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EDUCATION IN A MODERN TECHNOGENIC SOCIETY**

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Abstract

The article attempts to explicate and analyze modern sociocultural circumstances that perform as factors in the transformation of education. The main body of these factors is in one way or another connected with the development of technology and, in the first place, information technology. It is assumed that human being is not limited to the technical register of its existence, therefore inevitably appear such oppositions as human-technic, human-technical, etc. The authors proceed from the fact that education involves the formation of not only professional skills, but also personal, human qualities, general cultural knowledge and their understanding. In a modern technogenic society, the main driver of which is technology, the processes occurring in all social spheres are determined by the logic and dynamics of a technical nature. A request for education is being formed, which is expressed in the need to “produce” such a person who would perform functions in the logic of technical. However, the sphere of human is not limited by the technical aspect. The vector of sociocultural dynamics, which today depends on technology, is focused on the person and it needs. However, it turns out that the requirements of the environment, which was created by man and for man, will reorient it to “improperly human” qualities that should give him social advantages. Thus, we the proper human, humanitarian aspect should be returned to the education.

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1. Introduction

A public request for education is determined by how the society itself is structured. Traditionally, education has been focused on the formation of a cultural agent, i.e., a person as a carrier of general cultural, national, social knowledge and skills, responsible and capable of independent thinking and action (Kant, 1994). Today in this process, primarily in higher education, the general cultural aspect associated with the formation of such personality structures is leveled due to a reduction in the humanitarian component. The training of a competent professional is carried out, inter alia, by reducing the volume of humanitarian disciplines in the study curriculum. It can be seen as a consequence of economy, optimization in a bureaucratic and economic senses. It can also be said that the training process itself is being modernized due to the constant increase in the amount of knowledge that a specialist should have “on the way out” and an increase in growth rate of this knowledge. These reasons, in our point of view, have a place to be. However, we would like to draw attention to another aspect of the problem, which is associated with a change in the entire sociocultural situation. Indeed, the “optimization” and modernization of education is a reaction to the transformations that are taking place in society. Education find itself in a specific position, which is generally characteristic for the modernity. The main feature of this position is the technological effectiveness and technocentricity of all social and cultural life. Science, technic and technology are the most important factors in the functioning and development of all areas of modern society. The increase in wealth and the realization of human aspirations are of a technical nature. Technology has become not just a tool for achieving goals, it organizes the world of a person in its entirety. Technical means, if we understand them as the totality of rational means of purposeful activity (Ellyul', 1986), are an integral part of this activity. Therefore, any technical innovation becomes, in particular, a social and cultural factor that determines the form and quality of social relations. Consequently, a person is required primarily to have professional, functional skills that allow him to successfully exist in the technical environment and maintain its extensive growth.

In the framework of the article, we will identify those properties of the modern technological environment that have a decisive influence on a person and appear as a challenge to education in its classical sense.

2. Problem Statement

Information technology is the technico-technological basis of modern society. Related to the processing, transmission and storage of information, information technology, more than ever in the past, are changing our “second nature”. In the 20th century, theories emerged that describe the changes in public order that are caused by the rapid development and spread of information technologies, such as: information or network society. The impact of information technology on people and society continues to be an important topic. Some researchers believe that “the digital transformation of man will lead to positive changes” (Guryanova et al., 2020, p. 97), including in education (Trust et al., 2017). The digitalization of education is even seen as a factor in achieving universal social justice. There is also a critical reflection on digital and online education (Lee, 2017). One thing is clear that new information technologies accelerate the process of obtaining and producing knowledge and are designed to form and maintain the ability to

navigate through information flows. It is important that the process of learning, mastering knowledge should be accelerated, but at the same time it does not simplify and does not change. Information is both: a form of knowledge representation and a way of transmitting it, but it itself becomes knowledge when it begins to “belong” to a person, becomes part of himself, which is not possible without independent critical thinking (Jahn & Kenner, 2018). Efforts for perception, comprehension and understanding must all be made by man himself. The problem is that in the current conditions, the ability to learn and the ability to receive or search for information becomes difficult to distinguish. This, in our opinion, is a challenge for modern education.

