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PHILOSOPHY OF EDUCATION AND SCIENCE IN THE CONTEXT OF DIGITALIZATION OF SOCIETY

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Abstract: In the field of education and science, changes are taking place at the level of space and time, and digitalization is becoming a key direction for the development of education and science. The aim of the study is to provide a philosophical understanding of the nature of cultural and socio-economic transformations that have a significant impact on Education, Science and society in the digital age. In the article, theoretical and empirical research methods are used. In the results, it was noted that digitalization appears as a key factor in improving the education and science system. In addition to directly affecting the effectiveness of the educational process, digitalization provides a chain of indirect advantages, in particular, optimal use of time for more effective formation of key competencies. In the conclusions summarized that mission of modern education and science is to help everyone feel comfortable in a digital society. Prospects for further research consist in analyzing various aspects of digitalization of scientists' activities, features of the transition to digital services of professional periodicals and changes in Scientometrics associated with the development of the global digital educational and scientific space.

Keywords: education, science, digitalization, society, informatization.

Introduction

The processes of globalization and informatization of society have had a significant impact on the technology of scientific activity, the system of education and science, and the organization and technology of the educational process. The concept of informatization of education is understood as a set of measures to transform pedagogical processes based on the introduction of information products, tools, and technologies in training and education.

In science, big attention is given to problems of information of education and science, application of information and communication technologies, formation of information and information

and communication competence of teachers and other experts.

The events of the pandemic have clearly demonstrated that the modern world is changing civilizations, the transition to a new level of development caused by digitalization, and the phenomenon of vast data and technologies based on them. Nowadays, it is argued that it is appropriate to talk about a single cross-cutting process of transformation of society based on developing technologies, and the change of their generations determines the stages of civilizational development of mankind, one of which was replaced now by digitalization informatization.

Society began to talk about the digital economy, digitalization of production, agriculture, education, the social sphere, etc. In the field of education and science, changes are taking place at the level of space and time, and digitalization is becoming a key area of educational and scientific development. It is education and science that must provide society and every citizen as quickly as possible with the transition to the digital era, oriented toward other tools of labour, another environment of life, and prepare not only young people but also middle-aged and elderly people for new types and kinds of labour.

The modernization of universities requires thinking about the phenomenon of education. Today, education has become a competitive enterprise. Students have to fight for scarce places in universities. Few organizers of the educational process think about whether and to what extent the new criteria for measuring the effectiveness and efficiency of education help to improve its quality. But the mission of education should not be forgotten in the pursuit of rankings. Reducing teacher-to-student ratios should be proportional and should never compromise the quality of education. Economists who view education as a form of production point out that productivity increases in all but one area: education. In what ways do economists suggest increasing educational productivity? In addition to reducing personnel, the period of education is greatly reduced. For example, four years of training instead of five years. The use of online courses is another means of increasing educational efficiency (Featherstone & Habgood, 2019).

This is probably the main threat to education. Even before the discovery of radio and television, there were some attempts at open education, but they all proved ineffective due to the lack of feedback. Interactive online courses use tools to monitor and evaluate learning. Of course, this does not mean that students can access online courses prepared by leading experts anytime and anywhere they have an Internet connection. This strategy helps ensure equal opportunity and equal access to education, that is, eliminating the difference between prestigious and other universities (Littlejohn & Hood, 2018). But in practice, this may lead to an increased demand for certain celebrities, i.e., distinguished academics and professionals teaching expensive masterclasses, mostly on television, while teachers who impart knowledge and skills "from hand to mouth," so to speak, will not be in demand.

The university must train the professionals of tomorrow, the next generation of professionals who can show statesmanship and make responsible decisions. Therefore, students should be taught not only how to take tests and written exams but also how to think (Kulczycki et al., 2018).

While the social elite used to be educated in universities, many students now come to universities not for knowledge but for degrees. Teachers are trained on standardized tests. This is good for memorizing facts, but it does not develop the habits of independent thinking. The student must not only know but understand. Meanwhile, the test questions are extremely functional and focused on quantitative data. Lectures should encourage critical thinking; they should be both problem-based and creative, i.e., the old testing system was rigid. The exam was a serious conversation about scientific problems and required a lot of effort. On the other hand, such moments were memorable for a lifetime.

