of information flow and digital communications. New principles are required to ensure the security of education and economy to benefit from the open world and cope with the negative effects of such an environment.

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