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Research Article

Pedagogical Innovation in the Conditions of Informatization and Computerization of Humanities Education

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Abstract: The analysis of the processes associated with the fact that the course of transferring the Ukrainian economy from a raw material development path to an innovative one is extremely important. The authors believe that the role of higher education in this process is key. But it itself is faced with a huge number of problems, one of which is improving the quality of its functioning and guaranteeing the results of its activities. This problem is closely related to the implementation of innovations. The authors suggest that innovation in education should be understood as an innovation designed to resolve the current problem situation in order to optimize the educational process, improve its quality or organize favorable conditions for the assimilation of material by students. Based on a critical approach to reform the current system of higher education the paper touches upon the need to change the process infornatization of humanities education. The authors show that for the realization of a humanitarian approach to the modern educational situation, you must be friendly. The conceptually changing field of modern educational practices, aspirations and attempts to humanize and humanize education, taking into account the realities of the information society are favorable factors in creating and implementing the concept of humanities education, which allows different ways of implementation. The development of humanities education in the information society is aimed at implementing an interdisciplinary approach, i.e. should ensure the effectiveness of the development and application of humanities knowledge and form a conscious responsible choice in a variety of cultural meanings, cultural self-determination.

Keywords: Transformation, Innovation, Pedagogical Infosociety, Globalization, Network.

1. Introduction

The formation of personal being occurs as a drama (according to Vygotsky), but the true drama of our life lies in the constant denial of ourselves today for ourselves tomorrow. A person is born as an opportunity (to become a person), he lives as the realization of this opportunity, he dies when there is no such opportunity. Life is a constantly ongoing process of human formation. When the future begins to shrink, shrink to the present, the disintegration of the psychological system begins. This process of human formation is the formation of personal being (Bekh 2005; Tsiuniak 2020).

Unfortunately, more and more often a modern person, faced with "perplexing phenomena" (these are such phenomena "... which we have to face in experience and which confuse us, because they are at odds with our (assumed) knowledge of the world" (Zhuk 2006)), does not seek their explanations through independent cognitive interest, but finds ready-made answers in virtual reality.

First of all, the phenomenon of globalization remains insufficiently comprehended, which is directly connected technologically with the emergence of the global Network and politically with a departure from the model of a bipolar world (Almashi 2019). National and political diversity in cyberspace fades into the background, i.e. authenticity, self-identification of both a person and a social group on these grounds becomes secondary. The emerging cyber communities are based on the unity of interests of individuals who cannot fulfill their vital needs, being included in the structures of the existing "traditional" communities (Lavrenova 2019). Socially, the cyber community is initially a space of internal emigration, a manifestation of deviant behavior, it is

closely connected with a new generation, which (usually) does not have its place in the social world, since it is still in the guarantee of primary socialization – it tries to determine the world. But this is until the systems of needs, which are carried by wider mass communities, became present in the cyber society, and the new generation began to live in the "present" instead of the "future".

Slovenian philosopher Slavoj Zhižek draws attention to the fact that in the modern Western world reality as such is absent, it is replaced by surrogates of reality (Zhižek 2002). He writes: "In today's market we find many products devoid of their malignant properties: decaffeinated coffee, fat-free cream, non-alcoholic beer ... Virtual reality simply generalizes this procedure of offering a product devoid of its substance: it provides reality itself, devoid of its substance ... just as decaf coffee has the smell and taste of coffee, but it is not, virtual reality is experienced as reality, not being such. However, at the end of this virtualization process, we begin to experience the very "reality" as virtual" (Zhižek 2002).

