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ANALYSIS OF THE TRANSFORMATION OF LEARNING IN THE CONTEXT OF DIGITALIZATION OF EDUCATION

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Annotation
The article is devoted to the problem of digitalization of the education system at the present stage of development of society. In particular, it is noted that digitalization is aimed at training specialists who are guaranteed to be in demand in the labor market, who are easily and fluent in mobile and Internet technologies. In the age of informatization and digitalization, the teacher himself must change. He should develop new methods and forms of education. Attention is drawn to the advantages of digitalization of education and some of its disadvantages.

Keywords: digitalization, education, informatization, information technologies, digital technologies, e-education.

Modern technologies are developing at a tremendous speed. Many areas of activity are moving to digital systems: hospitals, catering establishments, educational institutions. Experts are increasingly talking about the transition of the educational program to an electronic format. When this idea comes to life, not only the education system will change, but also its meaning and purpose. The modern understanding of the learning process is fundamentally different from the old one. Thus, the digitalization of education is a process of transition to an electronic system.

"Integration of an educational organization of higher education into the socio-economic reality as a factor that affects the performance and competitiveness indicators, leads to the transformation of the functions of university teachers, taking into account the long-term tasks of the development of society" [1].

In the course of the digitalization of education, educational materials, plans, classes, journals and diaries are already being implemented online. The teacher conducts lessons without leaving home, via the Internet. Electronic resources are being created where the student can find detailed information for classes.

Researchers in the field of e-education highlighted the advantages of the digital education system:

☐ Learning to be independent. Since the future system implies independent work, an understanding is formed from childhood that a person himself should strive for

knowledge. Such upbringing will make the character of a person more solid in the future. Without excessive care of teachers, the student will achieve better results.

☐ No paperwork. Students have to carry several textbooks and notebooks at once, which take up a lot of space and weigh a lot. The load can be so strong that the child's body will hurt. Digital education saves a person from a mountain of papers and books. The computer will fit all textbooks and manuals, and the tablet will replace workbooks.

☐ Economy. Since digitalization eliminates paper versions, you don't have to spend money on notebooks, textbooks, pens and other stationery. Electronic versions will need to be replaced with new ones only in the event of a breakdown of the old equipment.

☐ Simplify the work of teachers. The profession of a teacher is considered one of the most difficult. A lot of energy and nerves are spent on educating young minds. In a digital system, the work of a teacher implies only assistance that sets the direction for the development of students. Appeal for help to the teacher occurs only in controversial situations.

☐ A step into the future. The transition to digital education is a significant step towards the creation of Internet technologies. Now science is developing at a high speed, new structures appear every day. The digitalization of learning will help learners better navigate the information world of the future.

The disadvantages of the digital education system were also highlighted:

☐ Risk of negative result. These changes will be dramatic. There is no way to say for sure whether such an innovation will be positive. This system will be used for the first time, so it will not be possible to compare with something similar.

☐ Lack of creativity. Scientists have proven that color scheme helps a person remember information better. Even adults are encouraged to create their entries with minor adjustments. It also promotes the development of creativity. However, information technology excludes the opportunity to express themselves. Electronic versions are "dry" in nature, so the student will quickly get used to the boring storytelling, and the development of creative abilities will noticeably suffer.

☐ Decreased mental activity. This phenomenon can already be observed. A person does not need to think about something, he has ceased to independently obtain information. It is enough to have access to the Internet to find out the necessary information. This leads to a weakening of the mental abilities.

☐ Poor socialization. When a student first comes to school, there is only a small chance that he will meet an acquaintance there. Thus, he finds himself in another society, where he does not know anyone, gaining not only knowledge, but also making

friends, learning to interact with society. The information system significantly reduces the level of human socialization. This will affect the further development of the individual.

☐ Problems with physical development. Vision and fine motor skills will change first. Prolonged exposure to the screen leads to eye fatigue. Over time, there will be: dryness; redness; irritation; deterioration of vision. In the next generations, there will hardly be a person with good eyesight. However, perhaps in the future technology will become safer for children's development. Working with a keyboard and a tablet will change the physiology of the fingers. The structure of bones, joints and muscles can change.