3. Research Questions

The ability to access information nowadays is reduced to one click, to one movement. This leads to the fact that for a person the difference between knowledge as the “internal” content of himself, as his “intelligent” world, and the information presented before him is lost. Due to the total surrounding of information and its accessibility, an illusion is created that there is no need to make any efforts to understand and assimilate it, this ceases to be perceived as an obligatory step towards knowledge. Now it’s enough to enter the network, make a request in the search engine, and it is believed that the answer to the question is received. The need to remember, realize, comprehend disappears. If the need arises, at any time you can access the network, and there is no need to know for yourself. A person, as it were, “merges” with the network, memory becomes distributed, a tendency to forget knowledge appears. In this regard, they talk about the emergence of transactive or digital memory.

The phenomenon of transactive, distributed memory stems from the inability of the individual to embrace the whole. The information masses that form the basis of the modern technological environment cannot be mastered by a single person. Hence the conditions for distribution. Everyone remembers something. Parts of knowledge add up to a whole with the participation of people who carry knowledge. Knowledge as the internal content of a person strengthens its importance and the need to be included in relationships with others. In other words, distribution is not a new phenomenon, but inherent in any society at any stage when everyone knows a part but does not know the whole. This, in particular, determines the social order, which consists of people who know something and perform the corresponding functions. Today, the Internet has become a participant in such relationships. Researchers record that “people relate to the Internet as a partner of transactive memory” (Vegner & Uord, 2014, p. 100). What can be obtained on the network does not need to be “stored in oneself”, it is not necessary to remember and understand. “When using the Internet, the differences between internal and external information (what we know and what other people know) are erased” (Vegner & Uord, 2014, p. 102), there is a feeling of “omniscience”, since the Internet is perceived as part of one’s own abilities.

4. Purpose of the Study

The aim of the work is to explicate sociocultural factors in modern technogenic society that transform the classical ideas about the goals and meanings of education, as well as ways to implement this process.

5. Research Methods

Comparative, discriminative, and critical methods were used in the work. The approach to the material study is based on a philosophical and anthropological attitude about the fundamental incompleteness of a man. The task of education, in this case, is the formation of a person who does not coincide with the current situation, transcends, going beyond it.

6. Findings

The main competency in the society of knowledge is the ability to learn. Today, knowledge is something that can produce some sort of effect. Economical, technological or political effect. Effect or benefit is what defines today's knowledge. Knowledge becomes knowledge when it allows you to get any quantitative increment of anything. The main regulator of the application of knowledge, as well as its determining factor, is efficiency, the possibility of technological use. All modern activities are aimed to obtaining an economic result. This result is both a goal and a factor in distinguishing between knowledge and non-knowledge. In fact, any information that may be useful for any pragmatic purpose is called knowledge. Nikiforov (2008) expresses a useful for our topic idea regarding scientific knowledge, that

in the twentieth century the pragmatic usefulness of scientific knowledge has become the determining motive for obtaining it: it is not curiosity, not the pursuit of truth, but applied value - this is what research in the field of natural science is now directed. (p. 58-61)

Bekmann (2011) says that knowledge creates the ability of action, while information represents knowledge for purposes of use. In other words, information is such knowledge that can be useful for any purpose. Knowledge helps to set goals; information helps to achieve them. Therefore, only a person can possess knowledge, a machine (so far) cannot possess knowledge, it works with information. However, the main value of the modern era is not knowledge, but information. Information is processed, formalized knowledge that has an impersonal character, in which all moral-evaluative, teleological, and other non-translatable into machine language components are eliminated. Mostly, that is the sort of "knowledge" the modern man is dealing with. In such conditions, the ability to set goals and follow them, to follow and uphold values and to keep form is rapidly losing. On the one hand, education has great difficulty building this ability in such a "knowledge" context, and, on the other hand, the goal-setting competence is not in demand in the technological environment, and it gives way to the abilities and skills associated with performing typical tasks aimed at maintaining technocratic status quo. It should also be added that a person included in communication having a network structure, himself becomes a node of this network. A person, aggregating information flows, arises as an active subject of network interaction and is determined by current tasks, and after their solution is reoriented to others. In this sense, the concept of the subject, of the person in general, is being transformed. Its classical understanding as an invariable essence give way to a constructive and situational version. Even the projective understanding of man, which is represented in non-classical philosophy, for example, in existentialism, is changing. Now man is a project, which first of all is determined by the context of the tasks being solved and by the "architecture" of the environment. We

can agree that the subject, the personality “in the current conditions of the identity crisis, from the classically understood ready-made “entity”, manifested in the space of “existence”, becomes the intersection of various information flows of a large network” (Pugacheva, 2015, p. 38-45). Man is less and less a center, a point from which the prospects of life strategies, goal-setting, rational action, etc. are opened, but more and more it becomes sort of a “node” at which objective necessities converge.