According to the scientific community, new media and interactive educational programs are the main reasons for the deterioration of the quality of education. As schoolchildren and students stop reading books and listening to authors' lectures, the collapse of education is inevitable. Textbooks are turning into comic books, and lectures are turning into presentations (Marchenko, 2020).

The word "video" is now used to refer to screen students. Instead, we believe that before any practical change, we should philosophize about what education, what universities, and most importantly, what educational technology

should be used today (Pakhomova, Ermakov, Ryabova, Belchenko, & Burova, 2020).

From our point of view, there are several relevant problems in the field of philosophical reflection concerning the phenomenon of education and science in the digital age (Sīle et al., 2018)

First, to reflect on the crisis in education and science and on the possibility of renewing meaningful teaching methods based on the personal understanding of the student and the teacher.

Second, to overcome the subjective-objective dichotomy and address the structures of interpersonal communication as the foundation of educational practice.

Third, to undertake a philosophical and anthropological analysis of the human feelings and attitudes (trust, caring, friendship, love) that define the pedagogical atmosphere.

Fourth, describe electronic media as a means of organizing contemporary educational spaces, as well as a means of electronic disciplinary control, causing resistance to the subjects of education and science (Giménez-Toledo, Mañana-Rodríguez, & Sivertsen, 2017, p. 95).

Fifth, to reconstruct the requirements imposed by electronic educational technologies on the subjects of the educational process. Since these technologies lead to a loss of reflexive experience and form a "clip consciousness", they will need to be complemented by hermeneutic techniques that promote an understanding of the meaning of education (Legner et al., 2017).

And sixth, effectively develop communication skills that reduce the risk of social conflict. As new media offer opportunities to develop students' visual and emotional abilities, they also block live interpersonal communication (Anspoka & Kazaka, 2019).

The purpose of the study is to provide a philosophical reflection on the nature of cultural and socioeconomic transformations that have a significant impact on education, science, and society in the digital age.

Materials and Methods

To implement a particular goal used theoretical and empirical research methods: analysis of legislation and regulations governing the digitalization of scientific activity and presentation of its results, consideration of basic terms; study of foreign and domestic experience in the use of open citation index, scientometric databases; comparative analysis and systematization of periodical scientific publications NAPS Ukraine. The information is summarized and correlated with the following:

- State Register of Print Media and News Agencies as Subjects of Information Activity of the Ministry of Justice of Ukraine;
- Orders of the Ministry of Education and Science of Ukraine on the approval of decisions of the Attestation Board of the Ministry regarding the activities of specialized scientific councils in terms of inclusion of printed (electronic) periodicals in the above List;
- databases Scopus, Web of Science Core Collection, CrossRef, International ISSN Center, ORCID, firms EBSCO Publishing, Inc., Directory of Open Access Journals, Index Copernicus International;
- portals of the National Library of Ukraine named after V. I. Vernadsky, the State Enterprise for Distribution of Periodicals "Press"; - websites of scientific periodicals of NAPN of Ukraine.

Looking at the bigger picture, considering philosophical, cultural, and economic aspects of education and science in the digital age, the study offers an insight into what is happening and what is not happening when digital and educational come together.

Results

Reproduction and caring for one's offspring constitute the most viable strategy for survival and well-being in both nature and society. Education is a costly tool for preserving and transmitting cultural heritage. Today, even the universities of the world's leading economies complain of a lack of financial resources because governments cannot support them at the taxpayers' expense since higher taxes would frustrate the population. The commercialization of education by converting existing public universities into service enterprises and creating new private universities significantly narrows the pool of applicants and increases inequality. What remains is an economic strategy to increase the number of students and reduce the number of faculty. New

types of carriers offer many opportunities to achieve this economic efficiency. First, online education can be accessed by large numbers of people with relatively low incomes, and second, it allows for a reduction in staff. Cost-effectiveness is also achieved by reducing the time spent on education, for example, by moving to a two-tiered education system with four or even three-year bachelor's degree programs. The main objection to this approach is doubts about the adequate quality of education and science. Another counter-argument is that efficiency and cost-effectiveness should be discussed in a broader context, given the fact that education is an integral part of the social capital that ensures international competitiveness. This is why saving money on education leads to underdevelopment and loss of international action. All this suggests that managing education and science based on online technology is not a panacea that will solve all problems. Intellectual or, in a broader sense, symbolic capital does not obey the laws of the market economy since it is produced by one person and consumed by many.

