

**ISMGE 2020****II International Scientific and Practical conference "Individual and Society in the Modern Geopolitical Environment"****DIGITIZATION OF RUSSIAN EDUCATION IN THE CONTEXT OF P.P. BLONSKY'S AXIOLOGY**

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***Abstract***

Science, knowledge and technology are currently used in almost all spheres of human activity, opening up scope for the emergence of fundamentally new industries and career opportunities for the younger generation. This generation differs from the previous ones in that it lives in a special digital cultural and dialogical environment that emerged thanks to the digital revolution of the 1980s, also known as the Third Industrial Revolution. It owes its appearance to personal portable communication devices, the widespread use of the Internet and computer technology. However, working with digital resources is not only the blind use of the gifts of informatization and the denial of other experience working with the scientific heritage of mankind. The process of digitalization of education is based, first of all, on a new ideology and a certain system of values. In many respects, the axiology of this stage of the transformation of the domestic education system echoes the ideas expressed by Pavel Petrovich Blonsky about a hundred years ago. He very accurately described the problems that teachers face today in the context of the modern "digitized" education system. Therefore, in this publication, a retrospective analysis of ideas of P.P. Blonsky in the context of the axiosphere, as well as the author's vision of their digital transformation. In order to visualize the results of the analysis, the image of the ancient Roman god Janus was used.

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## **1. Introduction**

D. Moschella in his book "A Guide to the Digital Future" defines the main directions of the technological breakthrough. Among them: cloud technologies, mobile applications, open source software, analytics and big data, sensors, augmented and virtual reality, machine learning, etc. As the authors note (Moschella & Lawrie, 2018), intelligent services will be able to: see, talk, listen, read, write, recognize, identify, translate, buy, sell, pay, conduct auctions, calculate, store, reserve, determine location, encrypt, share, search, cooperate, aggregate, evaluate, recommend, distribute, advertise, inform, advise, train, predict, predict, repair, track, keep under surveillance, notify, measure, feel, analyze, control, optimize, comply with requirements, personalize, make decisions, to develop, create, entertain and continuously learn and improve. These new opportunities contribute to the deployment of the Fourth Industrial Revolution (or the so-called "Industry 4.0"), associated with the massive introduction of cyberphysical systems in production and human culture.

## **2. Problem Statement**

Such an impressive range of digital intelligent solutions quite naturally determines the following questions: "Can these digital opportunities be extrapolated to education? Are there any lessons from the past that will become a valid vision for designing the development vectors of digital education?"

To answer these questions, we use the image of the ancient Roman god Janus, who could see both the past and the future. We believe that the face of the god Janus will help not only imagine the upcoming changes. The image of the "past-future" will allow you to recreate a certain holistic picture, to evaluate the possibilities for its development.

## **3. Research Questions**

The main research questions include:

- a retrospective analysis of ideas of P.P. Blonsky in the context of the axiosphere;
- presentation of the author's vision of the digital transformation of ideas of P.P. Blonsky.

## **4. Purpose of the Study**

Our work was aimed at describing the digital transformation of ideas of P.P. Blonsky in the context of the axiosphere.

## **5. Research Methods**

To achieve this goal, the following general scientific and historical-pedagogical research methods were applied.

At the general scientific level of historical and pedagogical research, the following set of methods has been applied: source analysis of archival collections; content analysis of documents on the issue in their historical and social context; historical and systemic synthesis and interpretation of the information received on the problem under consideration.

At the subject-scientific level, the following methods will be used:

- historical-comparative method based on a comparative study of values in the works of P.P. Blonsky and modern digital school (Konstantinova, 2020; Konstantinova et al., 2020);
- historical-structural method, involving the allocation of axiological problems in the works of P.P. Blonsky and modern digital school;
- constructive genetic method, which is an analysis of the value orientations of the education system at different historical stages (Boguslavsky, 2019; Boguslavsky et al., 2019).

## 6. Findings

So, one third of the modern population is generation Z - modern young people born after 2000. And whether we want it or not, we should recognize the fact that this generation is different. They have fully tasted the fruits of the digital revolution, as they grew and socialized, including on social networks. They cannot imagine their life without mobile devices. Gadgets and instant messengers have created new communication formats. Other ways of processing, storing and transmitting information have appeared. There is a model simplification of reality. Image and video sequence replace words, and sometimes information is collapsed to a short SMS or image.

Generation Z has its own values and ideas about a career. "Z" -you are not ready to work simply because you need to work. They ask for meaning because only they motivate the "Z" s to strain. "Z" you trust each other, tolerantly treating not only different nationalities but also specific types of relations.

Obviously, a generation has grown that has a fundamentally different way of thinking and a system of values (Averin et al., 2018). Therefore, "it is necessary to create educational formats and tools that allow different generations to interact in the world in a way that we already think, but still do not apply" (Shapiro, 2020). According to experts, these formats will be built on updated value foundations and will be dressed in a "figure".

