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THE PROBLEM OF THE EDUCATIONAL VALUE OF INFORMATION

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Abstract

The difference between the notion of information and the notion of knowledge grounded in the difference between quantitative and qualitative characteristics. Knowledge is a qualitative characteristic of information in terms of its correspondence to truth (in accordance with its truth-value). It seems reasonable that Theorists of information society introduce a notion "society of knowledge" as new, next step in the development of postindustrial society. In this regard education, today is a process of producing, mastering and transferring knowledge (scientific knowledge primarily) which has a deep relation with truth conditions. The idea of information society, as well as a society of knowledge with its pedagogical generative practices are the products of objectification of scientific rationality. Therefore, the evaluating of such ideas in terms of truth is correlated with defining them in the perspective of their belonging to either «naturally origin» or «artificially created» phenomenon of socio-cultural creativity. In this regard, the problem of the educational value of information appears to be deeply related to the series of questions of the nature of scientific knowledge, condition its truth, epistemological significance as well as methodological, conceptual and linguistic means (resources) of scientific rationality.

Keywords: Information society, information and knowledge, digital learning environment, educational system, informatization.

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1. Introduction

Information technologies and organizational and management practices which are based on ideas of cybernetic and theory of information demonstrate almost the maximum scale of qualitative transformations of naturally formed forms of human life and activity based on artificial inventions of scientific rationality. Its socio-cultural consequences at the end of XX and XXI are regarded as evidence of the emergence of a new, "post-industrial" or "information society. In such a society, the educational system, as a structure which produces the most valuable information and also provides optimal conditions for its keeping, treatment, and usage is one of the most important element.

Despite this in the «Declaration of World Summit on the Information Society» and Russian government program «Information society: 2011-2020» we can't find chapters which specially devoted to educational questions. The Geneva Declaration (World summit of the information, 2003) refers to

...our common desire and commitment to building a people-centered, inclusive and development-oriented Information Society, where everyone can create, access, utilize and share information and knowledge, enabling individuals, communities and peoples to achieve their full potential in promoting their sustainable development and improving their quality of life… (para. A)

As the main features of the information society in this document is declared:

- priority of information among other resource;
- the leading role of the information economy as a form of development;
- existence of automated generation which can be used in processing and use of knowledge with the help of information technology, etc. - up to" information unity of all human civilization" and "implementation of humanistic principles of society management and environmental impact". (World summit of the information, 2003)

It also emphasizes that the idea of the information society is based on advances in technology and the knowledge society is based on broader social, ethical and political parameters. In the information society due to providing access to reliable sources of information changes not only production but the entire way of living, the system of values, the role of cultural life in relation to material aspects of reality.

However, despite the scale of the proposed socio-cultural transformation, the latter only slightly modify the effect of the principle of social inequality, which plays a fundamental role in capitalist society. That situation leads to stratification in access to information based on property stratification. Therefore, such position looks more like ideological doctrine rather than objective social theory.

The government Russian program (2011-2020) dedicated to the problem of information society covers all kinds of activity and consists of four chapters (The decree of the President of the Russian Federation № 203, 2017). The first one is devoted to the question of information infrastructure and services based on such an infrastructure; the second is about information environment; the third one is dedicated to the problem of information security. In the fourth chapter, we can read about the conditions and possibilities of information policy. Each chapter consists of few gradations (from 4 to 6) and only one gradation of the fourth chapter we can find a mention about education. Among nineteen ways of informational development represented in government program education isn't the most popular topic. It also confirmed by the actual material basis of education in Russia for now. High school lecturers' and

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professors' salaries, as well as scholarships for students and postgraduates seem to retain total immunity to 1.2 trillion of «information» investments.

The information society, which meets the age-old hopes and secret aspirations of the humankind for the principles of humanism, goodness and social justice to be finally realized, if only in the distant future, raises well-founded doubts, both in the reality of existence and the possibility of its being brought to life in the distant historical perspective.

Multiple doctrines of information society (Volfson & Volchina, 2017) and society of knowledge (Bechmann, 2010) depend on the method of logic-mathematical construction, as well as individual and collective interests which dominate in current society. This situation creates such a high degree of uncertainty of any estimates and forecasts not only of the distant but also of the nearest cultural and civilizational future that the zone of its possible implementations practically excludes the expectation of favorable scenarios.

2. Problem Statement

From Galileo to nowadays has been prevailing the opinion which derive from Kant that degree of science in any area depends on the degree of mathematization in that area and because of this all science should become math. Therefore, we can observe a tendency of digitalization of almost all areas of cognitive and practical activity including the educational system. Creating the digital education space is observed as the main condition for technological jump and the possibility of creating the society of knowledge.