The need for reform of education and science is determined by the inability of national governments to carry the financial burden of public education. At one time, the humanities were seen not only as the origins of the industrial revolution but also as a means of creating national elites and symbols of states' political power. It was clear that history, philology, literature, and philosophy played a crucial role in the formation of national identity and the development of patriotism. However, the role of philosophy in today's educational system is highly ambiguous. If it is perceived as ideology, then the "age of the end of ideology" simply does not need it. But given the plurality of ideologies, philosophy can be very useful for ideological criticism and analysis.

In the pursuit of new technologies, we should not abandon traditions because they help to determine what should be preserved intact, despite all the processes of modernization. In practice, online courses are developed and implemented not by the principles of humanitarian education but with the use of so-called "administrative levers". In such cases, a pre-selected course is imposed from above and recommended as a model of teaching, giving the individual teacher no opportunity for self-realization. We need to break this model and make sure that course curricula include options that allow teachers to express their creativity and individuality. Lessons will then provide more encouragement and academic freedom.

The attempt to approach education reforms in terms of cost-effectiveness can be explained in terms other than financial concerns. Because qualitative methods are largely subjective, in practice, the quality of education is measured by quantitative measures. In terms of operational efficiency, universities cannot compete with assembly-line production to increase output and reduce the number of workers. Is there any solution to this problem? The answer may lie in the development of online courses aimed at several purposes at once. First, it would reduce the number of faculty members; second, it would ease the academic workload of students; third, it would increase the availability of university courses; and finally, it would increase academic mobility. Negative consequences of this approach include averaging and homogenization. Quantitative indicators include the degree of infrastructure development and comfort levels, which do not directly affect the quality of teaching but greatly increase the cost of education. Competition for rankings forces many low-funded universities to save money at the expense of the quality of their educational services.

Thus, educational efficiency and economic efficiency are the two main concerns of educational managers. On the one hand, about half of university graduates do not work in their chosen speciality, which means that the education system is idle. On the other hand, people with higher education remain a key driving force in society. This is why we cannot cut costs simply by reducing the number of universities. This conflict of interest should be discussed with all stakeholders-taxpayers, students and their parents, government officials, and employers. They all have equal rights. Consequently, compromises must be sought, which will be possible if we can find a way to make adequate concessions to find a middle ground for all conflicting parties.

The desires and needs of teachers and students are more or less clear. First, they want the lessons to be interesting and useful for both their personal and professional development. Second, they want universities to have more staff and more students. Finally, both students and faculty want more money and more comfort. Under-

standably, the government, in turn, wants to make education more cost-effective while maintaining its quality and accessibility. But if you think about it, no one is going to play random pieces of the symphony for a classical concert audience. Then why is it considered possible to replace full-fledged lectures and textbooks with some kind of comic book? To find the right answers in the digital age, we will need to combine new media with the traditional educational practices of the book culture era.

Discussion

Modernization of education can be seen as the addition or replacement of traditional "meaningful" teaching methods with new interactive learning programs. Education today is significantly different from classical education based on the humanities and, above all, philosophy (Farrington & Alizadeh, 2017). Its main subject was the teacher. The result depended on their knowledge and teaching talent. After all, education is not only about receiving information but also about transforming the student. The existential encounter with the teacher radically changes the life of the student. However, in order to advise on problems that arise, the teacher must be in constant contact with the student, and the conversation should not be reduced to a test.

The educational community views the digital society as something heartless and formal. These critics point to the reduction of teaching and learning in national policymaking to delivery issues, with the teacher's role reduced simply to providing the means by which to learn digitally, and conversely, the student's role is often reduced to a passive consumer of strictly defined, controlled and limited forms of formal learning "knowledge" (Knox, 2016). It is the displacement of quality by quantity, the triumph of number over the letter. It is the domination of bureaucracy and technocracy. In response, arguments are made against moralization and humanization. Morality and human rights are often a source of protest. Balancing these one-sided assessments, we can suggest that society is a complex system, not subject to human aspirations. Since history is "pragmatic," that is, events depend on goals and values, it is necessary to reconstruct how human beings and technology are connected (Pötzsch & Hayles, 2014).

