

# Artificial Intelligence Technologies in Realizing the Right to Education: Sustainable Development Trends and Potential Risks

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**Keywords:** Human and Civil Rights and Freedoms, The Right to Education, Information and Digital Reality, Artificial Intelligence, Sustainable Education, Educational Standards of the Future.


**Abstract:** In the Russian legal doctrine, attempts to systematically approach the regulation of artificial intelligence technologies have not been made for a long time. The long absence of fundamental research on this issue is due, among other things, to the novelty of social relations. At the same time, the need for a balance in the legal regulation and development of digitalization, artificial intelligence and the preservation of generally recognized constitutional values is of particular importance. Technologies and systems of artificial intelligence are purposefully introduced into all spheres of society and the state, their influence is becoming more noticeable and tangible in the implementation of human rights, including basic social rights guaranteed by the Constitution of the Russian Federation. The systems of health care, education, social assistance and support are currently integrating the achievements of information technology and digitalization, striving to ensure a barrier-free environment and high-quality implementation of human rights in the social sphere. The article is devoted to the study of the problems of using artificial intelligence technologies in the implementation of the right to education in the context of information and digital reality. The study pays considerable attention to the problems of risks that citizens face when exercising their right to education, due to the new digital reality and the use of artificial intelligence technologies. The work was carried out in accordance with the principles of the systemic approach, dialectical interdependence, behaviorism, and political hermeneutics. To solve the problem posed in the study, a complex of such mutually complementary scientific methods as the systemic and socio-cultural analysis was used; structural and functional method; analysis of documents and sources; interdisciplinary analysis.


## 1 INTRODUCTION

The large-scale plans of the Russian state for the introduction and use of digital technologies and artificial intelligence systems in all spheres of society's life objectively actualize the need for understanding, scientific substantiation, and adequate legal regulation of these processes. For a long time, there have been discussions among legal scholars about assigning the legal status of "electronic persons" to robots (Yastrebov, 2017), about recognizing them as a full-fledged cyber subject of society, about the possibility of granting legal personality to virtual persons (Polich, 2018), about endowing one or another system with the status of a subject of law (Gabov, 2018), on the recognition of

the AI system as a subject of copyright and patent rights (Morkhat, 2018), the use of AI in justice (Afanas'yev, 2020), in the implementation of social human rights is discussed (Lipchanskaya and Zametina, 2020).

In the domestic legal doctrine, attempts to systematically approach the regulation of artificial intelligence technologies have not been undertaken for a long time. The long absence of fundamental research on this issue is due, among other things, to the novelty of social relations. Currently, there are publications devoted to the problems of conceptual understanding of the regulatory problems of artificial intelligence, where it is rightly noted that "the tactics of regulatory promotion ... do not raise objections, provided that the changes will be complex,

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interconnected, which is impossible without the development of at least the most general principles with an awareness of the dynamics of regulatory efforts” (Gabov and Khavanova, 2018).

Of particular importance is the need for a balance in legal regulation and the development of digitalization, artificial intelligence and the preservation of generally recognized constitutional values.

It is no coincidence that the strategic documents of the Russian Federation, defining the main vector of development of artificial intelligence technologies and the tasks of their regulation, formulate not only principles but also basic ethical norms, which include: the priority of human well-being and security, protection of their fundamental rights and freedoms; a ban on causing harm to a person at the initiative of artificial intelligence systems and robotics; controllability to a person; prevention of unlawful manipulation of human behavior.

In the last decade, futuristic ideas have been very actively implemented into reality and provoke serious challenges to the legal system of the Russian Federation, the public administration system, and society as a whole, since the development of artificial intelligence technologies cannot be assessed unambiguously, it is necessary to foresee, scientifically substantiate and minimize the risks associated with these processes.

The systems of health care, education, social assistance and support are currently integrating the achievements of information technology and digitalization, striving to ensure a barrier-free environment and high-quality implementation of human rights in the social sphere. Of course, in the conditions of the information society and the introduction of artificial intelligence technologies, there is a transformation not only of the implementation of basic human rights but also a change in their established content, new powers appear or are supplemented by existing "digital" specifics. This study focuses on the analysis of the implementation of the constitutional right to education in the context of information and digital reality and the development of artificial intelligence technologies.

## 2 THE METHODOLOGY OF RESEARCH

The methodological basis of the research was formed by the dialectical materialist method, as well as the most important general methodological principles

and methods of cognition of social reality. In order to form the conceptual and methodological foundations of the study, the analysis of the concept of artificial intelligence is carried out.

The use of systemic and structural-functional methods made it possible to consider the trends and prospects for the implementation of the constitutional right to education in the context of information and digital reality and the use of artificial intelligence in the educational process.

