

# Digitization Of Education: Current Challenges Of Education

Vadym Osaula <sup>†</sup>, Ihor Parfeniuk <sup>†</sup>, Maryna Lysyniuk <sup>††</sup>, Viktoriia Haludzina-Horobets<sup>†</sup>,  
Oksana Shyber <sup>†††</sup>, Oksana Levchenko<sup>††††</sup>

[maxnik888@gmail.com](mailto:maxnik888@gmail.com)

<sup>†</sup> Department of PR, journalism and cybersecurity, Kyiv National University of Culture and Arts, Ukraine

<sup>††</sup> Department of Public Relations and Journalism, Kyiv National University of Culture and Arts, Ukraine

<sup>†††</sup> Department of Event Management and Leisure Industry, Kyiv National University of Culture and Arts, Ukraine

<sup>††††</sup> Department of Ukrainian Language, Donetsk National Medical University, Ukraine

## Summary

The article identifies the features of the digital culture of modern society in the dynamics of its impact on the education sector, identifies the main directions of digitalization education, an objective analysis is presented, the possibilities of examination as a scientific assessment are determined "Digital reforms" of education, the role of traditional values of educational culture in expertise and improvement digital innovations in the education system, identified the main contradictions in the development of digital culture, to determine the directions of its improvement. The article describes the three main components of information technology as a complex of hardware, software and a system of organizational and methodological support; the description of analog and digital information technologies is presented. The authors list the most common multifunctional office applications and IT tools; the advantages of using IT in the educational process are highlighted.

### Key words:

*Innovative teaching. Higher education. Teaching technology*

## 1. Introduction

In the process of reforming education, modern technologies are acquiring a large role, the introduction of which contributes to the modernization and development of the educational sphere, as well as to improving the quality of training of future specialists and bringing education to science. At the same time, such technologies, in many ways, require revision existing approaches to educational activities, as well as analysis of their impact on culture and society. In this regard, the study of the issues of technologization of the educational process and its consequences for culture seems to be a very relevant area of scientific research. One of the priority directions of the process of informatization of modern society is the informatization of education - the process of providing the education sector with methodology and practice for the development and optimal use of modern, new information technologies (NIT), focused on the implementation of the psychological and pedagogical goals of teaching and upbringing [5].

Today, digitalization stands out as a new direction in the development of education. It covers all spheres of culture, making changes in work processes, interpersonal communication, pastime of people, changing their views and way of life. The process, being global, requires careful scientific study.

Humanity has always sought to improve the process socialization of the younger generation. As a result of this aspiration, an education system arose, which is the most important link in the formation of a personality, the formation of its civic and professional qualities. Taking on themselves such an important mission, education has become an object of constant experimentation and innovation. It is quite natural that with the development of society, certain aspects of its life, the requirements for the education system also change. Just as not to stop the development of culture, not to stop changes in expectations from the activities of educational institutions, attempts to modernize this area [1-3].

It is worth noting that often political modernization projects do not rely on a scientific study of the essence proposed innovations, their consequences for culture. In this regard, it seems relevant to address the problem of "digital" education reforms. The reforms are very contradictory and requiring deep scientific substantiation. Informatization of education as a process of intellectualization of the activities of the teacher and the student, which develops on the basis of the implementation of the capabilities of new information technologies, supports the integration trends in the process of cognition of the regularities of subject areas and the environment (social, environmental, informational, etc.), combining them with the advantages of individualization and differentiation of learning, thus ensuring the synergy of pedagogical influence.

As a result of using BAT, the following is provided: implementation of the possibilities of software and methodological support of modern PCs for the purpose of communicating knowledge, modeling educational situations, exercising training, monitoring learning outcomes; the use of object-oriented software or systems in order to form a culture of educational activity; implementation of the capabilities of artificial intelligence systems in the process of using educational intelligent systems [6].

The introduction of technologies in various spheres of society is always accompanied by changes, since the new and the old (traditional) collide. Thus, innovation should be seen as a process of "creative destruction" and, at the same time, creation. In this regard, technological advances and developments inevitably entail different kind of conflicts and problems [3-6].

The purpose of the article is to identify directions development of digital culture based on the analysis and assessment of its interaction with the values of education.

In the article, the following research methods were used to solve the set tasks: theoretical (study and analysis of scientific and pedagogical, psychological and pedagogical, reference, specialized literature, regulatory documentation on the topic of research, additional professional advanced training programs; analysis, comparison, classification of the information received and generalization); empirical (pedagogical experiment, observation, questionnaire survey, survey, conversation, testing); mathematical (statistical data processing).

