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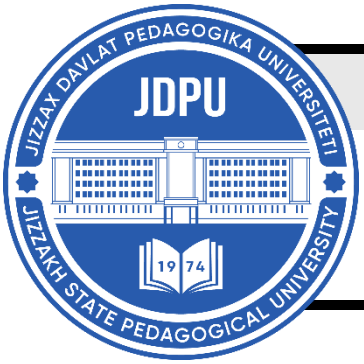

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THE THEORY OF THE SELF-ORGANIZATION OF PRIMARY SCHOOL STUDENTS' EDUCATIONAL ACTIVITIES IS BASED ON A SYNERGISTIC APPROACH.

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ABOUT ARTICLE

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Abstract: The article discusses the synergetic approach as a methodological basis for developing self-organization skills in the educational activities of primary school students. It explores the shift towards active student participation and the importance of fostering autonomy and creativity. The synergetic approach views the educational process as an open, complex system involving knowledge exchange and adaptation. The study analyzes key synergetic ideas and their interpretation in primary education, presenting features of this approach in the first grade. It establishes that the synergetic approach enables the formation of self-organization skills and considers the content of educational and cognitive activities from this perspective. The implementation of a synergetic approach in primary education is expected to increase efficiency, flexibility, and universality of the learning process.

INTRODUCTION

The rapid development of our society requires a change in the old didactic model, according to which a person acquires knowledge at the beginning of his life, which in the future gives him the opportunity to be an "effective" person. The effectiveness of the educational process is ensured by many factors, the determining factor among which is the student's ability to independently acquire new competencies. The educational process in a

modern elementary school involves a change in the student's position: from an object of learning, he turns into an active subject of educational activity, which requires the activation of his self-organization.

At the same time, the essence and purpose of education is not in the scholastic increase of information, but in providing information for the continuous development of the individual. This problem is especially relevant in the context of distance learning in the conditions of the Uzbekistan School, therefore learning technologies aimed at activating the educational and cognitive activity of students and forming their readiness for independent work are becoming more and more in demand. Life in modern society requires the individual to develop the qualities of autonomy and organization: independence, initiative, the ability to think creatively, etc. We consider these qualities as components of a single process of self-organization of the individual.

LITERATURE ANALYSIS AND METHODOLOGY

Analyzing the methodological positions of philosophers and teachers of the past, modern scientists pay special attention to the study of the theory of self-organization [2; 3; 4; 7; 8; 10]. Self-organization of complex systems, including educational systems, requires the presence of a certain interaction between its components - synergy. In view of this, there was a need to study the synergistic approach as the methodological basis of the theory of self-organization of the educational activity of primary school students.

Self-organization of educational activities was studied by O. Vozniuk, A. Yevtodyuk, O. Knyazeva, V. Lukyanets, V. Lutai, I. Prigozhin, O. Chaliy and others.

The analysis of psychological and pedagogical research on the problems of self-organization of the educational process makes it possible to single out several main directions: organization of independent activity (A. Belyaeva, G. Mykhaylenko, P. Pidkasisty, I. Shimko); the relationship between self-organization and motivation of educational activity (I. Beh, H. Kogan); the relationship between self-organization and self-control (V. Kremen, Ya. Ustinova); formation of a culture of self-organization (H. Gmyzina, V. Onyshchuk); connection of components of self-organization with success (O. Ishkov, M. Mur); formation of self-organization methods (V. Lvovych).

Therefore, synergy can be interpreted as a methodological basis of educational, prognostic, organizational, and didactic-management educational activities. We characterize synergy as an opportunity to solve educational problems by the modern challenges of today.

Despite numerous studies, the problem of implementing a synergistic approach in forming the skills of self-organization of educational activities of primary school students remains open.

The purpose of the article is to highlight the theoretical issues of the synergistic approach as a methodological basis for the formation of the skills of self-organization of educational activities of primary school students.

In the scientific literature, synergetics is characterized as the theory of self-organization or the theory of spontaneous emergence and self-maintenance of ordered temporal and spatial structures in open nonlinear systems of various natures, therefore its fundamental concepts are "self-organization", "openness", "non-linearity", "disequilibrium", "bifurcation", "fluctuation", "dissipative structures", "attractors" [2; 7].

At the current stage, the synergistic paradigm encompasses the methodological principles of many scientific approaches. It is based on the synthesis of the traditional understanding of the content of concepts ("system", "element", "whole", "structure") and synergistic categorical conceptual apparatus ("non-linearity", "bifurcation", "attractor", "self-organization", "order", "chaos", etc.). Thanks to these concepts, an idea is formed about the common system and structural characteristics of the subject. These ideas organize various models into a whole, many of which were previously created in other sciences. Used in various scientific disciplines, they are organized into a new system thanks to the picture of reality formed in synergy, which is usually denoted by the concept of "self-organization" [1].