The work was carried out in accordance with the principles of the systemic approach, dialectical interdependence, behaviorism, and political hermeneutics. The theoretical and methodological basis of the study is the synthesis of the general theory of security and modern theories of the analysis of social phenomena.

## 3 RESEARCH RESULTS

### 3.1 Implementation of the Constitutional Right to Education in the Russian Federation in the Context of Digital Reality and Artificial Intelligence

Currently, there is no special legislative regulation in the Russian Federation that takes into account the specifics of the use of artificial intelligence technologies in the field of education.

In this situation, a conceptual dilemma arises: is it appropriate to advance legislative regulation of the imperative use of artificial intelligence technologies in the educational process or the gradual application of modern information technologies should be flexible depending on the economic, resource, national, and other characteristics and capabilities of the educational organization and other subjects of the educational process?

It is worth noting that in the Concept for the development of regulation of relations in the area of artificial intelligence and robotics technologies until 2024, the first task is to create the foundations of legal regulation of new social relations, which are formed in connection with the use of artificial intelligence systems and robotics, which are mainly stimulating in nature. Based on this, we can conclude that the Russian state is focused on creating legal regulators of a “soft imperative” nature, which create conditions and motivate subjects of legal relations to use artificial intelligence technologies.

Determining in the Concept the priority sectoral directions for regulating the use of artificial

intelligence, the education sector is unreasonably ignored. The list of the main industry areas requiring legal regulation of the implementation of artificial intelligence systems includes the legislation of the Russian Federation in the area of public health protection; state and municipal administration; legal regulation of artificial intelligence in the field of transport, urban planning activities, including the implementation of the concept of a "smart city" and in the industrial field. This is a comprehensive list. It's safe to assume at least two options for such a situation. First, the Concept, adopted until 2024, does not in fact imply the development of educational legislation taking into account artificial intelligence technologies in this area in the next few years. Secondly, it is in the field of education that a flexible step-by-step option for the introduction of artificial intelligence is supposed to be applied at the discretion of the educational organization itself, using a risk-based approach based on assessing the size of potential harm and the need to take measures to minimize the corresponding risks.

Within the framework of this study, we do not aim to conduct a detailed analysis of available technologies and innovative artificial intelligence systems currently used in education. There are a lot of them and their number is constantly increasing. Let us express our opinions regarding the relations arising from the implementation of the right to education with the use of artificial intelligence technologies guaranteed by the Constitution of the Russian Federation. Of course, in this context, we are not talking about AI as a subject of the constitutional right to education, the article proposes to consider artificial intelligence in the following aspects:

1. artificial intelligence as technologies to improve the learning process
2. artificial intelligence as an object of study within the educational process.

The normative legal act specifying the implementation of the constitutional right to education is the Federal Law of December 29, 2012, No. 273-FZ "On Education in the Russian Federation". Analysis of this law has shown that until now it does not use the terms "artificial intelligence technologies", "artificial intelligence systems" and other phrases formed with the construction of "artificial intelligence". It contains an article that establishes the concepts and procedure for the implementation of educational programs using e-learning and distance learning technologies.

Thus, the state policy in the field of education allows the use of such innovative forms of educational activities as e-learning and distance

technologies. At the same time, e-learning is understood as the organization of educational activities using the information contained in databases and used in the implementation of educational programs, all kinds of information, and telecommunication networks that ensure the transfer of information through communication lines, the interaction of students and teaching staff.

Distance learning technologies are understood as educational technologies implemented mainly with the use of information and telecommunication networks with indirect (at a distance) interaction between students and teachers. Simultaneously with the use of e-learning and distance technologies, the educational organization undertakes to create an electronic information and educational environment that provides certain conditions for high-quality and barrier-free development of the educational program by students.

The first practices of introducing e-learning in the Russian Federation already exist. For example, in Moscow, MES is actively used - the Moscow Electronic School. Most educational organizations, in the face of constraints caused by the 2020 pandemic, were forced to implement e-learning and distance learning at an operational and accelerated pace. However, it is important to understand that this is not AI yet, but already the first attempt to automate the educational process. First, it is necessary to provide each student with a personal digital device, and only after that "it is possible to obtain a digital educational footprint and a basic technological foundation for building individual educational trajectories using artificial intelligence".

It is easy to note that neither e-learning nor distance technologies involve artificial intelligence systems in a broad sense. We believe that electronic technologies, distance educational technologies, and artificial intelligence technologies are close but not identical concepts. The definition of the first two is contained in the federal law "On Education in the Russian Federation", and the legal concept of artificial intelligence for the first time in our state was formulated in a by-law - Decree of the President of the Russian Federation of October 10, 2019, No. 490 "On the development of artificial intelligence in the Russian Federation", later it migrated to Federal Law No. 123-FZ.

