

# Digitalization of Education: Save the Human

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## ABSTRACT

The article substantiates the need for a transition from an eclectic postmodern education paradigm to a humanistic one, rooted in the foundation of Russian culture and suggesting the development of a person and increasing his personal potential. The educational process immanently contains moments that are not reducible to technology and require direct subject-subject communication and interaction between teacher and student. Education issues are mainly related to student motivation, not digital literacy. In this regard, the authors believe that the priority direction of state policy in the field of education should be the training of highly qualified teachers, improving the level and quality of their life, as well as increasing the prestige of teacher work.

**Keywords:** human, education, digitalization of education, education paradigms

## 1. INTRODUCTION

The rapid process of informatization of all aspects of society has become the norm and a characteristic feature of our days. The digital communications system now covers all spheres of the life of a modern person: production, science, healthcare, the leisure, and entertainment industry, etc. The rapidly changing sociocultural reality cannot but have a profound impact on the education system, which, while remaining a universal cultural transmitter ensuring continuity of generations, the same time should not only correspond to the spirit and dictates of the time but also work for the future. In this regard, there is a clear tendency to consider digitalization as a panacea, as a magic wand, the flick of which will solve all the accumulated problems of our permanently reformed school. At the same time, in the conditions of the boundless pluralism of our socio-humanitarian knowledge, for some time now it has become almost a good practice rule in scientific publications to refer only to sources confirming one's own point of view, completely ignoring a different position and thereby completely dismissing the declared principle of dialogism. In this situation, however, it is impossible not only to increment scientific knowledge but also an approach adequate to reality to comprehend our tasks. In connection with such a sensitive topic for society as the digitalization of schools, not only scientific objectivity, but common sense itself is urgently required to listen not only to the voices of the apologists for digital education but also to its critics in order to understand the essence of the changes and make more informed

decisions. Globalization processes in the field of education require an appeal to the ideas of humanizing relations in school and higher education [1], actualize the problem of cultural traditions in this area [1, p. 223].

## 2. METHODOLOGY OF THE STUDY

The study was based on a number of principles and theoretical approaches developed in the field of socio-humanitarian knowledge: the cultural-historical theory of the formation of higher mental functions [2], as well as the work of representatives of the cultural-historical school of psychology [3; 4]; outstanding domestic teachers [5]; information society theory [6; 7]; the concept of network generation [8]; anthropology of Russian existentialism [9; 10]; value-oriented approach to the use of digital technologies [11]; studies of domestic and foreign authors on the problems associated with the development of digital technologies [12; 13; 14].

## 3. RESEARCH RESULTS

Today the world has come to a state where the future fate of human civilization will be determined by the intellectual and moral potential of man and society. This ultimately actualizes the problem of the modern education system that meets the needs of the times, its role in the formation of an integrated, morally sane and responsible person; as well as in the integration of a modern, dynamic, complex society. In this regard, behind the discussions on the digitalization of the school

one can guess the more complex and serious problem of choosing the educational paradigm.

The development of digital information technologies leads to a deep cultural gap between the modernist "calculus culture" (that is, the technogenic culture peculiar to technology developers, with their well-developed rational thinking) and the post-modern "simulation culture" into which users are "immersed" [15, p. 226]. In this case, the user even refuses "from trying to understand the principle of the computer ...", the "screened" digital mechanism is immersed for him in complete impenetrability, even invisibility [15, p. 226] It is proved that in cyberspace there is a return to "wild thought", i.e. to particular, pre-rational, sensual, besides "clip", fragmentary illogical thinking. In the future, students of modernist culture have a limited interest in real life in general, as well as "interest in participating in future political activity" [16, p. 377], social skills are lost [17]. Thus, in fact, two worlds are formed in which representatives of one generation live: the Modernist universe is a world of "bytes, wires, chips hidden behind the screen" [15, p. 227].