☐ Absolute control. This applies to students, teachers and parents. A personal file is opened for each person, detailed information about the family is collected. This will lead to total control of society. If we talk at a lower level, there is no way to hide anything (hide the diary, correct the grade, keep silent about the remark), which will significantly affect independence and personal development. When a student encounters problems, he tries to solve them himself, although not always in the right ways.

☐ Function of teachers. After digitalization, the concept of a teacher will be completely changed. Professionals will be replaced by robots and virtual systems. People will lose their jobs.

In traditional education, a student who is active in motor and speech terms, at the first stage of his training, falls silent for a long time, taking a response position and speaking with the special permission of the teacher (when they “call him to the blackboard”). For a full academic year, a student speaks in class for a few tens of minutes. For eleven years, the student is mainly engaged in the fact that he silently consumes information. Then he does about the same for ten years (bachelor-master-postgraduate) at the university.

And in the process of digital learning, the live speech of students - a means of forming and formulating thoughts - is turned off by definition. Therefore, if you follow the path of total individualization of learning with the help of personal computers, you can come to the conclusion that the very possibility of forming creative thinking, which is dialogic in origin, will be missed. There is another danger: the curtailment of social contacts, the reduction in the practice of social interaction and communication, which leads to individualism and loneliness.

This does not mean that digital learning should not be used, quite the contrary. But it is important not to oversalt, it is important to find a psychologically, physiologically, pedagogically and methodologically justified balance between the use of computer

capabilities and live dialogic communication between the subjects of the educational process - the teacher and students.

Digital learning devices are the embodiment of rigorous mathematical, engineering, technocratic thought, and the educational process is based on psychological and pedagogical, largely subjective patterns of the activities of teachers and students, starting with their motivation and ending with intuition and personal meaning of transmitted and received information.

The greatest difficulty is the transition from information circulating in the education system to independent practical actions and actions.

Many researchers note that with the ever-increasing level of digitalization of society and the education system, a person is required not to possess the knowledge necessary for life and professional activity, but to gain access to a computer system where the necessary information is located.

In the absence of a theory of digital learning, its mechanical integration into traditional learning only reinforces the shortcomings of both.

Such a powerful tool as a computer cannot simply be built into a traditional system and hope to improve the quality of education. It is necessary to develop an adequate psychological-pedagogical and actually pedagogical theory, organically including the computer as a learning tool with its truly enormous possibilities for obtaining, storing, processing and transmitting information.

There was a difficult problem of choosing a scientifically based strategy for the digitalization of life, production and education, which would allow using all the huge advantages of a computer and avoid losses that will affect the quality of the formation of the personality of a schoolboy or student from the standpoint of not only their professional and practical, but also social competence, civic position and moral character.

There are a number of features of the representatives of the "digital generation":

– almost from the moment of birth, communication with the outside world occurs mainly through mobile phone screens and computer displays;

– there are significant difficulties in finding friends in the real world; virtual communication prevails over personal, with a quick entry into online contact, there are no real friendships;

– in virtual communication, the visual language replaces the usual text of the previous generation;

– every day a person manages to view a lot of screens, so his speed of perception of information is growing, but he can hardly keep his attention on one subject;

– it is much more habitual to read short news than any article;

– the authority of parents decreases in favor of the omniscient Internet, the psychological distance between the child and the adult increases, and at the same time the process of transferring experience from parents to children suffers. The lack of positive emotional contacts in the family and the excess of information lead to disorders in the development of the nervous system: children are easily excitable, impressionable, restless, less obedient;
– many are often poorly oriented even in their own city, although they will quickly find the right place on their mobile phone;
– the number of overweight people is growing;
– there is blurring of social and gender orientations, there are problems of self-identification; the concepts of marriage and family become unsteady;
– there is no real life experience, difficulties arise in solving even small problems, such people grow up sensitive and pessimistic, few will be able to achieve independence by their own efforts;
– this generation is characterized by "hovering in fantasies", they hardly manage to separate the features of virtual heroes from real ones; the main reason for isolation from reality is an obsessive mass culture;
– this generation receives almost all information from the Web, which gives confidence in their views, which are far from always correct;
– this generation is consumer-oriented and more individualistic than previous generations; they are impatient and focused mainly on short-term goals, while being less ambitious [2].