The National Strategy for the Development of Artificial Intelligence for the Period up to 2030 indicates that the use of AI technologies in the social sphere contributes to the creation of conditions for improving the living standards of the population, including by improving the quality of services in the

field of education. At the same time, the National Strategy specifies what is meant by improving the quality of services in the educational environment. Namely: adaptation of the educational process to the needs of students and the needs of the labor market, a systematic analysis of learning efficiency indicators to optimize vocational guidance and early identification of children with outstanding abilities, automation of knowledge quality assessment, and analysis of information about learning outcomes. In the future, these processes will be implemented by artificial intelligence systems.

Conventionally, the legal conditions for stimulating the introduction of artificial intelligence technologies in the field of education include experimental and innovative activities, the definition and content of which is enshrined in Article 20 of the federal law on education. Of course, the purpose of these activities is focused on the modernization and development of the education system. Hypothetically, assuming that modernization and development are currently not conceived without the inclusion of artificial intelligence technologies in the educational process, we can talk about the "hidden content" of the listed types of activities in the field of education.

A new project of the Government of the Russian Federation on the formation of a digital educational environment can become a serious development in the implementation of the constitutional right to education in modern conditions. Its main goal is to provide free access on the principle of "one window" for all categories of citizens, including those studying in educational programs of higher education and educational programs of additional professional education, to online courses implemented by various organizations carrying out educational activities, and educational platforms.

Noteworthy is not only the formation of a unified public digital educational environment, stimulated by the Government of the Russian Federation, but also for the first time introducing in the regulatory field of Russia such terms as educational platforms, online courses, a passport, and examination of an online course, a personal educational trajectory, a portal and others reflecting the transformation the right to education in the context of information and digital reality.

However, these are only the first steps in the legal regulation of the use of artificial intelligence technologies in the implementation of the right to education.

### 3.2 Barriers and Risks of Digital Transformation of Education

Digital transformation processes are becoming a part of reality today, a modern trend, and cover almost all social and economic relations. It is no coincidence that one of the priorities in the development of Russian education is the creation of a modern and safe digital educational environment.

It is difficult to dispute the fact that digital technologies today create and provide a set of opportunities for improving the quality of education. However, integrating them into the educational process is far from an easy task. It is impossible to achieve high educational results only by providing educational organizations with new digital technologies. The digital transformation of education is possible if the problem of bridging the digital divide is solved. The digital transformation of the education industry is a qualitative change in both the educational process itself and educational activities based on the development of breakthrough information technologies. With the help of digital technologies, it is easier to use new models of organization and conduct of educational work, which were not previously used due to the complexity or impossibility of their implementation through traditional technologies of interaction and work with information.

At the same time, the creation of a modern and safe digital educational environment is associated not only with the introduction, use, and development of modern digital information technologies within the educational process, but also implies the need to study the emerging legal and organizational barriers to the introduction and use of such technologies, and is also associated with a certain kind of risks.

One of such serious barriers to the digital transformation of education is the digital divide that appears in all areas where digital technologies are introduced. Schools and universities are no exception. At the same time, the emerging digital divide exacerbates the "traditional" educational inequality associated with the different cultural and social capabilities of children belonging to different social groups. Currently, educational organizations in Russia are equipped with digital equipment to one degree or another. However, inequalities in access to it still persist. At the same time, the availability of equipment does not mean that it will be actively and effectively used in the educational process.

Another, no less serious barrier to the introduction of digital technologies is the access of students to the Internet. However, its availability often varies



significantly depending on the region of the country, as well as on the types of settlements. Residents of medium and large cities generally do not experience problems with Internet access, which cannot be said about rural areas. But despite some positive dynamics that have emerged in the work to connect schools to the Internet, inequality still persists. Today in the Russian regions there are still many educational institutions that do not have access to the Internet. Thus, measures to create material conditions for the digital transformation of education should continue. In addition, high-speed Internet is not available to all educational organizations today, especially at the level of general education schools. High-speed Internet access is a necessary condition not only to be able to receive additional educational resources from the Internet but also to provide educational services that meet the needs of the modern information society.

The risks associated with the digital transformation of education seem to be no less serious.

In its resolution 55/63, the UN General Assembly expressed concern that technological advances have created new opportunities for criminal activity, and in particular for the criminal use of information technology. The report on the right to education prepared according to UNGA Human Rights Council resolution 26/17, covers in some detail the problems and challenges in the field of the right to education in the digital age. The report notes that the use of digital technologies carries the risk of diminishing the importance of universal values in education and undermining the quality of education. Digital technologies negatively affect the function of education, reducing the ability of students to think logically and critically, diminishing the importance of universal values, and paving the way for the commercialization of education. The misuse of technology can lead to cyberspace bullying, criminal activity, and even terrorism. Sexual abuse or sexual exploitation of minors was identified as the most serious risk.