The postmodern world is "a universe of naive faith in the screen, which makes senseless of the question of what is behind the screen" [15, p. 227]. In other words, a new abyss is dividing people, this time - on a deep anthropological basis - on the degree of development of not only cognitive functions but also related brain structures: there are studies showing that "the digital way of comprehending the world negatively affects the formation of the brain ..." [18, p. 155].

These two worlds correspond to two educational paradigms. It is clear that the basis of any pedagogical paradigm is certain anthropology (understanding of a person and his place in the world), and not technology but the latter can have a profound effect on it. Thus, in the framework of the technocratic paradigm corresponding to modernist culture (or rather its apotheosis-technogenic), the main merit of a person is considered exclusively intellect, and all efforts are directed to the hypertrophied development of rational, logical thinking, to its improvement using technical means (human-machine interface) and etc. The use of digital technology is strictly subordinate to the learning process, aimed at gaining knowledge exclusively in those areas that are related to computer development hardware and software. This approach contributes to the formation of a person with an underdeveloped emotional sphere; poor imagination and language, striving for complete uniqueness; with analytical thinking incapable of synthesis and, according to Ilyenkov, "ascent to the particular."

The antipode of this paradigm is the postmodern one, which is based on anti-scientism, an appeal to a Russoist natural person, refracted through the prism of Freudianism (a person is a slave of his unconscious, "desire machine", etc.); value pluralism and moral

relativism. Characteristic features of this paradigm are also: the rejection of any educational practices (interpreted as repressive); appeal to children's values in the issue of the introduction of information technology in the educational process; gamification; virtualization of education, etc. All of these seemingly innovative innovations that are being introduced in elementary schools can turn into non-formation in children of higher mental functions, computer dependence and, ultimately, human degradation.

Many authors are now inclined to the idea that postmodern philosophy "cannot be regarded as the philosophical foundation of education because of "anti-educational and anti-world outlook intentions." In this regard, one of the urgent tasks facing the school now is "overcoming postmodern timelessness, developing a kind of spiritual antibodies that can cope with nihilism viruses" [19].

But at the same time, the question remains open on what basis to build education, in the framework of which universe, which worldview paradigm should children be raised? In our opinion, neither the first (technocratic paradigm) nor the second way (postmodern paradigm) can be considered optimal, since both of them make people one-sided appendages of new technologies, give rise to new forms of human alienation. Their mechanical connection gives rise to a chimera, bearing all their flaws. In addition, now, in connection with the successes of the digitalization of the world, we are witnessing a convergence of the opposites of the rationalism of modernity and the irrationalism of postmodernism: the rationalized, formalized, divorced from reality thinking, characteristic of technology developers, turns into its opposite, giving rise to mythological ideas about mathematics (assuming that only mathematical objects have the status of being), about information (endowing it with the properties of the Absolute) [20], and also developing anti-human heavily mixed with eugenics, the reductionist projects of transhumanism and posthuman utopias (modifications and transformations of the human body, cyborgization of a person, transfer of his consciousness to a computer, etc.). In other words, not only the "dream of reason" (postmodernism) gives rise to monsters, but also an extremely formalized, computerized, one-sided mind that is not warmed by human feeling.

In our opinion, both the first and second paradigms are extremes that a modern school has to overcome based on a humanistic paradigm, based on domestic cultural tradition. Indeed, the basis of domestic culture is special, different from the Western, understanding of human, his dignity. While Western humanism has given absolute value to an empirical individual with all his weaknesses and vices, Russian humanism is an effective, demanding love for a person, encouraging him to become better than he is, considering him in development, self-creation, the discovery of his own essence, the humanity.

Traditionally, education in Russia was based not only on the intellectual component, but also on moral and spiritual development [21]. This is the way to that inner freedom, which only makes a person responsible, moral, creative. This desire, the need for it for a growing person should be supported in every way, to a school that considers itself humanistic, and not to indulge the whims, whims of children about a new, even high-tech toy. Reliance on the best in a person, on how he can and should be in his development, this, according to A.S. Makarenko, the “optimistic hypothesis about a person” is the basis of the domestic humanistic pedagogy, a school working to increase the personal potential of students [22]. Not to lose this foundation, not to lose a person with digital transformation, with the technologization of education - this is the main task, in our opinion, of the school, without solving which we risk losing the future.