Therefore, synergetics studies the regularities of objects of the investigated reality as a complex system capable of self-development. What is important here is that the concepts, laws, and principles of classical science, with the help of synergy, move to a qualitatively new stage of the development of knowledge, focused on learning about the integrity of the world and the mechanisms of its self-organization. [6].

The key ideas of a synergistic approach to education can be formulated in the following statements:

1. We live in a world of unstable processes with broken symmetry between the past and the future.

2. The future appears as a space of possibilities, and the present is a tense selection process.

3. The education system can be both closed and static, and open and dynamic, depending on how fully it reflects the dynamics of ways of knowing the world - science, art, literature.

4. In an open system, each person is considered a unique individual who initiates and organizes his unique process of learning about the world.

5. The principles of self-organization, implemented in a self-developing environment, involve the joint creativity of organizers, teachers, and students in defining goals, plans, programs, and learning strategies.

Thus, the synergistic interpretation of the educational process involves the idea of development attractors, ultimate goals that build and self-organize existing knowledge from the future. That is, it is a plan, the main idea, the image of the final result, which determines the choice of a life position, the goal of life. Self-organization – assembly of a whole from parts, self-construction, self-structuring of parts into a whole. This leads to the spread of a person's creative activity to the disclosure of his unlimited possibilities [7].

"In the educational process, during the assimilation of educational material and the accumulation of experience in educational and cognitive activity, there is a transition from quantitative changes in the composition and content of the educational activity of the schoolchild to their qualitative transformation. The transition from the quantitative accumulation of knowledge to the qualitative transformation of the student's readiness to solve educational tasks at a new level of complexity, in new situations, is cyclical in education. A cycle is a set of certain acts of the educational process, a summary of successive micro-results of learning" [11].

The traditional education system, based only on the principles of classical science and functioning as a closed system, often loses its capacity for self-development and cannot effectively fulfill the role of a means of learning about the modern world. "Efforts of the traditional pedagogical theory were mainly focused on didactics, not paying attention to the methods and appearance of those forms of activity that lead to the creative construction of the world", V. Kremen notes [7].

The implementation of a synergistic approach in primary education, which is based on a universal evolutionary picture of the world, contributes to blurring the boundaries between natural, scientific, and humanitarian knowledge. At the same time, productive activity - research, project, creative - of the student and teacher is dominant. From the traditional "ZUNs" and evaluations in terms of "knows - does not know", "can - does not know", and "has a skill - no skill", we move on to the assessment of a specific product - project, scenario, theory, etc. in the categories "interesting - not interesting", "original - not original", "complete - incomplete", etc.

The problem of students' independent work as a self-organizing process must be studied in the context of synergy. Synergetics is a modern educational methodology that

makes it possible to understand, explain, and regulate the internal mechanisms of self-organization of open complex systems, which also includes the educational space. The process of self-organization in the educational space is spontaneous and involves the presence of interaction, and synergies, which are carried out through the restructuring of already existing and the formation of new connections between the elements of the education system.

Teachers [2; 3; 7; 13] define synergetics as a science that investigates the process of transition of a complex system from disorder to an ordered state. In the context of synergy, it is possible to determine the mechanisms of self-organization of the subjects of the educational space (students) and the management of these processes. The processes of self-organization have a significant number of constituent elements that are connected by probabilistic characteristics.

RESULTS

Synergetics studies the evolutionary processes of the development of a complex open system as a phenomenon of its self-organization. At the same time, if such processes of self-organization are evolutionary, then the system is capable of self-development. A synergistic approach makes it possible to consider the personality of a junior high school student as an open system that makes the transition from development to self-development [6].

Synergetics explains the process of self-organization in complex systems in the following terms:

1. The system must be open.

2. An open system must be unbalanced, and unstable.

3. The occurrence of fluctuations in the system (random deviations that "shake" it) causes a new order. The state of the system after the transition to a new order is determined by random factors and has a probabilistic character.

4. Self-organization arising from chaos is possible only in sufficiently complex systems that have a significant number of interacting elements and relatively high values of the probabilities of their fluctuations.

5. Self-organization occurs only when positive feedback prevails over negative feedback. That is, changes in the system are not neutralized, but accumulate and lead to the emergence of a new structure [7].

As for the self-development of the personality, this means that it must be complexly organized, be in constant search (learning, creativity, research) of qualitatively new states, and be open to the educational environment. Changes in the structure and structural

connections of the personality occur not only in leaps and bounds but also constantly in the process of interaction of the individual with the surrounding environment and within himself. From this, we can draw an important conclusion that personality is a process of internal changes. Such an understanding of the individual, from the standpoint of synergy, is placed by us in the study of self-organizational activity in the process of independent work of students.