2. Processes of Informatization and Formation of Information Technology in Education

The modern world is arranged in such a way that a sane person simply has no choice: to be or not to be immersed in the world of computers. Refusal from such immersion will mean that a person refuses to go through the process of socialization and wants to remain in the marginal sector of society. We can conclude that it is the society that determines the immersion of the individual in the virtual space and its functioning in this space. The lack of aspiration for personal self-realization, the inability of a person to formulate life guidelines and the unwillingness to create their own social norms are compensated by permissiveness in cyberspace (Zinchenko 2020). Cyberspace advocates warn us that we must not forget about our body, that we must be rooted in "real life", regularly returning from immersion in cyberspace to the intense experience of our corporeality – from sex to jogging. We will never become virtual beings floating freely between different virtual worlds: the "real life" of our body and its mortality is the main horizon of our existence, the ultimate, deepest impossibility that serves as the basis for immersion in all the many possible virtual worlds ... Literally "enlightenment", "lightness of being", relief – all that we feel when we freely float in cyberspace (or even more in virtual reality) – this is not the experience of disembodied existence, this is the experience of possessing another – ethereal, virtual, weightless – a body that does not imprison us in inert materiality and finitude. It is an angelic, ghostly body, a body artificially created and manipulated. Thus, cyberspace defines a turn, a kind of "negation of negation" in a gradual movement towards the liberation of our experience from corporeality (first written speech instead of living, then the press, after it mass media – radio and television): in cyberspace we return to immediacy, but to an eerie, virtual immediacy (Berdyaev 1994).

The transformation and development of humanities education is largely determined by the processes of informatization and the formation of information technology in education. The introduction of information technology in the structure of humanities education leads to the emergence of new areas of scientific knowledge and specializations in the humanities (Sydykhov et al. 2017). The use of modern sources of information strengthens individual strategies of student success, stimulates universities to informational presentation of their own achievements, areas of partner search, information support of the educational process by creating university information resources, networks, clusters (Romashkina and Khuziakhmetov 2020).

Today, computer science is not only ancillary, but also becomes a humanitarian discipline, as information processes underlie a new type of society and organize a new social space. There are favorable conditions for the implementation of a humanitarian approach to education in the current educational situation. In today's dynamic society, value-semantic variability is necessary and the influence of the advanced development of education on the formation of social innovations is recognized (Khenner et al. 2020). The dynamically changing conceptual field of modern educational practices, aspirations and attempts to humanize and humanize education, taking into account the realities of the information society are favorable factors for creating and implementing the concept of humanities education, which allows different ways of implementation (Bordovskaia et al. 2020).

Necessary gradual changes in the structure, content, technology of humanities education are dictated and reflect the transformation of the forms and content of the humanities, humanities and knowledge.

Changing the orientations of the study, moving away from the position of a neutral observer and the universal theoretical horizon of humanitarian research lead to a change in its nature. Humanities knowledge acquires an interdisciplinary character, the principle of additional determines the way of interaction of different disciplines. The complex nature determines the efficiency, theoretical performance and direction of research. The humanities are evolving through the emergence of specializations, the emergence of related fields of study, which are

considered in the context of the actualization of the fundamental structures of human existence (Abdullina et al. 2013).

Information processes and structures that provide them change not only the technical, instrumental side of the study, forms and methods of working with humanitarian material, but also become an essential and necessary subject of study and a factor that determines the idea of humanitarian research and its subject area. They form a modern orientation of humanitarian research on the socio-cultural context, which determines the pragmatic and project nature of humanitarian knowledge.

3. Modern Methodological Guidelines for Education Research

The integrity of humanitarian research is determined by the historical and cultural horizon, in relation to which its objectivity and meaning are formed and its various levels and aspects are synthesized. Modern humanities knowledge is focused on understanding, not on explanation, that is, it seeks not to identify causal patterns as a determinant of a cultural phenomenon, but to explicate and actualize its meaning. Humanities cognition is based on genetic and teleological interpretation. The study of the origin of cultural phenomena reveals its conditionality, historical relationships, cultural context of the phenomenon, its cultural and humanitarian dimension. The teleological perspective of the existence of the phenomenon allows to thematize its cultural value, to open its worldview projection. The changes that are taking place and the current level of humanities research determine the vector of transformation of humanities education in the conditions of formation of the information society.

The development of humanities education, taking into account the solution of the tasks and previously identified trends in education and humanities, involves the implementation of the principle of openness of humanities education to social practices and the principle of its accessibility without age and geographical location. Humanities education in the information society involves the formation of the intention for continuing education and the ability to self-education through the creation of structures, forms and technologies that provide them. A special role in solving this problem belongs to distance education. education and science are a holistic "connection" in which one component plays an increasingly important role in the development of another component. Improving the quality of higher education is possible today only under the condition of "fundamentalization of education on the basis of the organic unity of its technical, scientific and humanistic components" (Zhuk 2006).

