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PEDAGOGICAL AWARENESS AND INTERPRETATION OF IDEAS OF SOCIAL AND HUMANITARIAN SYSTEMOLOGY

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Abstract

The article presents the experience of determining the directions of development of a specific pedagogical theory as a result of engagement and interpretation of the theories of a higher level. Purpose: determination of possible directions of development of the educational systems theory based on pedagogical comprehension and interpretation of the social and humanitarian systemology ideas. Methodology of the research contains systemic, system-activity, sociocultural, communicative, personal and interpretative approaches. Employed methods: analysis, synthesis, interpretation, specification, analogy. The findings adduce a set of basic ideas of the theory, preservation of which allows maintaining its originality as well as two promising development directions of this theory. The first direction is related to the special development of the integrity problem of educational systems through the intensification of integration processes. The quantitative and qualitative increase of the integrative properties and qualities must be considered an indicator of the transition of educational system to integrity. Wherein, integrity can be regarded in statics, in the process of functioning and development. Consequently, integration processes are also counted. The second direction involves a special study of system-forming factors of educational systems. The four level system-forming factors are: result (first level), processes (second level), states (third level), activity and communication (fourth level).

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1. Introduction

The systemic character of educational phenomena and processes is one of the urgent and complex issues of modern pedagogical theory and practice. On the one hand, it is evident that system creation is associated with the integration of efforts and resources (Novikova, 2010), which increases the productivity of pedagogical practices. The result is social and pedagogical expectations proper for the effectiveness of any system in education. On the other hand, natural systems do not repeat theoretically justified and developed models, they exist before them and determine them. Understanding and managing such systems represents an objective complexity. In spite of this, quantity and diversity of scientific searches in pedagogical systemology are growing year by year.

The system theory is actively utilized to define the strategic guidelines of development of national education. An illustration can be found in the definition of a system-activity approach as a methodological basis for modern state educational standards. And it is the system-activity approach, according to the opinion of Reznik (2003), that is essentially important for social systemology, which accumulates “systemic knowledge about the social world”. Another system theory – humanitarian systemology -, for its part, has systems in the object, in which, at least, one element is a human (Bederkhanov & Ostapenko, 2013; Guzeev, 2011), anthroposystems (Nevzorov, 2017). The ideas of social and humanitarian systemology act as a basis for pedagogical systemology, within which the theory of educational systems serves as one of the most integral theories (L. I. Novikova, V. A. Karakovskiy, N. L. Selivanova, A. V. Gavrilin, P. V. Stepanov and etc.).

The theory of educational systems advanced at the end of the 20th and the beginning of the 21st century by the scientific school of the academician of the Russian Academy of Education, doctor of pedagogical sciences, professor L. I. Novikova has received scientific recognition and numerous practical embodiments throughout Russia. However, evolvement of the theory of educational systems remains an urgent task. While maintaining the original ideas, it is formed to respond to a number of relevant requests, understand the practice, interpret and assimilate scientific knowledge in the field of system theory.

2. Problem Statement

The problem of research is designated by the necessity of development of the theory of educational systems, its basic provisions in the context of developing ideas of social and humanitarian systemology. Therefore, it seems important to define “increment zones”, the introduction of interpreted and adapted scientific knowledge in which will allow outlining directions of qualitative enrichment of theoretical knowledge about educational systems.

3. Research Questions

What are the fundamental directions of development of the theory of educational systems on the basis of pedagogical comprehension and interpretation of the ideas of social and humanitarian systemology.

4. Purpose of the Study

Purpose of the study: Determination of the possible directions of development of the theory of educational systems on the basis of pedagogical comprehension and interpretation of the ideas of social and humanitarian systemology.

5. Research Methods

The methodological basis of the research consists of systemic, system-activity, sociocultural, communicative, personal and interpretative approaches. The general scientific research methodology is determined by systemic (B. G. Ananyev, N. I. Lapin) and interpretive (T. A. Romm) approaches specifying the focus and the leading mechanism of comprehension. The specific scientific methodology based on sociocultural (P. A. Sorokin, A. I. Ahiyezer), communicative (R. O. Yakobson, U. Maturana, U. Varela), personal (S. L. Rubinshteyn, V. V. Serikov, Ye. V. Bondarevskaya) and system-activity (A. N. Leontyev, A. G. Asmolov) approaches allows to preserve the current sociocultural request for development of the theory of educational systems and to designate priority emphases in the system pedagogical theory which will be in the centre of research procedures. Methods of the research, which are used: analysis, synthesis, interpretation, specification, analogy.