Studies on the prospects for the digital transformation of education in the Russian Federation also contain a critical analysis of the risks of using digital technologies in education. In particular, such negative changes in the development of the brain and consciousness as "digital dementia" are called, when cognitive functions of the brain are impaired and its individual parts are affected. Moreover, experts associate the worldwide growth of autism with computer learning. According to the director of the Center for Geopolitics of the Institute for

Fundamental and Applied Research, Chetverikova, O.N., the replacement of the physical world with a virtual digital environment leads to atrophy of certain parts of the brain, loss of cognitive functions, loss of thinking skills and inability to concentrate and not only memorize but even understand what has been read.

Kasperskaya, N.I., an expert in the field of IT security, also outlined the main risks of digital colonization and widespread implementation of such technologies in all areas of life. A breakthrough in artificial intelligence, the analysis of "big data" is associated, in her opinion, with the imposition of Western technologies, the degradation of one's own competencies, the loss of basic cognitive competencies, a decrease in the quality of education, a reduction in personal contacts, the growth of conflicts, the "leakage" of talented youth and teachers abroad, etc.

This is not a complete list of the barriers and risks of digitalization of education.

Digital transformations of the system of modern Russian education represent a kind of core around which new pedagogical innovations and methodologies should be formed and a qualitative improvement in the effectiveness of the educational process should take place. However, at present, the main problem is the lack of a clear understanding of the ways to reform the Russian education system.

## 4 RESULTS AND DISCUSSION

The problems of digital transformations and the use of artificial intelligence in the area of realizing the right to education are widely discussed in the scientific community.

Zametina, T.V., Kombarova, E.V., Balashova, E.Yu. consider the introduction of artificial intelligence as an objective process affecting human rights, which are the highest value recognized both at the national and international levels (Zametina et al., 2020). As a priority, they call the improvement of state regulation in the field of informing the population about the possibilities of using artificial intelligence technologies, the development of the competence of all citizens in the development of new forms of interaction with artificial intelligence.

Researchers Keshalava, A.V., Budanov, M.P., Rumyantsev, V.Yu. predict a significant impact on society and the digital economy of mobile, cognitive, and cloud technologies, Internet of Things, and big data technologies (Keshalava et al., 2017).

In a study by Aslam, Abdul Azis Wahab, Purnam Syae Purrohman, Zulherman, Evi Segaravati Ampri (Abdul Azis Wahab et al., 2020), of the behavior of Internet users and social networks in the learning process, it is noted that the majority of users use the global network for activities aimed at getting pleasure, and only after that - for learning. The authors conclude that learning behavior using social networks and the Internet is quite positive in the perception of the younger generation.

In a study by E. Dobrolyubova, O. Alexandrova, A. Efimova (Dobrolyubova et al., 2017), dedicated to the prospects of digital transformation, emphasize the need to remove legal and organizational barriers as a factor in the success of digital transformation in certain industries, including education.

The research of Strekalova, N.B. (Strekalova, 2019), in which, along with the positive aspects of the digitalization of education, possible negative changes in this area are analyzed (loss of basic cognitive competencies, a decrease in the general level of competence, a reduction in the need for an "intellectual" specialist, high requirements for the psychological qualities of a specialist, a reduction in personal contacts, an increase in conflicts, "leakage" of talented youth and teachers abroad, a reduction in the contingent of higher education, the loss of the status of domestic higher education).

## 5 CONCLUSIONS

The conducted research allows us to draw the following conclusions.

Artificial intelligence is essential for the development of educational standards of the future. At the same time, it is rather early to talk about artificial intelligence as a subject of educational legal relations, although algorithms for creating chat bots for forming and adjusting an individual learning path, creating textbooks and teaching aids by artificial intelligence are being actively discussed. Currently, in the field of education, artificial intelligence is manifested in two aspects: as a technology for sustainable development of education and as an object of study within the educational process.

Analysis of the Federal Law of December 29, 2012, No. 273-FZ "On Education in the Russian Federation" showed that it does not use the terms "artificial intelligence technologies", "artificial intelligence systems" and other phrases formed with the construction of "artificial intelligence". Despite the fact that the law contains an article that establishes the concepts and procedure for the implementation of

educational programs using e-learning and distance learning technologies, it should be reported that neither e-learning nor distance technologies involve artificial intelligence systems in a broad sense.

Despite the progress made, inequalities of opportunity persist in higher education. Digital technologies are omnipresent only in principle, in real life their presence is fragmented due to the existence of the "digital divide".

The use of digital technologies carries the risk of social stratification in society. The use of information and communication technologies can lead to the deprivation of educational opportunities, especially for the disadvantaged population.

Government should take steps to protect children from online harassment, including bullying or sexual grooming. Finally, care must be taken to ensure that children are not involved in illegal activities, financial schemes, or terrorism.

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