The term "digitalization" itself, closely associated with the information and communication processes taking place in the modern education system, owes its birth to the intensive development of ICT (Neborsky et al., 2020). Davosse Klaus Schwab, calling the first digital revolution of 1960-1980 "industrial", believes that its catalyst was the development of semiconductor computers, in the 60-70s - personal computers, in the 90s - the Internet (as cited in Laptev, 2001).

However, digitalization already has its own special atmosphere and focus in education, taking them far beyond the Internet connection, web links and cloud services, even affecting the way we see and perceive ourselves.

Marey (2015) sees in the process of digitalization a paradigm shift in communication and interaction with each other and society. "Generation Z" intuitively switched to other methods of communication, in which there was a place for artificial intelligence. Robots, wearable electronics, brain scans, retina and fingerprint identification, blockchains, the Internet of things, voice assistant, virtual and augmented reality and other digital innovations significantly expand not only the potential of human capabilities but also lay the foundation for the emergence of human-machine connections close to symbiotic.

And how quickly the technological leap is realized, we can see in ordinary lessons at school (Bizyaeva & Konstantinova, 2019). Interactive whiteboard in the classroom, the Electronic Diary service, the Moscow Electronic School, replacing paper textbooks with electronic ones - all these and other digital technologies are already active segments of modern education. In particular, virtual reality (VR) and augmented reality (AR) technologies are gaining ground.

Their difference lies in the fact that VR is built on images and models, prescribed algorithmically in a particular program. VR immerses in an artificially created, "synthetic" world. Whereas AR allows the user to see virtual images in the real world. The value of VR for the education system is that this technology allows you to simulate a virtual environment in which the user can interact and gain experience, visit imaginary worlds or places that cannot be visited in real life (Osipenko, 2017). This includes numerous virtual museums, simulators (especially relevant in open source software and special schools, for example, in flight), historical reconstructions. In addition to transmitting visual images, VR allows you to recreate sounds, smells and tactile sensations. AR in its simplest version helps to "revive" the pages of textbooks, thereby taking the process of interaction of students with educational material to a different level.

All this became possible largely due to the creation of artificial intelligence. The term "artificial intelligence" (hereinafter - AI) was first proposed in the United States in 1956 by John McCarthy. A large psychological dictionary defines "Artificial Intelligence (Eng. Artificial intelligence, AI) - a direction in computer technology that sets the goal of creating computerized systems using analogs of human intellectual functions (Karpenko, 2001; Pushkarev, 2014).

A man is formed within the framework of culture, he possesses both natural, natural and cultural properties that determine the specificity of his intellect. A person's survival strategy, when he can change his strategy, does not lose his genotypic identity. This allows you to review decisions and transform the environment at a pace unattainable for hereditary material (Stepanenko, 2008).

Considering AI as a potential solution that enhances the functions of a person, it should be understood that the machine does better and what the person does?

Shannon noted four potential benefits of computers. Among them: the ability of computers to make calculations very quickly, "without getting tired, not obeying emotions and not changing moods during the game."

Computers do not make mistakes, unless these errors are not wired in the program itself. In addition, computers are not lazy and do not refuse a full analysis of what is happening or all possible steps. However, computers perform tasks that require a perception of the context of information rather poorly. Lack of awareness and emotions are AI weaknesses.

In the education system, artificial intelligence can track the individual progress of each student, adjust the educational process to the goals and interests of each student. In addition, AI can automate the process of assessing knowledge, exam control, as well as provide quick feedback.

Examples of the implementation of a differentiated approach to the organization of children's education based on artificial intelligence are Cram101 and MATHiaU technologies.

In the CRAM101 technology, artificial intelligence is introduced to improve the efficiency of working with a textbook. Artificial intelligence is used to "fluently view" the contents of the textbook.

The program includes notes, tests, after which the student is invited to concentrate on topics that he has not learned enough.

Another example of the use of artificial intelligence for is the Carnegie Learning's MATHiaU program. It includes adaptive feedback, visualization of progress, assessment and forecast of expected results.

At the same time, new digital solutions are generating new values. In this regard, one of the futurists in the field of pedagogy was Pavel Petrovich Blonsky, who described the problems of modern teachers in the digitalization of the education system.

Blonsky was one of the first teachers of the Soviet period who saw in pedagogical axiology a system of stable ideas about the objects and benefits that are most significant for the continuous development and improvement of the theory and practice of education from the standpoint of its democratization and humanization, the consolidation of the true life values of the past, regardless of modern political guidelines.

In particular, the Soviet teacher wrote about the views on the problem of educational reform by various philosophers. In the light of the axiology of pedagogical thought, his study of the ideas of Alfred Fullier is closer to us. This supporter of eclecticism, according to Blonsky, believed that "the reform of education should be carried out with the help of philosophy. The sciences being studied must be saturated with a philosophical spirit, for only so far as they have educational value." Blonsky (1961) noted that "the antinomy of ideas is the reason for the anarchy of minds in France" at the beginning of the 20th century, a clash of opposing, mutually exclusive worldviews. "In this sense, philosophy, namely rationalistic philosophy, is called upon to fulfill a social mission: rationalist philosophy must fight against all modern trends that want to shake the mind and propose building a worldview on "feeling, heart, faith".