Statements that concern the direct correlation between new social reality and progress of artificial information technology indicate its dependence from technocratic utopic projects which have been compromised before. The tendency to regard things in terms of the social ideal belong to ideological fictions of the contemporary world.

One can only imagine how crucial the negative educational consequences brought about by the doctrines of construction of information society might be. Such doctrines, alongside other aspects, are often quite obscure in the way they define the nature of information society. We can discover a lot of different concepts of understanding the information and knowledge society (Yu, Philips, Hameed, & Abdullah El Akhdary, 2017).

Now, along with the concept of post-industrial society (D. Bell), the ideas of post-Fordism and information infrastructure (R. Reich), information capitalism and network entrepreneurship (M. Castells), corporate and consumer capitalism (G. Schiller), information management (J. Habermas), the society of organization, supervision and control (A. Giddens) and others are defended. Despite the obvious differences, all of them are based on the beliefs about the decisive role of the progress of information and communication technologies in the formation of the situation of the "The great disruption" (Fukuyama, 2004), mediating the transition from the industrial to the information stage of development of society.

Admittedly, this process has been accompanied by both undeniably positive and negative developments (Vrcelj & Zloković, 2014). The negative developments appear as «degradation of social relations and common values of Western people» (Fukuyama, 2004), «decreasing of role of family and reproduction in people's lives» and «distribution of individualistic culture in social regulations» what

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leads to «destructions of all form of power and weakening family relations as also neighbourhood and cross-country relations» (Fukuyama, 2004).

Along with high optimistic assessments of the ongoing and expected social changes, the Geneva Declaration also contains concerns about a few real negative possibilities such as raising of influence of mass media, threat of destruction of individual's private life, question of selection quality and trustful information and eventually threat of split between the «users» and «informational elite» (creators of informational technology).

Both positive and negative expectations from the conscious efforts of European humanity aimed at building an information society can be justified only if the epistemological "conditions of its right" to exist will be clarified (Balakhonskii, Bakhtin, & Strelchenko, 2017).

3. Research Questions

- The problem of the nature of information.
- Information and knowledge: difference and identity
- The problem of the reality of digital education space

4. Purpose of the Study

The main goal of this article is the definition of conditions that permits the correct questioning about the educational value of information in actual socio-cultural circumstances. The main accent is done on epistemological conditions of determining the education value of information.

5. Research Methods

Logical structure, content, argumentation technic, truthfulness and relevance of results which presented in this article reflect not only the subject of investigation (educational value of information), but they also are the expression of organic synthesis of contemporary comparative methods with the instruments of dialectic-logical and hermeneutic-phenomenological analytic within the whole composition of the general method of investigation.

The comparative historical investigation is directed by the purposes of understanding the specific logic of the subject of research, and of defining its attributive features as manifestations of its essence.

From a phenomenological perspective, such phenomena as information, information society, digital education space, etc. appear as self-revealing entities, which, due to their self-determination, demonstrate obvious features of specific types of subjectivity.

The hermeneutic analysis is used as an instrument of understanding the subject of investigation from the position of its immanent structure determination, which is correlated to the understanding of meaningful form of texts, in which it is fixed.

The semantics of conceptual and factual contexts, that is their content, is determined by means of dialectic, being the method of theory construction. This investigation has been carried out while meeting the requirements of unity of the logical and the historical, as well as following the principles of ascending from the concrete to the abstract.

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6. Findings

6.1. The objects of the ontology of the information society

The main objects of ontology and, at the same time, the main constructive material of building an information society are such elements as «information», «knowledge», «communication», «information and communication technologies», «digital learning environment». These elements are not educational, economical or even social essences. Bearing this in mind, one can adequate answer the question about the reality of information society and its educational institutes when one fully comprehends the meaning and truth references of the concept «information», as the attributive definition of a new type of sociality brought into being in the process of «the great disruption».