Theoretical foundations of modern educational and innovative activities rely only in part on the methodology of the twentieth century, and the latest – on modern philosophy of education. This allows scientists to get started development of a modern branch of pedagogy – pedagogical innovation – science about the system of renewed relations between the participants of pedagogical process, the object of study of which are innovative processes, ie pedagogical innovations, by which we mean not only the end product of the application of novelty in educational and management processes in order to change (qualitative improvement) of the subject and objects of management and economic, social, scientific, technical, environmental and other effects, but also the procedure of their constant renewal. In particular, all over the world, the creation of high-tech zones is a promising area for attracting innovations in the field of education. Most often, they are created on the basis of universities and research centers that are engaged in research and development, have a rich human potential, train future professionals who use advanced technologies in their activities. Synergetic perception of the world significantly helps to understand the innovative nature of education. From the point of view of the corresponding paradigm, today the innovation of education is a kind of release of the student's own strengths and abilities and his initiation into one of his individual ways of development. In this case, knowledge will not just be layered on the structures of personality, will not be imposed on them, it will stimulate their own, perhaps even undiscovered, hidden strategies for personal development.

In the social sciences, and especially in philosophy and pedagogy, opportunities have emerged for the development of new forms of education based on the ideas of rationality (here rationality is understood as improving the quality of education by expanding advanced experience), informatization, democratization, humanization and humanization. Info-telecommunication technologies make it possible to converge the educational process as a school of dialogue between material and spiritual cultures, make the formation of a specialist of high culture as their central idea. The introduction of info-telecommunications accelerates the creation of a single information space, provides access for representatives of different specialties to the information resources of civilization. Success in the development of education is associated with fundamentally

new principles of interaction in its infrastructure, which are developed on the basis of info-telecommunication technologies and act as a methodological basis for the implementation of these technologies in education.

Rationality expresses the content and essential-structural characteristics of the educational process, simultaneously fixing not only the fact of its course, but also the specific way of its existence. The rationalization of knowledge is by its nature intentional, since it is always the concentration of the subject over "something" by means of a certain methodology. This is a creative search for truth. In the educational process, the solution to this problem expresses the communicative connection of its subjects, but this connection is the deepest reflection of communicative rationality.

The old paradigm is being replaced today by the paradigm of intersubjective understanding and communication. Today, "the focus of research has shifted," notes Y. Habermas, "from cognitive-instrumental to communicative rationality. For him, the paradigm is not the relationship of a private subject to anything in the objective world that can be imagined and with which can be manipulated, but the interpersonal relationship, into which subjects capable of communication and action enter, if they rotate in a natural language environment, are used by cultural devotees interpretations and at the same time refer to something objective, common to them social and, accordingly, to the subjective world". Y. Habermas (2000) substantiates the essence of communicative rationality, notes that it has its own structure. Y. Habermas described it as follows: "When the speaker speaks about something within the framework of the everyday context, he enters into a relationship not only to something that exists in the objective world, ... but also to something in the social world and to something in your own subjective world". Communicative rationality is purposefully focused on the search for truth through a system of mutual understanding.

Information content is the core of the dialogue, revealing the intersubjective world of the individual, the system of his personal knowledge and skills to use them in the search for truth. Dialogue as a form of the search for truth is a moment of illumination of its participants, directed towards the formulated problem, and both our rationality and our intuition work in the dialogue. Dialogue is a form of expression and a way of realizing our needs. A communicative attitude is also manifested in him, he personifies the striving for integrity, creation and understanding.

4. Conclusion

Thus, in the educational process, as the forms of communication of the subjects of this process in the course of comprehending the truth, priority belongs to dialogue as a value form in which the epistemological aspect of education is most clearly revealed. The appeal and attitude towards communication as communicative factors is a condition for the existence of communicative rationality; it expresses the integral nature of subject-subject relations in education.

The development of humanities education is aimed at implementing an interdisciplinary approach, i.e. involves multilevel and comprehensive analysis of the humanitarian phenomenon and its holistic understanding in terms of alternative interpretive strategies that represent diverse cultural positions. This approach should ensure the effectiveness of the development and application of humanitarian knowledge and form a conscious responsible choice in a variety of cultural meanings, cultural self-determination. At the level of organization of educational practice, the variability of the content of humanitarian education is envisaged.