7. Conclusion

Thus, the main requirement presented by the medium to the subject is dynamism, mobility in the information space. This requirement is dictated by the growing speeds of technical means and, as a consequence, the growing dynamics of all sociocultural processes. Therefore, to manipulate data, compile information on the basis of tasks at such speeds can only be "mechanical", and to grasp the meanings and think about the content can only be superficial. This characterizes the current situation in which the consumer mode of information behavior and human culture is set, the consciousness of which “easily glides on the surface, surrendering to the joy of unaccountable perception” (Epshtejn, 1998, p. 75). The thinking subject, sort of “pulling” the meanings in the course of work, he operates with knowledge, and not just codified forms of machine information. At a first approximation, it turns out that the latter is not productive and, accordingly, is not in demand in the current sociocultural conditions. However, it should be taken in account that technology development is moving in the direction of increasing automation and autonomy of management and production processes. The presence of a person in these processes is minimized and required only in non-standard, non-algorithmizable decision-making situations, and this is the competence of a professional who thinks and operates with knowledge, but not information. It is reasonable to assume that the demand for a highly professional specialist who does not have a non-standard creative look will fall, and the creative professional will grow. Therefore, the modern orientation of education towards the formation of only a professional who does not have a holistic picture of the world does not meet the demands of the development of modern society, its cognitive dynamics. Creative and non-standard solutions that an independently thinking person is capable of, and not just his mobility and conformal flexibility, are the main factors in the existence and development of a technogenic society. The period during which the formation of such a specialist and personality does not coincide with the period of planning the educational cycle in the modern system, which has a technocratic character. The training of a creative specialist requires decades, and its use cannot be regulated by the laws and rhythms of the economy and industry. The nature of this preparation is not tactical, but strategic, and therefore a reorientation of the entire modern education system should already be taking place.

References

- Bekhmann, G. (2011). *Sovremennoe obshchestvo: obshchestvo riska, informacionnoe obshchestvo, obshchestvo znanija* [Modern society: risk society, information society, knowledge society]. Moscow Logos. [in Russ.]
- Ellyul', Z. H. (1986). *Drugaja revoljucija. Novaja tehnokraticheskaja volna na Zapade* [Another revolution. New technocratic wave in the West]. Progress. [in Russ.]

- Epshtejn, M. (1998). Informacionnyj vzryv I travma postmoderna [The informational explosion and the trauma of postmodernism]. *Russian journal*. <http://old.russ.ru/journal/travmp/98-10-08/epsht.htm> [in Russ.]
- Guryanova, A. V., Smotrova, I. V., Makhovikov, A. E., & Koychubaev, A. S. (2020). Socio-ethical Problems of the Digital Economy: Challenges and Risks. In S. Ashmarina, A. Mesquita, M. Vochozka (Eds.), *Digital Transformation of the Economy: Challenges, Trends and New Opportunities. Advances in Intelligent Systems and Computing, 908* (pp 96-102). Springer, Cham.
- Jahn, D., & Kenner, A. (2018). Critical Thinking in Higher Education: How to foster it using Digital Media. In D. Kergel, B. Heidkamp, P. Telléus, T. Rachwal, S. Nowakowski (Eds.), *The Digital Turn in Higher Education*. (pp. 81-109). Springer VS, Wiesbaden.
- Kant, I. (1994). *Otvét na vopros: čto takoe Prosveshhenie? [Answer to the question: what is Enlightenment?]*. CHoro. [in Russ.]
- Lee, K. (2017). Rethinking the accessibility of online higher education: A historical review. *The Internet and Higher Education, 33*, 15-23.
- Nikiforov, A. L. (2008). Fundamental'naja nauka umiraet? [Fundamental science is dying?]. *Voprosy Filosofii (Philosophy Issues), 5*, 58-61. [in Russ.]
- Pugacheva, L. G. (2015). Lichnost' v setevom obshchestve: dialog kul'tur proshlogo i nastojashhego [Personality in a networked society: a dialogue between past and present cultures]. *Vestnik MGUKI, 3(65)*, 38-45. [in Russ.]
- Trust, T., Carpenter, P. J., & Krutka, D. G. (2017). Moving beyond silos: professional learning networks in higher education. *The Internet and Higher Education, 35*, 1-11.
- Vegner, D., & Uord, A. (2014). Kak internet menjaet nash mozg [How the Internet is changing our brain]. *V mire nauki (In the world of science), 2*, 98-102. [in Russ.]