What is information itself? One of the ancestor's information theory Wiener (1988) defined information, not in terms of energy or matter but as the information itself. Out of this definition, the currently dominant belief is derived, that regards information as an example of an intuitive scientific concept. In all discourses, the notion of information is used as if its socio-cultural meaning was already known. However, even in cybernetic and theory of information, there exist a wide range of different understandings of information phenomena, which sometimes contradict each other. For example, the modus of the existence of information remains obscure. Does information exist independently, or does it emerge only in relation to the management process? Bearing this in mind, we have a ground to distinguish two notions of information: prescientific and scientific. In the first case, information is interpreted as a message from one person to another with the help of conventional signs through special transmitting and receiving devices. In the second case, we can mention multiple alternative ways of defining «information» such as topological, combinatory, algorithmic (Ashby) and others. Regardless of their features, the existing methods of measuring information are neutral in relation to the methods of its transmission, types of material carriers and forms of signals in communication channels, as well as to the specific content of the transmitted messages (Kasavin (Eds.), 2009). In this case, information as a coded message (in the language of the genetic code, electrical impulses, etc.) recorded on certain material carriers can denote both knowledge and error, can serve as an expression of truth or obvious lies.

The situation, when the latter two are indistinguishable, directly comes from the Descartes' idea of «mathesis universalis» when it is applied as a scientific-research program. Such a program pursues the development of formal languages that exclude qualitative differences in the diversity of the phenomenon of reality. Contemporary problems of computerization, artificial intelligence, and digital education space formed and discussed in the horizon of Descartes paradigm in which for math investigation important only the order or measure of facts and events, not their qualitative features (Descartes, 1950).

6.2. Limits of applicability of information theory

The fact that informational messages are neutral towards truth is overcome by assigning meaning to these messages in order to solve certain tasks. This becomes evident once we remember that the theory of information is the science about connection. This theory explores the issues of processing, and not of production. Even less so does it concern itself with the origins of information. It is fundamentally important to present information in an explicit and definite form. Only then can we have satisfactory answers to the questions of how to encode a message, use redundancy, reconcile the message with the

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capabilities of processing devices, how to transmit it through channels with noise, filter out noise, reproduce the message, etc. Therefore, the limits of applicability of information theory are strictly delineated by classes of phenomena for which the concept of information can be uniquely formulated and has a very definite meaning. For example, social information can be discussed only at those stages of anthropogenesis when humans and society have already emerged and the question of what constitutes social information has been resolved.

6.3. The educational value of information and civilizational differences

It is generally agreed that the doctrine of the information society in all its theoretical representations may be considered only as an unreliable hypothesis. Moreover, such a hypothesis implies unpredictable anthropological and social consequences in educational practices (Weizsaecker & Wijkman, 2018).

It is a well-known fact that educational practices depend on the socio-cultural tradition and the naturally grown practices of rationalization. Because of this, the cases of cross-cultural exchange in education are not always successful. Moreover, the argumentation which was developed by the proponents of the conceptions of historical-cultural types justify such anxiety around information society. Such classic Russian pedagogy as Ushinsky (1950) in his works is also highly doubted about the relevancy of cross-cultural educational investments. Moreover, a lot of examples of civilization's conflicts as well as the collapse of «multicultural» geopolitics can also serve as the argument against the doctrine of the information society in its application on educational areas.

There's some evidence that the new world order based on acceptance of the originality of civilizations is arising. In such a world, societies that have cultural similarities cooperate with each other and grouped around leading countries of its civilizations. The attempts to transfer values of one civilization to another fail more often than succeed. Moreover, the existence of contemporary Western technical countries depends on American approval of their identity as part of western civilization; it is also based on European understanding of Western Civilization to be the only and the unique one. The global conflict of civilizations is avoidable only if world leaders will base their policies on principles of poly-civilization global policy (Huntington, 2003) and bear in mind the incommensurability variety of historical and contemporary types of educational experience (Karpov, 2016).

The situation of «The Clash of Civilizations» is rooted in the diversity of its controversies and antagonisms, which have direct impact on educational area as a structure providing the production of scientific and historically perspective sociocultural information. The acknowledgment of this fact is the main reason why K. Ushinsky spoke about how harmful the enthusiasm of Russian 'intelligenzia' for the inventions of European pedagogics might turn out.

Since the time of Ioann the Great and Sophia Paleologue to nowadays, we can see a tendency where pedagogical activity in Russia has been deeply influenced by vanguard ideas of western pedagogic. Both in the past and at present, the main motives of such pedagogical borrowing is mythologized views about the eternal «backwardness» of Russia and romantic attempts to evaluate the potential of pedagogical activity only on the basis of scientific and technological progress. This views and evaluations has always been and remains a source of destructive criticism of all original, national not only in

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education but also in the people's life of Russia. For centuries, the call for the modernisation has been often carried out under slogans for the destruction of cultural and civilizational traditions and historically developed features of the way of life. Almost full degradation and disintegration of the Russian school also may be achieved by reforming it on the ways of assimilation to the Anglo-American and Western European educational "models".

