

On the Need for the Transformation of Preschool Education in the Digital Age

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ABSTRACT

The spread of digital technologies contributes to qualitative changes in production and in global markets. These changes are also taking hold in the field of education. The pedagogical community considers the process of digitalization of education as an inevitable process of changing the content, methods and organizational forms of educational work, which unfolds in a rapidly developing digital educational environment and is aimed at solving the problems of socio-economic development of the state. The article discusses the legal basis for regulating preschool education in the digital age. The analysis of the works of domestic and foreign researchers whose works affect the processes of digitalization of preschool education in the Russian Federation and abroad is proposed. Problems are identified and some ways to improve preschool education in the digital age are suggested. It is concluded that the essence of digital transformation of preschool education is to effectively and flexibly apply information technologies in the activities of preschool educational institutions and organizations.

Keywords: *right to education, pre-school education, digitalization of education, transformation of pre-school education*

1. INTRODUCTION

Today, Russia lives in the era of global digital technologies. As of 2019, the Internet audience is 4.39 billion people. There are 109.6 million Internet users in Russia, which means that the level of Internet penetration is at around 76%. Digitalization affects all sectors of the economy, and the education system is no exception, especially since citizens and society as a whole are making more and more demands on this area, including those related to the introduction of digital technologies into the educational process.

Of course, the formation and development of a person's personality, his success in society, in work, in the family are determined by many factors, but one of the most important components in the formation of an individual as a person is played by those attitudes that are laid in him from early childhood. A significant role in the formation of these prerequisites and factors is played by preschool education as an integral stage of human educational development, guaranteed at the level of the Constitution of the Russian Federation. It is generally accepted that preschool age is the age of accelerated physical and mental development of the child, the formation of skills that determine his physical, intellectual, and mental development in the future. It is for the formation of a full-fledged active participant in civil society, a qualified employee, a full-fledged citizen of their state, in the Russian Federation, that preschool education has recently

also become a significant focus, taking into account both the experience of this level of education acquired during the "Soviet period" of history, and the promising practices applied in most foreign countries where state programs for early development of children are implemented.

2. RESEARCH METHODOLOGY

General scientific methods were used to solve the tasks: scientific analysis, synthesis, deduction and induction, abstraction, structural and functional method. Based on the research problems, special methods were chosen: formal-legal, formal-logical, systemic, statistical method and others.

3. RESULTS AND DISCUSSION OF THE STUDY

The fundamental basis of the legal regulation of preschool education in the Russian Federation is based on the norms of part 2 of article 43 of the Russian Constitution, which guarantees access to free preschool education in state or municipal educational establishments and at enterprises. Thus, the Russian state, proclaiming itself social, assumes obligations to fully ensure the implementation of this right. In more detail, the constitutional norms are set out in the Federal law of December 29, 2012. No. 273-FZ “On Education in the Russian Federation” (hereinafter - the Federal Law “On Education in the Russian Federation”).

The strategic aspects of the development of preschool education are reflected in the state program "Development of Education" (subprogram "Development of Preschool and General Education"), approved by Decree of the Government of the Russian Federation of December 26, 2017 No. 1642. One of the tasks of which is "achieving global competitiveness of Russian education, entering the Russian Federation into the top ten leading countries of the world in terms of the quality of general education".

By the Decree of the President of the Russian Federation dated May 07, 2018 No. 204 "On National Goals and Strategic Tasks of the Development of the Russian Federation for the Period until 2024", the Government was tasked with creating a modern and safe digital educational environment that ensures high quality and accessibility of education of all types and levels. Based on the norms of part 4 of Article 10 of the Federal Law "On Education in the Russian Federation", pre-school education is one of the levels of general education. Therefore, it is recognized as the initial stage of general education, which means that all the requirements that are established for general education are presented to preschool education. It is necessary to immediately note the dual nature of the activities of pre-school educational institutions, which in addition to educational activities are charged with the duty to provide supervision and care for children (part 1 of article 65). This activity is a set of measures for the organization of food and household services for children, ensuring their personal hygiene and daily routine (paragraph 34 of article 2). Thus, the legislator distinguishes the concept of educational activities and child care for preschool educational institutions, which is considered as a special type of services provided by preschool educational institutions, different from educational activities. In the light of the digital transformation of the education sector, these aspects of pre-school education deserve special attention.