6. Findings

In modern sociocultural conditions, the basic ideas of the theory of educational systems, elaborated in the scientific school of L. I. Novikova, evolve, enrich, first of all, with the findings of the analysis of pedagogical practice and theoretical modeling (Selivanova & Sokolova, 2011, 2015; Stepanova, 2014), development of separate provisions, significant for this theory (L. V. Aliyeva, A. Ye. Baranov, N. A. Baranova, M. V. Voropayev, D. V. Grigoryev, A. I. Grigoryeva, I. D. Demakova, O. V. Zaslavskaya and etc.). Meanwhile, the basic ideas of the theory are conserved, which include:

- Definition of educational system as a socio-pedagogical phenomenon that affects subjects as a pedagogical factor and social factor (through inclusion into the environment, through those relationships, which are formed between children, teachers, parents, chiefs; through psychological climate) (Novikova, 2010).

- Consolidation of the approach to the structure of educational system, uniting purposes expressed in the initial conception (that is, the sets of ideas, for the realization of which it is created); activity, supplying the realization of purposes; subject of the activity, its organizer and participant; relations born in activity and communication, that integrate the subject into a certain commonality; environment of the system, mastered by the subject, and management, ensuring the integration of components into an integral system and the development of this system (Novikova, 2010). As Stepanov (2018) emphasizes, it is precisely the presence of a clear knowledge of the structure that allows to raise a question of matching, comparison, definition of the general and the special in numerous samples;

- Educational system is a unity of the general, special and single (specific). The latter enables to consider each example of educational system as a peculiar author's system, the pedagogical value of which is not only typical confirming the regularity but also unique;

- Educational systems are being established, improved, transformed. Development can be multidirectional and passes through critical states. The folding of the system and its ordering are appointed by system-forming factors, the leading one of which is the activity;

- The criterion of the effectiveness of educational system is the development of the personality of a child, who is a full subject of relations and activity. Collectives play an essential role in the development of educational system;

- Development of educational systems lies in the continuity of “summability – integrity”. Indicators of progress towards integrity are integrative properties, among which the image of the school, the spirit of the school, traditions, etc.

In current sociocultural conditions, the trend of which is established by increasing co-dependence, the scientific search focuses not only on the disclosure of systemic links, but also on the search for mechanisms of their initiation, management.

Educational objects represented systematically should be considered in combination with several levels of systematicity: social system – humanitarian system – educational system. Thus, the following characteristics described in the social and humanitarian systemology attract attention.

In the view of Anokhin (2019), a system can be called only such a complex of selectively involved components, in which the interaction and interrelations take on the character of the interaction of components to obtain a focused useful result. Integrity, integrative processes in educational systems to date have not been the subject of special study. The quantitative and qualitative increase in the integrative properties and qualities must be addressed as an indicator of the transition of educational system to integrity. The systemic qualities of educational systems as humanitarian can be typified, but at the same time, they will retain variable characteristics. The integration of variable characteristics induces uniqueness of each educational system. Nonetheless, not all of them can be accurately qualified and described using available scientific and pedagogical methods. These characteristics, primarily, include everything that is distinguished as hidden content (lifestyle, atmosphere, school spirit, consonant personal meanings and value choices).

According to Anokhin, (2019) the search and formulation of a system-forming factor” is the key issue of the system approach: “Whether the system approach will be or not of use to particular sciences will depend on how successfully we will allocate a system-forming factor and how fully its operational significance for the creation of the system will be described. Only under this condition can we apply the principles of system creation to all those classes of phenomena in which ordering takes place. The system-forming factor brings order and organization into the structure of the educational system and provides assistance to the structural elements for obtaining the expected result. In the theory of educational systems, this component characterizes an advantage as a system-forming activity (A. V. Gavrilin). Result (first level), processes (second level), states (third level), activity and communication (fourth level) can act as a system-forming factor.

Social systemology, from the perspective of Reznik (2003) reclines against the recognition of the fact that “systematicity is an attribute of social life. It makes possible to view society through special “glasses” (systemic vision or cognition) and scrutinize it with the help of special methods and means (system methodology) (Reznik, 2003).

Social systems are complex systems (Bar-Yam, 2019) in the apprehension of which the movement from recognizing the presence of interacting parts (“the whole is greater than the sum of its parts” (Reznik, 2003). as the leading characteristic by focusing on the interaction and mutual influence of the parts on the idea of primacy integrity, which is objectively systematic, is noticeable. Thuswise, from the standpoint of Subetto (2018), a new systemic paradigm can be at issue: “a view of the world and the laws of its evolution through the “system”, the main ontological vocation of which is the disclosure of the mechanism of the emerge of the “whole”.