All of the above does not answer the question: "What to do?" This is just raising the question of a new type of socio-cultural inheritance, a fundamentally new situation in education that has developed along with the emergence of children, adolescents and students - whose representatives can be attributed to the "digital generation".

In the conditions of digitalization of the educational process, the role of active and interactive forms and methods of teaching is increasing. The digitalization process provides qualitatively new opportunities for “packaging” educational material and organization of educational activities, and also forms fundamentally new educational demands (including due to the emergence and spread of new types of activities in which children and adolescents are spontaneously involved and which act as a natural environment for their socialization). in the digital society). Under these conditions, the differentiation of various technologies and teaching methods increases in terms of their didactic potential. The role of long-term, structurally homogeneous activities, "passive" forms of educational work, such as lectures, is noticeably reduced.

On the contrary, the role of pedagogical technologies based on the students' own activity, interactive communication, teamwork, group and individual reflection, which have a complex structure and a certain internal scenario, such as project activities of students, in all its variants, game learning technologies, case solving, group discussions and discussions, etc. All these technologies allow the student to form, among other things, a set of social competencies necessary in a digital society.

In the course of digitalization, the transformation of the educational process takes place in the direction of increasing the degree of structuring of educational activities. In this case, the principle applies: the complexity of the forms and methods of teaching should be adequate to the complexity of the teaching aids used. The variety of forms of organization of educational activities in the digital educational environment is increasing significantly, they are becoming dynamic. This significantly increases the pedagogical effectiveness of the educational process.

Consequently, the general change in the activities of a teacher in the context of digitalization of the educational process is not to simplify it, but to increase the degree of its intellectuality and creative nature, including through the automation of routine operations (designing a curriculum, designing a scenario for a training session, selecting educational content and materials). to the lesson, checking the work of students, etc.).

Digital technologies make it possible to significantly speed up, make the process of mastering the given activity patterns more technologically and pedagogically effective, increase the motivation for mastering them through instant diagnostic feedback, personal recommendations and other means.

Global digitalization processes lead to the dominance of visual-figurative and visual-logical thinking. The processes of digitalization and the formation of a global information environment have given rise to new ways of "packaging" educationally significant information, more compact and convenient for quick perception and use. These methods are acquired by representatives of the digital generation already in the early stages of childhood, as a result of which the very style of thinking of students changes. It ceases to be traditional (narrative, requiring a verbal "explanation of new material", and associated with the independent development of voluminous texts) and becomes infographic, visual-logical, based on the joint work of both hemispheres of the brain.

Thus, the traditional way of presenting educational material in the digital educational process ceases to be pedagogically effective. Lectures built on a reproductive presentation of the material and not containing a pronounced problematic or interactive component, voluminous educational texts inevitably shift to the periphery

of the educational process.

The digitalization of vocational education and training contributes to a reduction in the duration of training courses. The higher the degree of personalization of the learning process and the possibility of choosing educational programs, the shorter in duration and more local in content these programs should be.

On the basis of the presented material, the following conclusions can be drawn:

1. It is necessary to conduct fundamental and applied research aimed at revealing the psychological, pedagogical, pedagogical and other patterns of general and professional development of children, adolescents and students - representatives of the "digital generation";
2. The main direction of research should be not so much the patterns of human information processing and the mechanisms of the brain in the current socio-cultural conditions, but the patterns of personal development of a person in the system of continuous education, starting from the moment of his birth; an organic place in these studies should be occupied by the problems of education;
3. It is necessary to seriously improve the skills of teachers, teachers, all educators, as well as parents in the problem area under consideration, appropriate scientific and methodological support for the activities of a teacher at all levels of the lifelong education system;

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