## 2. Theoretical Consideration

Basically, digitalization, first of all, presupposes transformation of significant information into digital form to ensure its effective use in various areas of human activity and the formation of new communication and cognitive capabilities.

Expanding these possibilities, digitalization itself is already creating new human habitats - digital, technological, different from reality, but claiming to be a more perfect replacement.

The unfolding digitalization forms a new type of culture of modern society - digital culture. It is important to note that this is one of the variety of existing types of culture and, being a temporary phenomenon, i.e. caused by the changing conditions of the era, he must show his positive potential in finding unity with the integral system of national culture, realizing its basic values and enriching it with its capabilities [9], virtual reality, the constantly growing power of the computers used make it possible to "define" previously abstract teaching programs. They offer not only informational, but also intellectual and cultural resources: photo and video recordings of objects and processes under study, rare museum and archival materials, original reports and live reports on fundamental and applied research. Modeling and subsequent "inclusion" of students in various situations, provoking and implementing non-standard solutions in a potentially multivariate educational environment contribute to the development of imagination and creative abilities. Thanks to these means of preserving objectivity, deep understanding of the activity that the student carries out by means of a computer with visual models, it becomes possible to escape from narrow

mechanical thinking [8]. Whether all of the above possibilities are realized depends not only on the teacher, but also on whether, in addition to his own desire, he has real conditions: whether a sufficient number of hours is allocated for the study of the discipline, whether time is planned for preparing classes using certain electronic resources, including support for independent work within the framework of individual educational trajectories.

After all, the creation of conditions for the teacher, first of all, depends on whether it will be a full-fledged productive activity that gives new ideas about the essence of phenomena, or simply with the help of a computer simulator, a set of concepts will be memorized and a certain sequence of elementary operations, sufficient for passing tests, will be mastered. All this is very important for education, since formal or non-formal approaches, having become entrenched in students, will undoubtedly manifest themselves in other, not only educational, spheres of activity.

Digital modernization of education in wears "Inorganic" character, which is determined by the absence of a clearly formed social need, social demand for digital changes in the educational environment. Modernization of this type stimulates the state, a set of generally binding legal and other regulatory acts emanating from specialized administrative structures and, often, not finding understanding in wide layers of subjects of educational activity.

Thus, the digitalization policy is not systemic, not united by a common value-semantic principle. The contradictory nature of the digitalization policy in education is determined by the attempt to combine progressive tasks and ineffective bureaucratic means of resolving them. The nature of the unfolding digitalization raises the question of large-scale transformations in the activities of the entire education system, united by a common value-semantic basis. This is understandable: subject testing is becoming the norm for assessing the quality of education for universities. The reports include data on the number of computer presentations prepared by the teacher. However, at its core, a presentation is just a report outline combined with illustrations (diagrams, maps, tables). But a good lesson or lecture is not a report, but communication.

Therefore, even the highest quality computer-based presentations by themselves do not guarantee the quality of learning and do not indicate mastery teacher of educational technology. Business, as a rule, pursues as the main goal the liberation of a person from routine operations in order to create conditions for creativity or, at least, to direct efforts to solving non-standard tasks. However, now we can see evidence that in the course of informatization very important skills and abilities, even forms of activity, are being lost. For example, preparation of an abstract (and sometimes a dissertation), which requires careful selection, study and analysis of literature, comes down to formal

copying into one document of more or less relevant fragments of other people's works. Not knowing what the essence of working with the library catalog is, students cannot find the publications they need in the electronic catalog. With the wide distribution of e-mail, forums, chats, ICQ, blogs, hopes were pinned for the revival of epistolary creativity, albeit in somewhat modified forms. After all, these are technologies that require written communication skills, which in many developed countries have turned out to be practically forgotten due to the wide availability of telephone communications. It seemed that where communication technologies became available, conditions were naturally created for the emergence of motivation for mastering written speech.

Paying attention to the fact that it is especially important to preserve the traditional focus of our education on the formation of a person of culture, akin to its values and ideals.

In this part of the dissertation, the idea is defended that new in education can be included in the educational culture of the country if it corresponds to a certain system of values. If values are not defined, there are no guidelines for the selection of what is significant for a person, the development of culture and its new forms slows down. The elements of digital culture, which originated in the education system, by themselves, without unifying values, cannot acquire the form of a holistic culture.

In this regard, the axiological approach is of particular importance for the study. According to him, the choice of values is the starting point of the conceptualization of culture, new phenomena arising in it [12].

The most stable, basic values of national culture are concentrated in education and, first of all, around the interests of a person, as well as culture itself, as an environment for his existence. Thus, the values of education can be considered as a basis for conducting humanitarian expertise of the introduced technological innovations.