In the theory of educational systems, a specialized study of ensuring and preserving integrity is necessary. Herewith, the educational system is accounted not in statics but in constant development. As a result, “any developing system is characterized by a decrease in its stability, resistance to various kinds of effects. Destabilization is due to the fact that with the rapid systemic formation the wide range of components of the system, as a rule, develop unevenly, as a result of which particular contradictions arise between these components in the system. The growth of these contradictions leads to the rupture of existing bonds, to the destruction of the integral structure” (Sidorov, 2019).

A priori it can be argued that most of the existing educational systems are either summative or have a flashing (unstable) integrity.

Integrity can be discerned as a characteristic of a system in statics, in the process of functioning and in the process of development.

The integrity of the educational system in statics (integrity of the structure) means the presence of all the elements necessary for the performance of given functions, their qualitative definitiveness and quantitative sufficiency. These are the elements distinguished in the theory of educational systems (the concept, including the purposes for which the system is created; joint activities, communication, relations between educators and those who are being educated, assuring the realization of the purposes; subjects of the activity, communication, relationships; acclimated environment, resource base; management). Structural unity implies the existence of connectivity of these elements and their co-organization as the consistency of the elements and the connections between them. It is this kind of integrity that is well examined and described in the theory of educational systems.

Two other levels of integrity of educational systems were not specifically studied. Interpreting the conclusions of social and humanitarian systemology, it can be claimed that:

- The integrity of the functioning educational system is the integrity of functioning, that is, the implementation in full of qualitatively defined functions (necessary and sufficient) that are not contradictory to each other;

- The integrity of the developing educational system is the target integrity, in the case when along with the main purpose of the system (the expected result, the purpose of functioning) the development purpose is formulated and implemented. In this case, a critical part is played by the consideration of quality benchmarks and development resources.

It is required to take into account that anthroposystems have a high level of decentralization due to the maximum variety of subsystem characteristics: “It should be clear from the above analysis of natural systems that more advanced forms of human organization should be characterized by decentralized, highly diversified subsystems with widespread participation at the individual level” (Dahl, 2019). In this regard,

the mechanistic decisions of the interaction of subsystems, reserving unified characteristics for them, which are typical of Russian pedagogical practice, knowingly designate the high risk of poor results of managerial actions.

Integrity is provided, among other things, by integrative processes themselves. Integrative properties of the educational system in the synthesis of potentials (the synthesis of potentials is rooted in the formation of integrative properties). The process of accomplishing results primarily determines the integrative properties of a functioning educational system. In this respect, the goal-setting and definition of a consistent set of functions (the performance of some functions does not contradict the performance of others) of the educational organization as a carrier of the educational system are of particular importance. The integrative properties of a developing educational system are positioned by development purposes and a combined resource base maximally oriented towards emerging new growths. The transfer of the system to the development mode introduces the system proper and the integrative properties, already established in the process of its functioning, into the unstable mode, a number of new growths might undergo significant changes.

To ensure integrity, apprehension and scientific and methodological support for activating system-forming factors at various levels are of high importance.

An example of a system-forming factor of the first level can be called a specific result of the system's activity ("useful result of the system"), accentuated and described by Anokhin (2019). The measure is the sufficiency or insufficiency of the result.

As a system-forming factor of the second level, relating to educational systems, appears the process of education, organized and implemented at a specific level and in a specific organizational form (class, school, district, region, etc.).

The system-forming factors of the third level include, for instance, crisis conditions of the system that have the potential for renewal. Subetto (2018), specifying the basic laws of systemology, draws attention to the law of periodic crisis in the development of systems. In essence, the cyclical progressive development ("progressive evolution") is characterized by uneven stages, which determine "periodic systemic crises and qualitative leaps, transitions to a new development cycle".

At the fourth level, multiple types of activity are often indicated as a system-forming factor. Therefore, Sidorkin (1991), referring to the problem of typification of educational systems "by leading, that is, the system-forming activity" highlighted:

- Communal type systems with a system-forming socially valuable (socially useful) activity and self-government activity;
- "Systems with a predominance of cognitive activity";
- Systems of labour or club types with a predominance of respectively labour or leisure activities;
- Systems of a "family" type with a predominance of informal communication, etc.

These levels are codependent. In particular, the system-forming factor of the first level absorbs and determines the system-forming factors of the second level, which in the same way determine the factors of the third level.

7. Conclusion

Any theory, including pedagogical, is in demand and valuable only under the condition of constant development. This inevitably raises the question of the sources of this development. For the theory of educational systems the theories of higher order, in particular, social and humanitarian systemology, become one of the sources. While retaining the basic ideas that are consistent, but potentially providing an increment of scientific and pedagogical knowledge about educational systems, contemporary ideas about integrity, integration and system-forming factors come forward.

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