The development of humanities education in the information society is aimed at its integration with science education. It ensures the rigor and accuracy of the methodological and technical side of humanities education, which largely determines its objectivity and effectiveness. Their synthesis in the framework of humanities education is project education. The project method allows to reveal the practice-oriented nature of humanitarian education and to offer a pragmatic criterion of humanitarian education. In this way it is possible to involve in the educational process a social environment, which is a necessary condition for the formation of social and regional competence, the ability to effective social action.

The development of humanities education involves the development of creative thinking, stimulation of cognitive activity, which is carried out by raising the level of problematic educational situation. Humanities education is problematic. Its comprehension expands the cultural horizon, leads to a critical awareness of their cultural background, to self-understanding and self-determination. At the level of the content of humanities education, its development involves a combination of principles of visual and problem-based way of its organization. The humanistic orientation of the information society presupposes the corresponding orientation of

information educational technologies, which places a number of requirements on modern universities. This is, first of all, the selection of such informational educational technologies that would convey to the student understanding of the diversity of human cultures, the complexity and ambiguity of the humanistic perspective of mankind.

References

1.Abdullina, Gulzhan, Baktiyar Ortaev, Zhamilya Torybaeva and Kopzhasar Zhetibaev. 2013. "Technology for development of intellectual skills of the future teachers from the perspective of the competence approach". *Middle East Journal of Scientific Research 13*(5): 640-646.

2.Almashi, Ivan. 2019. "Psychology of innovation management using information and communication technologies in the activities of environmental public organizations". Bulletin of Mukachevo State University. *Series "Pedagogy and Psychology" 2*(10): 105-108.

3.Bekh, Vladimir. 2005. "Philosophical Analysis of the Origin of the Levels of Higher Education". *Vyshcha Osvita v Ukraini 3:*13-19.

4.Berdyaev, Nikolay. 1994. *"Philosophy of Creativity". In Culture and Art* (Volume 1). Moscow: Iskusstvo.

5.Bordovskaia, Natalia, Elena Koshkina and Natalia Bochkina. 2020. "Educational technologies in modern higher education institutions (analysis of Russian and foreign research and practice)". *Obrazovanie i Nauka 22*(6): 137-175.

6.Habermas, Jürgen. 2000. *Moral Consciousness and Communicative Action.* St. Petersburg: Nauka.

7.Khenner, Evgeniy, Carol Frieze and Olivia Zane. 2020. "IT education as a factor to influence gender imbalances in computing: Comparing Russian and American experience". *Obrazovanie i Nauka 22*(8): 189-206.

8.Lavrenova, Maria. 2019. "Mental cards as innovation in educational process". Bulletin of Mukachevo State University. *Series "Pedagogy and Psychology" 1*(9): 36-40.

9.Romashkina, Gulnara and Roman Khuziakhmetov. 2020. "The risks of internet addiction: Structure and characteristics of perception". *Obrazovanie i Nauka 22*(8): 108-134.

10.Sydykhov, Bakhyt, Serik Daiyrbekov, Moldir Muratbekova, Zhazira Issayeva, Meruyert Burkitbayeva, Mehmet Kavakli and Luiza Rizayeva. 2017. "Methodology for the development of search and research skills of prospective math teachers in a course on mathematical physics equations". *Eurasia Journal of Mathematics, Science and Technology Education 13*(11): 7223-7236.

11.Tsiuniak, Oksana. 2020. "The essence and structure of professional readiness of future primary education masters for innovation". Scientific Bulletin of Mukachevo State University. *Series "Pedagogy and Psychology" 1*(11): 107-110.

12.Zhižek, Slavoj. 2002. *Welcome to the Desert of Real.* Moscow: Pragmatika kultury.

13.Zhuk, Mykola. 2006. "Modern Higher Education in a Competitive Information Flow". Retrieved December 23, 2020 (http://www.dlab.kiev.ua/ITEA2006/paper/Zhuk.doc)

14.Zinchenko, Alexander. 2020. "Project-focused personnel management approach of higher educational institutions". *Asia Life Sciences 22*(2): 243-256.