#### **4. DISCUSSION OF RESULTS**

It is known that the role of the Other as an active accomplice is indispensable for the formation and development of personality. However, when mediated by technical communication devices, his personal involvement becomes optional. Such technologization of the sphere of interpersonal relations can adversely affect the formation of the student’s personality. The problem of upbringing is the problem of the interiorization of relations and self-upbringing, which then determine the orientation of a person, their needs, motives, choice of action, etc. Therefore, it should be honestly recognized that no soul-saving conversations, and especially special lessons in ethics, will make a person moral if he was deprived of the experience of genuine, disinterested moral relations that are possible only in person. In other words, education is possible only with the personal communication of the teacher and students.

Direct interaction between teacher and student also requires innovative training, which involves not preparing for life, but actively involving students in it, motivating them to engage in self-development, self-education. Only a teacher, not technology, can create an educational situation when a student becomes an active subject of learning.

It is no coincidence that in the article by A.V. Sukhorukikh “the question of the significance and practical implementation of the principles of humanistic pedagogy and the value-based education of a personality culture” is being raised in the context of the digitalization of the school. The author is convinced that no technology should cancel interpersonal communication and creative interaction at school. It is concluded that the actualization of humanistic concepts of education and upbringing of an individual should become one of the most important areas of the development of society,

“ensuring the integrity of a single cultural space” [23, p. 19].

At first glance, a similar position should be expected among the authors of the article “Humanization of education in the digital age” [24]. The authors are confident and it is difficult to disagree that “a reasonable balance is necessary between combining the capabilities of the digital era and the principles of humanization in education” [24, p.34]. However, some provisions of the article are in doubt. So, the authors argue that in connection with digitalization, “the gaming component of consciousness comes to the fore”, “gamification also becomes relevant and in-demand” [24, p. 38]. As you know, domestic psychological science (general and developmental psychology) considers the game as a necessary form of activity at an early and preschool age, when the game performs many of its inherent functions. Does the gamification of the formation of infantilization contribute, therefore, to a delay in the development of a person, to the consolidation of his immaturity? In addition, we are talking about computer games that can be addictive and painful addiction akin to drug addiction (the same brain structures are involved in its formation) [25]. Some games (developed on the basis of the von Neumann game theory [26, p. 159]) contribute to the development of intelligence, but not moral qualities. We are convinced that the school should accustom serious systematic mental work, and not replace it with a game. Only such work contributes to the formation of the will, stress resistance, and preparation for life in reality, in the real, not virtual world; this is the path to personal maturity.

The article in question [24] also deals with a change in the paradigms of education, and the authors for some reason believe that the main characteristic of the modern paradigm should be anti-scientism. In connection with this, a reasonable question arises: what then does this school using digital technologies teach, therefore, equipped with the latest technology based on precise scientific knowledge, a school? As for the provision of information from various sources, for which L. Rosen stands for (which authors of articles on digitalization of the school like to refer to), rather, it introduces considerable confusion into the minds, generating cognitive dissonance and forming a clip (torn, non-reflective) consciousness, which “helps students develop a richer and more complex idea of the material being studied” [24, p. 37]. So, according to the theory developed by L. Festinger in the middle of the last century [27], conflicting information about one subject causes psychological discomfort, prompting the subject to decrease dissonance. This is possible in two ways: 1) by developing “tolerance to dissonance,” in other words, insensitivity to a contradiction (however, as the well-known philosopher and logician E.V. Ilyenkov, it is sensitivity to contradiction that is a sign of correctly formed thinking); 2) refusal to receive further

information. In other words, the overload of conflicting information prevents the formation of thinking and reduces the motivation for learning.