In 2019, the Ministry of education of the Russian Federation developed a Model of the digital educational environment. It defines the structure, requirements, and participants of digital educational content. The project is focused on creating a secure digital educational environment. However, it is more focused on the development of the digital environment in schools than in pre-school educational institutions. However, given that school is the next link in the level of education of a child, it is obvious that preschool education faces issues of expanding the educational space of preschool education for children: distance and mixed learning, combined / augmented / virtual reality; updating the content of preschool education for children with modern digital technologies; problems and prospects for the introduction of digital technologies in preschool education and the readiness of preschool educational institutions to keep up with the times.

Online platforms, such as the national open education platform "openedu.ru", inter-University network platform for online e-education "Universarium", open video archive of lectures for teaching in Russian "Lectorium", have already been created and are being developed in the

system of General and higher education as part of the project "Modern digital educational environment in the Russian Federation". However, these platforms are either not used at the level of preschool education, or simply are not adapted to this level of educational activity. As experience shows, the use of digital technologies at each level of education increases the overall effectiveness of educational activities when these technologies become available to all participants in educational relations, regardless of the level of education received. At the same time, it is important to note that only equipping educational organizations with information and communication technologies does not in itself lead to an increase in the effectiveness of the learning process. These measures should be accompanied by the simultaneous introduction of new content, forms and methods of educational and organizational and methodological work into the educational environment.

N.S. Denisenkova and T.A. Krasilo confidently declare that "children are becoming more technically literate and advanced users of digital technologies, the gap between the generations of children and parents is widening, the universality of the adult's figure and its role in parent-child relationships is decreasing." There is a problem in the need for quality training / retraining of pedagogical and managerial personnel. The competence of the teacher, kindergarten teacher should include legal knowledge, technological, neurophysiological training, digital skills, knowledge in the field of environmental protection and use, bilingual training.

T.G. Shmis notes that "in many countries of the world in preschool and general education there is a situation that children do not reach the educational level that could give them their potential. In many countries, the issue of timely preparation of children for school remains unresolved. The level of managerial management of educational organizations lags behind the average level of economic management in the same countries. And this is characteristic not only for Russia, but for many other states".

In this regard, all participants of the educational process: the state, society, parents and students are faced with the task of maximally using the elements of modernization of the modern education system, which helps integrate the child into the digital world of knowledge and information, taking into account the integrated approach of "science - technology - innovation".

Let's consider the views of foreign researchers on the problem of the need to transform education. D. Heckman notes that "The education begins in infancy, long before entering the institution of formal education, and continues throughout life. Investments in pre-school education give significantly greater returns than in school and University education." This is why pre-school education is becoming a mandatory element of national education systems. Thus, from the economist's point of view, the introduction of digital technologies from early learning ensures the development of the economy, since children who attended pre-school educational institutions with digital educational programs will do better in schools and universities, will be

able to find a good job and achieve success in life in the future.

Many authors talk about the so called digital childhood as a special historical type of childhood. According to the research of K. Robinson, "a new look at the education system implies a creative approach, the rejection of standard planning and the freedom of thinking. We are accustomed to the principle of training, where the grading system and curriculum does not tolerate individuality." The scientist believes that, first of all, it is necessary to determine what the child has talent for and to emphasize this direction.

D. Kropf believes that "in a society where the authorities endlessly reflect on the reforms of their education systems, it is necessary to look for and create some educational alternatives. Indeed, in a situation where a parent who does not understand what will happen in the future with education, it remains to tackle the child's potential, focusing on alternatives." That is, using the capabilities of the continuing education system, the potential of digital technologies can make education a conscious need of a person. Thus, education is currently reaching the level of need that a person needs throughout his life, which becomes a prerequisite for the transformation of preschool education in the first place.