Undoubtedly, modern technical means, the role of which in human life is increasing, and the consequences of this remain unknown.

Note that there are many problems, as in implementation of the policy of digitalization itself, and in the consequences of its expansion in the life of modern society and its institutions of socialization. Having established itself in the field of education, "technologism" has changed the very nature of the educational process, giving it the form of production, aimed at the "production" of human capital. In it, the student is represented a certain detail that must be perfected by the teacher and, upon completion of training, take a place in the general mechanism of social relations. With this approach, the very essence of the educational process, its values and ideals change [7-9].

The technologization of modern life in general and education in particular leads to a split between feelings and

thinking, reason and experiences, an ever-increasing pragmatism of people. Technological innovations are able to lower the threshold of receptivity and sensitivity to another person and, as a result, form the spiritual emptiness of people [5-8]. The program for their implementation should provide for all aspects of this complex process, take into account the problems that students, teachers, and organizers of the education system will face. The transition from teaching informatics to real informatization of general education is possible on the basis of a single educational information environment formed by all participants in the educational process. The information educational environment (IEE) is a complex system that accumulates intellectual, cultural, programmatic, organizational and technical resources and ensures the formation of a personality in its various manifestations. At the same time, the management of the educational environment and its development is determined by the target settings of society and the subjects of the educational process - students and teachers.

The era of the Internet is a challenge to the history of mankind, to the institutions of the formation of a common identity and collective memory. Cultural marginality is fueled by the increasing pace of human alienation from one another. Mosaic, fragmentation is growing society. There is less and less in common between people.

Being technologized, domestic education pushes the student to the already created array of information. By accepting it uncritically, the subject acquires an imaginary, imposed identity, not rooted in his actual interests and needs. This leads to one-dimensional thinking and behavior. At the same time, it is noted that a given measure is established from the outside, it is often a derivative of a different culture and historical tradition, and can also act as a form of manipulation of public consciousness.

Particular attention in this section of the dissertation is paid to the problem of patriotism, the preservation of its status as the greatest spiritual value of culture, the basis of moral education of citizens. Patriotism is an element in an integral national culture and is influenced by other elements, reflecting the nature of their changes and, in turn, influencing them. Technical re-equipment of education is considered as the most important direction of modern state politics caused by the requirements of the development of the world economy, the processes of globalization, changes in the nature of social communications, the demand for the formation of human resources with new competencies in interaction with the world of technical means. The emergence of digital technologies, which have unique capabilities for storing and transmitting arrays of information, brought technological and educational vectors closer together social dynamics like never before [11].

## Conclusions

The work identified the positive potential digitalization, noting that digital technologies offer many options in the design of educational processes. It is emphasized that the variety of informal proposals and the possibility of their use in education is currently enormous. The combination of virtual and real learning components enables teachers to transfer knowledge both directly and indirectly. A distinctive feature of this approach is that you can take advantage of these methods and avoid their disadvantages.

A positive significance for the formation of significant personality traits of a modern professional has been determined that training formats through digital games, which are beginning to be used in professional education. Game simulations allow you to reproduce real-life situations in classrooms in accordance with the training profile.

Thus, the informatization of education leads to the transformation of certain aspects of the learning process. The activities of the student and teacher are being transformed towards informatization. The student can use a wide variety of information, collect it, process it. The teacher is freed from routine activities and gets the opportunity to explore the learning process, track the development of the student. Basically, teachers are not ready for the transition from established teaching methods to the use of information technology in the educational process. Computers are mainly used as an additional learning tool.

As a result of the analysis of modern trends in the development of the process of informatization of education, its reasonable organization in the interests of the future scientific, technical, socio-economic and spiritual development of society is a complex and very urgent scientific, organizational and social problem. To solve this problem, continuous interaction of education specialists is necessary, as well as effective support of this interaction from the state.

In addition to the main educational function, information technology develops the student's creative skills and broadens his horizons. In addition to basic subjects, the student can receive additional education, for example, start learning a programming language, use online courses, simulators, and communication in any social network. You can get knowledge regardless of place of residence and age. At the same time, the author comes to the conclusion that the widespread introduction of digital technologies leads to a decrease in the intellectual culture of society. In the context of digitalization of education, an array of information fills the entire space of knowledge, to the detriment of the meanings of this knowledge.

Thus, the deep layers of knowledge (meanings) remain outside the field of the student's activity, making his work superficial and unproductive from the standpoint of the tasks

of increasing knowledge and improving the person himself, his conditions existence.

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