“Individualized learning, taking into account the dominant modality” (i.e., a more developed sensory system), which the authors talk about, may be “comfortable”, however, other modalities do not develop, which, in our opinion, is necessary to improve cognitive functions: if, for example, auditory memory fails, visual or motor comes to the rescue [28].

Academician M.A. Piradov calls such simple and accessible methods as memorizing verses, learning foreign languages, and using his “non-working” hand (left-handed) as an effective means of improving cognitive functions. The scientist believes that “human capabilities are colossal,” and “our own reserves are napping in us” [28, p. 27]. Instead, we come up with electronic assistants that a healthy person does not need. It is further stated that the concentration of attention, and not its scattering, is necessary to solve the tasks set. This is the answer to the question of “multitasking”, which is supposedly inherent in those who constantly use the computer. But this is best described by Spitzer: multitasking is a myth. The author of the book “Anti-Brain” (a German professor, neurophysiologist, psychiatrist) examines in detail the possible consequences of using computers at school and concludes that “the computer takes away mental work from students” and therefore negatively affects the learning process [18, p. 74]. The digitalization of education, having gone beyond the reasonable, has a tendency to formalize school and university curricula, to reduce them to the minimum of useful knowledge and skills, orienting a person to “meeting market needs” [29, p.72]

“Making technology a fetish is very easy,” say the authors of another book. - However, one should not forget that the learning process “is characterized by qualities that are practically not related to technology” [30, p. 228].

However, articles dedicated to the digitalization of education by domestic authors sometimes talk about such things, the approval of which is hardly compatible with the stated humanistic position of the authors: “Digitalization rigidly sets the rules in society that must be mastered, or a person falls out of society”, “the verbal code has become archaic” [24, p. 38], “attempts to block or occasionally respond to digitalization challenges seem to be a risk of successful socialization” [31, p. 424] and so on. In other words, the authors advocate the tough apologetics of the digitalization of education.

It is alarming that authors of articles on the topic of digitalization, as a rule, constantly appeal (referring to Rosen) to children's values formed under the influence of computers: perhaps children have acquired a bad habit, or even a serious disease, requiring medical intervention (digital dementia and computer addiction is

not a metaphor, but a formidable medical diagnosis) [see: 18]. Sweets can also be super valuable for children, however, it would not occur to anyone in this regard to feed them only sweets and cakes.

Some authors expressly state that “digital transformation is associated with a fundamental change in teaching practices ...” and involves “a change in goals, content and expected results” [31, p. 428] training. At the same time, the mentioned authors (twice in the same article) admit that the introduction of digital technologies in the education system was not preceded by appropriate scientific expertise, they speak of insufficient knowledge of the impact on the school students of the digital learning environment [31, p. 427]. However, in this case, the question arises, why is it just about the transformation, i.e. cardinal changes in the education system, its radical transformation, and not about modification (transformation, accompanied by the emergence of new properties), modernization (an improvement that meets modern requirements). If you can apply digital technology to the benefit of the educational process, this does not mean that the whole process should be broken, subject to technology. These bureaucratic formalisms themselves - “introduction”, “transformation” - evoke associations in society with the forcible introduction of something foreign (one of the meanings of the word “transformation” is a change in the cell under the influence of foreign DNA introduced into it).

In the article Kolykhmatova V.I. [32] impressive figures are given (for the Leningrad Region) indicating that modern children are beginning to use the Internet earlier (at the age of 4-5 years old). In this regard, in our opinion, the serious concern should be expressed, given the possible negative consequences of the use of digital technologies at such an early age, especially since the author further gives the results of socio-psychological testing of students in the Leningrad Region in 2016-2017, which allowed establishing that only 6% of “all students use the Internet for learning” [32, p. 12]. It clearly proceeds from this that digital technologies and computer literacy alone do not stimulate, but, on the contrary, reduce the motivation for learning. However, the author draws opposite conclusions from this, lamenting that some schools, being conservative, do not allow using mobile devices in the classroom. No doubt: in the hands of an experienced teacher, information technology can become an indispensable assistant in solving educational and upbringing tasks. But one should not discount the negative aspects of technologies, especially when they are used immoderately in the lower grades. As for the “backlog” of our education system, which the author speaks of, one should still adhere to moderate conservatism: the school is not just one of the institutions where “educational services” are provided, but also a unique cultural transmitter that connects the past with the future, therefore, the preservation of the

cultural identity of a society that makes a population a people.