Fullier, according to Blonsky, was not a fan of theoretical philosophy, as an educational tool. The French philosopher believed that "not logic and metaphysics, but ethics and sociology are needed by the school." "These branches of philosophy were called upon to free the minds of future workers in France, on the one hand, from the morality of the "struggle for existence," and on the other, from clericalism," Blonsky wrote. Based on this position, Blonsky comes to the conclusion that "philosophy is a necessary science for a teacher," because "pedagogy without philosophy degenerates into pedantry." The pedagogy of Alfred Fullier is filled with faith in reason and democratic France, so it can be called the pedagogy of the progress of humanity. She earned this name thanks to the following interrelated values described by Fullier:

- education (as the development of intelligence through the instillation of ideas of truth, goodness and beauty);
- creation of a democratic aristocracy of the spirit (as the goal of education, and the future of the nation and humanity, as its regulatory);
- humanism and philosophy of mind with its social mission (as a means of education) (Blonsky, 1961).

In many respects, these provisions echoed the system of ideas that later revealed the innovation and P. P. Blonsky's interpretation of the axiological approach to the content of general education, labor

and moral education of students that became so relevant in the era of digitalization and the spread of the “Generation Z” culture:

- general education acts as a way to master the universal culture;
- the orientation of the content of general education towards the self-development of a creative person, the formation of a scientific worldview, preparation for life, productive work;
- orientation in education on priorities combining universal and national values;
- labor training and education, polytechnic education, the combination of training with productive labor as the mastery of cultural values;
- the focus of moral education on the development of moral ideas, concepts, ideals, on the development of moral feelings, on the formation of spirituality, moral beliefs, skills and habits of behavior that meet the norms and requirements of morality (Pohilko, 2003).

The results of the study Pohilko (2003), showed that the scientist attributed to the pedagogical values the comprehensiveness of the personality as the focus of humanistic values in their dialectical “unity and interconnection”. Education, according to the scientist, is an unshakable value, an integral part and a necessary condition for the production of material and spiritual goods as a basic component of the comprehensive development of the individual. P.P. Blonsky emphasized the importance of the value of education, which consists primarily in the fact that "it forms and develops a person's main productive force, on which the fate of mankind depends."

P.P. Blonsky contributed to pedagogy through the disclosure of the provision that the necessary and sufficient condition for the functioning of educational values are:

- their connection with the nationality;
- unity of national identity;
- dialectical correlation with universal values;
- democratic and humanistic orientation of pedagogy.

All these provisions are largely reflected in the process of digitalization of education, contrary to the established point of view that this undermines the historical heritage in the form of the methodological basis of the school.

## 7. Conclusion

Summarizing the main ideas from the heritage of P.P. Blonsky, we consider it important to emphasize several important aspects.

Firstly, the classic struggle of the older and younger generations or the conflict of values of “fathers and children” is a completely normal human phenomenon. “If you look at the whole story, the older and younger generations are fighting and moving forward together”, allowing the “intellectual”, spiritual, all positive components of the concept of “man” to “flourish”. This is most clearly visible at a time when there are systems that allow older and younger voices to communicate

Secondly, digitalization allows you to make information more accessible in its various forms. The universal human culture itself and its heritage are becoming closer to any user thanks to numerous virtual

libraries, galleries, archives. Accessibility of information will require constant search and selection of relevant and interesting content, high speeds of its processing. Consequently, the digitalization of education leads to its fundamental, qualitative restructuring. The teacher must learn to use new technological tools and almost unlimited information resources.

Thirdly, regarding preparation for the productive work, about which P.P. Blonsky, virtual reality technologies create the ability to immerse yourself in a certain way simulated reality. Professional VR-simulators and simulators expand the range of potential possibilities of a person in his professional self-determination.

In the 21st century, asking the question “What does it mean to remain human in the world of robots?” we partly find the answer to this question in the ideas of P.P. Blonsky, who, in addition to the humanization of education and upbringing, the combination of national and universal beginnings in upbringing, considered the development of creative personality and familiarization with the depths of culture to be the most important value orientations of education. Indeed, it is creativity, emotionally charged and filled with inner meanings, that distinguishes a person from a machine. In addition, Blonsky pointed to a situation that has become especially relevant in the context of a dialogue between a machine and a person: society is constantly evolving and the behavior of each person is a function of the behavior of the society around him. “Scientific psychology is, first and foremost, genetic psychology ... Behavior is understood only as a history of behaviour,” - Blonsky (1920). The behavior of each individual person and any mental phenomenon should be considered in development, genetically, historically, which cannot be fully applied to artificial intelligence.

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