The need to transform preschool education in the digital age has also become the main theme of the International scientific-practical conference "Education and training of young children" (ECCE Conference) (2018), which is held annually under the auspices of UNESCO. The recognition of the field of preschool education has reached an international level. According to the UNESCO Sustainable Development Goals, by 2030 it is planned to provide all children with access to quality systems of development, care and pre-school education. The educational level index is one of the main indicators of the social development of the state and society as a whole. Since 2019, Moscow has been implementing the International Baccalaureate School under the Initial Years Program (IYP) on the basis of the State Educational Institution "School No. 1589". The IYP program is designed for students aged 3 to 12 years. The program is based on six universal interdisciplinary topics that are studied using knowledge and skills gained in six subject areas, as well as interdisciplinary skills. Much attention is paid to research activities. Thus, the education sector is becoming one of the instruments of competitiveness.

Domestic scientists note the need to improve the sphere of preschool education primarily through educational policy on the part of the state. I.I. Komarova believes that "education is turning from conservative types of human activity into a dynamically changing one. Knowledge, including pedagogical, is updated every two years, and there is a tendency to reduce this time. It is required to design educational work taking into account the latest knowledge about brain functions. The development of process and constructive thinking is required. Intuition becomes an important component of educational processes. Non-institutional forms of education are developing. Cognitive processes are visualized." It can be

concluded that all the changes that are taking place in the world today are reflected primarily in education, where a special role is given to the sphere of preschool education.

E. O. Smirnova expresses concern about the active introduction of digital technologies in the world of children. "The computer has become for children not just an assistant and a source of information, but a means of getting sensory impressions, without which they can no longer do. Digital technologies enter a child's life almost from infancy. Live communication, game and subject activities, and just physical activity—all this is beginning to be replaced by interaction with the computer (and its analogues)." Of course, modern trends leave their mark on the development of children. For modern preschoolers, it is important not so much to remember information as to know where to find it. Their brain works in multitasking mode, which is provided by the ability to remember unsolved tasks, plan long-term goals, divide large tasks into small ones and bring them to the end.

Currently, various information programs are widely used in many regions of the Russian Federation (for example, the IP of JSC "Irtech", the unified information and educational interactive development environment, mobile e-education, and others). A positive fact is the ability to work with the digital environment for both children, parents, and educators. Thanks to digital technologies, the time spent on preparing for classes, a large amount of visual material, the variability of its use, the ability to individualize the training of preschoolers, and the ability to use the resource together with a child outside of kindergarten are reduced. However, when using digital technologies, there is a question of ethics. Parents and teachers have to choose between "harmful" information for the child, and information useful for knowledge. The digital environment sets tasks that subsequently affect the child's mental development. As a result, their cognitive and personal development may differ greatly from the vision of their parents and teachers. The significance of this result for the well-being and success of the child in the future in the context of digitalization remains debatable.

Digital learning games, simulators, simulation, digital teaching materials in the digital environment, they are free and available for the participants of educational relations can contribute to progress in the field of education in General. However, the key is "availability". It is not for nothing that scientists have identified the problem of the digital barrier or digital divide when it comes to unequal access to digital infrastructure.

4. CONCLUSION

Having analyzed the trends in the development of education in the era of digitalization, we can conclude that the state is massively implementing a digital educational environment at all stages of education, thereby forming a digital society. The essence of digital transformation of preschool education is to effectively and flexibly apply information technologies in the activities of preschool educational institutions and organizations. Transformation

is impossible without a developed digital infrastructure, without publicly available digital educational materials, services, and without the formation and development of digital literacy among educators, teachers, and parents. It is necessary to leave all the best that was developed in the past, and aim at rethinking traditional approaches to preschool education, which lacked elements of the electronic digital environment. It is obvious that at the present stage of development of Russian society, there is a need to prepare preschool children who will have critical thinking, communication and creativity, ready for school. Daily interaction with the digital environment, the choice of individual trajectory and methods of training become an integral part of education in Russia and abroad. Thus, pre-school education is facing the need to solve the following tasks first of all: first, to train teachers who have digital literacy and are able to apply the digital educational environment; secondly, the pre-school education system must meet the requirements and demands of the modern digital society, which indicates the development of state educational policy at this level of education; third, ensuring security and minimizing the risks associated with the digital environment, including the risk of computer addiction among children.

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