In other words, on the way to the digitalization of the school there is still a lot to comprehend, to overcome many pitfalls.

The article under consideration, in our opinion, is very revealing in terms of the immoderate enthusiasm associated with the technologicalization of the learning process. This is especially evident when comparing this article with the position of Lisa Guernsey (director of the "Education and Technology" program, senior adviser of the program "Policy in the field of preschool and primary school education" of the New America scientific center [33], which claims that the key to school success is language skills formed in early childhood, the ability to control oneself and the ability to concentrate on a task. It seems that in the United States only now, faced with considerable problems of school education, they are empirically approaching what was well known to Soviet pedagogy, built on the solid foundation of the cultural-historical theory of the development of higher mental functions, developed by our great compatriot L.S. Vygotsky a hundred years ago. It is significant, however, that in the country that is the flagship of the development of digital technologies, in a large article devoted to the development of children and their preparation for school, there was no place even for mentioning digitalization, computers, gadgets, etc. The author is sure (and it's hard to disagree) that "a good preschool program can affect entire generations" [33, p. 84] that to implement high-quality programs of preschool education highly qualified teachers are required [33, p. 85].

As you can see, special methods and programs are being developed in the USA, considerable funds are allocated for their implementation so that all children come to school well prepared, i.e. with correctly formed higher mental functions. One has only to regret that in our country, with a rich pedagogical tradition, with a psychological theory ahead of its time, parents almost from the cradle give the children a tablet and supply them with a smartphone from the first grade, and education officials sometimes interpret informatization as a panacea, able to solve all problems and prepare children for life in a high-tech society.

"Technologies should be used only to support the pedagogical process, but in no case for the sake of the technologies themselves" [30, p. 291]. This, in our opinion, is the most optimal and sober approach to the digitalization of education. To this, perhaps, we should only add an incomplete list of problems that teachers of higher education constantly face when dealing with typical representatives of the "digital generation" who demonstrate a low level of basic knowledge, lack of cognitive sphere (poor development of logical thinking, weak memory, distracted attention); tendency to plagiarism; lack of emotional-volitional and value-motivational spheres; poor motivation for independent

educational activities and self-education; infantilism and unpreparedness for life in the real world. It seems that it is in this direction — the correction of these shortcomings — the school should concentrate.

## 5. CONCLUSIONS

The research, the study of the experience of colleagues, as well as our own experience of teaching activities at the university (using digital technologies for 15 years), allow us to come to the following conclusions.

Many works on informatization, digitalization of the education system are characterized by excessive enthusiasm for the technological process of the educational process. Meanwhile, a more balanced approach, taking into account the pros and cons of digitalization, a deeper acquaintance with foreign experience, reliance on domestic pedagogical traditions, scientific age psychology, and most importantly, on the implementation of the "Do no harm!" Principle, which should guide all those who deal with a person.

In our system of general education, a postmodern paradigm has been established, which is covered by the declared values of humanism and paradoxically combines anti-scientism with naive optimism based on a belief in technology that allows solving all educational and upbringing, i.e. purely human problems. Such a mechanical mixture of two opposites - technocratic and postmodern - is not able to overcome the flaws of either the first or second paradigms. This cannot but cause concern since such an approach can lead to long-term negative consequences.

The way out of this situation is seen by us in the affirmation of a humanistic educational paradigm, rooted in the foundation of Russian culture and aimed at developing a person and increasing his personal potential. In this regard, we believe that the priority of the educational policy of the state should not be the total digital transformation of the school but the increase in the prestige of the teaching profession, for which a number of urgent measures should be taken to improve the quality of life of representatives of this most difficult and indispensable profession for society.

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