> According to Ushinsky (1950) the basis of education and its purpose, and, consequently, its directions are different for each nation and are determined by the national character» (p.117). Generally valid system of education is impossible mostly because of that "school education is far from being the whole education of the people. Religion, nature, the family, tradition, poetry, laws, the industry of literature - all of which constitute the historical life of the people, - also constitute its real school, before the power of which, the power of educational institutions, especially those built on artificial principles, is absolutely nothing (p.123).

The artificial systems of education are directly opposed to the natural systems of education which developed based on people's life. Both homegrown and taken from abroad artificial systems of education are distinguished by arbitrary construction based on abstract concepts and aggression towards the anthropological and socio-cultural traditions.

Therefore, only that information which meets the requirements of theoretical meaningfulness, empirical validity, axiological correctness, and objectively self-determined in the form of one of the branches of social knowledge should be considered as having educational value. Thus, information by itself does not often has an educational value.

6.4. Relations of knowledge, truth and information in the modern socio-cultural situation

It is a well-known fact that knowledge as whole and scientific knowledge, in particular, is a socio-cultural phenomenon. Scientific knowledge is also characterized by a number of specific properties, the most important of which are objectivity, reliability, and truth. From the origins of the formation of European science, to nowadays its main purpose and value remains the production of reliable, true knowledge. However, under the influence of the disintegration of structures of reflective thinking - the twentieth-early twenty-first century are marked by a systematic growing trend to relativize the previously generally accepted idea about truth and reality.

Hence, it's important to note that the extension of the principle of "pluralism of opinions" to the field of assessment of the conditions for the identification of reliable knowledge led to the formation of opinion about the borders, epistemological unimportance and even irrelevancy of the classical concept of truth with the aims and projects of modern science. Furthermore, the relatively new non-classical notions of truth caused the widespread in our time beliefs about the general plurality of truth (Strelchenko, 2019). But, if the rising of the classical concept of truth and beginning of the formation of European science and philosophy were parallel processes the non-classical notions derived from the attempts of the scientific and philosophical community to comprehend the consequences of the revolution in natural science and the crisis of the foundations of logic and mathematics in the XIX-XX centuries

Rationally comprehended and empirically confirmed beliefs that "consciousness thinks being", which means nature and social life positioned outside consciousness, served as almost a generally

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accepted concept of the objectivity and truth of scientific knowledge until the 30-40s of the twentieth century. Scientific revolution at this time resulted in rethinking of the fundamental concepts of classical natural science such as matter, space, time and motion. Such rethinking has changed common beliefs about truthfulness even logically correct and empirically-based theories. The absolute opposition of truth and falsehood inherent in the classical conception proved to be incompatible with the almost universally accepted ideas of historical relativity, concreteness, social and anthropological conditionality of truth. The accumulation of evidence about the ambiguity, multiplicity of truth leads to a fundamentally new formulation of the problem of the reliability of scientific knowledge. The scientific revolution at the beginning of the XX century caused a shift in the main interest of scientific society to the notion of truth itself instead of its criterion. Such concepts as the historicity of reason, the concept of concreteness of truth, dialectic of absolute and relative truth, idea about social and historical practice as a truth criterion played a major role in the specification of the notion of truth. In addition, a significant role in the clarification of the concept of truth was played by researchers who worked on the system of instruments for logico-semantic analysis of scientific language. An important contribution was made by researchers who worked on the problem of falsification and verification. Post-positivists, who consider science as a socio-cultural phenomenon, have also made a significant impact to the understanding of the concept of scientific truth.

7. Conclusion

Multiple concepts of truth have led to almost unsurmountable for identification of scientific knowledge and educational value of scientific information. The situation might be clarified if we consider the fact that artificially created scientific knowledge essentially differs from naturally originated «living knowledge» (Gorz, 2010). That former means that K. Ushinsky was wrong when he thought the genesis of the artificial system of education in Russia to be result of the forced implementation of the educational ideas of foreign civilizations. The artificial educational system may be formed through the cognitive arbitrariness of constructive techniques that use a formal language. Such educational systems are also sometimes aggressive to socio-cultural tradition. The adequate questioning about the educational value of information isn't possible without taking into account the difference between information and knowledge, mind and scientific rationality. Also, in this regard, we should remember about inadequacy of identifying rationality only in terms of Western science. Any attempts of rationalization of the educational process should be based not only on the ideal of logico-mathematical impressibility and empirical relevance but also on the foundation of «living knowledge» which derived from national socio-cultural tradition.

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