Contemporary high culture is undergoing a global crisis caused by a change of mediums. This is, firstly, a measure of the book age caused by new electronic and computer technologies and, secondly, a crisis of humanism in general and classical education in particular. Today we are entering information and digital society (Peters & Jandric, 2015). New computer technologies allow a radical modernization of the educational process, and these opportunities are being realized before our eyes. Schoolchildren and students are reading fewer books and getting more information online.

Digitalization is an inevitable, natural progression of knowledge (Solomakha, 2018). There is so much information that it is easier to rediscover than to find it. Of course, a good bibliographer can find literature on a topic better than a search engine, and a text translated by a qualified human translator is better than a machine translation. Unfortunately, 90% of the books in libraries are not used. On scientific boards, we can still distinguish good theses from bad ones, but it is not clear what criteria the machine controls when selecting information. It does not seem to distinguish between important and unimportant or even between true and false.

The professor's erudition is inferior to the Internet. There is so much information today that no one can keep it "in mind," so there are no universal scholars. Hence the creation of automatic processors, translators, and search engines. There is a project to create a "theory of everything" that can be built with these kinds of machines (Kapitanov, Osipova, & Chikileva, 2021).

Digital technology is provoking a negative reaction from humanities scholars. They point out that in this way, we lose understanding, creativity, and other higher human abilities. This has caused a surge of research interest in the methods and practices of classical education and science (Tykhonkova, 2018).

Without ruling out the need to preserve them, one should look positively at digitalization and the use of digital and computer technologies for human benefit. Obviously, they offer opportunities for educating the masses. Screen culture does not necessarily lead to a new barbarism; it opens wide access to world culture and thus promotes humanization rather than the savagery of people (Zawacki-Richter & Qayyum, 2019).

The information society is a new stage of technological development, affecting not only the means of communication but also being accompanied by profound anthropological and social transformations. It is impossible to understand how modern media work by methods developed from book culture (Tømte, Fossland, Aamodt, & Degn, 2019).

New techniques in the educational process shape not only thinking but also emotional, volitional, value acts of consciousness, and even psychosomatic states. It is not only video technology and neurolinguistic programming but also all kinds of drugs that suppress some and stimulate other effects and abilities of students. Education assumes the average healthy student. Meanwhile, there are a large number of people with disabilities. They can be included in the educational process thanks to digital technology. Advances in pharmacology make it possible to cope with mental problems, such as increased effectiveness or aggressiveness. In the future, drugs that improve memory and even creativity may be available.

Today, digitalization acts as a key factor in improving the education and science system. In addition to the direct impact on the efficiency of the educational process, digitalization has a chain of indirect benefits, in particular, optimal use of time for more effective formation of key competencies. Digitalization makes the educational process more personalized, accessible, and flexible. This, in turn, provides a comfortable environment for self-learning, effective development, and career growth.

Conclusion

The need for people of all ages to adapt to the new technologies of the digital environment activates the paradigm of lifelong learning as a form of improving one's own digital competence, self-development, and professional and life self-actualization. The mission of modern education and science is to help everyone feel comfortable in digital society.

The digital reality determines the definition of pedagogical priorities in the transformation of the essential positions of pedagogical science, the revision of forms, methods, means, and technologies of training, education, and development of the applicant of education. Currently, the development of conceptual positions of digital pedagogy, in particular digital didactics. The vision of the problems of organizing the educational impact on children and youth in the digital space and the means of their solution is also becoming important.

Digitalization of education and science leads to the unification of efforts of scientists and practitioners of pedagogical and psychological sciences, specialists in digital technology for interdisciplinary solutions to modern problems of organizing the digital educational process.

Summing up as a whole, it is advisable to note that the process of digitalization of educational and scientific activities focuses on the following:

- Creation of special services for scientists, providing the presentation and publication of the results of scientific research on the Internet;
- automation of the publishing processes of journals, including open access;
- analysis of closed databases of publishers, open-access journals, and Internet sources;
- real-time monitoring of publications;
- ensuring the quality of scientific content, in particular, the creation of intelligent anti-plagiarism systems;
- automation of determining the citation indices of articles, impact factors of publications, etc.

Prospects for further research lie in the analysis of various aspects of the digitalization of scientists, the features of the transition to digital services of professional periodicals, and changes in scientometrics associated with the development of a global digital educational and scientific space.

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