The educational process in the primary school can also be considered an open system, since in it there is a continuous process of exchange of information (knowledge) between the teacher and students (feedback), the content of education is constantly changing in accordance with the needs of society, therefore there is an effect of non-linearity of the educational process and its result The result of the student's educational activity will always have a probabilistic assessment, a prognostic nature. In addition, the constant growth of the flow of information and the volume of knowledge "brings" the system out of balance and forces it to create a new order. Based on the main characteristics of self-organizing systems (openness, nonlinearity, instability [16]), we consider it appropriate to characterize the student in the educational process as a self-organizing system.

As V. Chaika notes, "the prerequisites for a student's educational activity are the presence of a goal, physiological and psychological readiness for learning, desire to learn, focus on educational activity and the appropriate level of development. Simultaneously with the process of teaching and learning, the internal process of assimilation of knowledge and methods of activity takes place. There are two main options for students' educational activities: under the guidance of a teacher (stimuli, methods, forms of activity, etc.) and independent" [17]. Independent educational activities include the following actions: planning or specifying the tasks of one's educational activities; planning methods, means, and forms of educational activity; self-organization of educational activities; self-control; self-regulation of learning; and self-analysis of the results of educational activities.

It is the synergistic approach that creates an opportunity to form self-organization of educational activities. He characterizes the student's personal development not only as a gradual, linear, conflict-free process but as a process accompanied by contradictions that lead to the transformation of value orientations, self-discovery, and self-educational activity. From the point of view of synergy, decisions, and actions are determined not only by knowledge formed by abilities and skills, the content and results of analytical and synthetic activity, but also by understanding one's mental processes, analyzing the features of one's work style, one's own "I" [17].

"During the education of a junior high school student, the integration of self-organization processes takes place, thanks to which the system maintains a certain level of organization during changes in the external and internal conditions of the development of systems that are able to accumulate and use experience (development processes of social and biological systems)" [3]. For example, a student's personality self-organizes to perform project activities, using not only previous experience and knowledge, but also interpreting the results of one's own educational activities. Therefore, the student's stay in the educational process can be considered from the standpoint of an open system capable of self-organization and oriented toward self-development.

"Effectiveness of educational and cognitive activity," V. Chaika notes, "depends on the student's personal qualities: his activity, independence, initiative, as well as the desire to learn (sustainable motivation).

The main meaning of such educational and cognitive activity, its result is changes in the intellectual, moral, and personal development of students, and its subject is the process and result of the formation of self-organization mechanisms" [17].

The personality of a junior high school student in a synergistic aspect can be represented as a "complex system with the following characteristics:

• complexity (hierarchy) – the presence of many functional and structural levels;

• openness (openness) – the ability to evolve, exchange energy, information, interact;

• instability (non-linearity) – a change in the states of order and chaos according to random probability characteristics. We will reveal the content of the processes that take place during the formation of self-organization skills of elementary school students:

• established (traditional) structures are the student's understanding of educational activity as the transmission of knowledge;

• a new quality is a new understanding by the student of his place and role in the structure of educational activities, as well as awareness of the mechanism of educational activities;

• personal qualities are an individual attitude to common values that guide creativity filled with personal content;

• personal structures – the structured value content of consciousness, which determines the development of a complex of other personal structures: criticality, reflexivity, motivation, mediation, orientation, autonomy, creativity, self-actualization, self-realization" [3].

Taking into account the main regularities of the learning process of a junior high school student as an open and complex system and multi-component, multi-level, and

interdisciplinary knowledge provides an opportunity to single out the main directions of implementation of synergistic ideas in the educational process:

1) the use of dialectical paired phenomena of "figurative and visual", "abstract and concrete", "qualitative and quantitative", and "reproductive and problematic" in their mutual transitions during the assimilation of knowledge and the formation of competencies;

2) students' mastery of various learning methods and technologies in order to be ready to make their choices during the planning of educational activities;

3) introduction of elements of the andragogic model of learning and application of elements of acmeological technologies in lessons [3].

DISCUSSION

The current level of development of primary education, especially in the conditions of distance learning, where independent work has a special role, is closely related to computer learning technologies. The formation of new competencies in students can be characterized as a process of self-organization that can be implemented using computer technologies. Computer learning technologies provide additional tools and synthesis in learning, although the main tool for acquiring new knowledge in education is human intelligence (teacher/student).

According to the synergistic paradigm, which is the basis of the new logic of the organization of the educational process, it is advisable to adhere to the following principles of innovative education:

– the principle of evolutionary movement, according to which the natural order of formation is not the only possible one;

– the principle of harmonization, according to which the formal mathematical language cannot be considered universal without interaction with conceptual, spiritual, and humanitarian methods, i.e. humanization and humanitarianization should become the main ones in innovative education;

– the principle of variability: education is carried out on a diverse and alternative basis; the presence of moments of instability associated with the choice of a further learning path; the conflict of types and forms of the learning process leads to the need to change the learning trajectory;

– the principle of comparative analysis of the value system: the development of the student's personality is realized on the basis of a comparison of one's own system of personal meanings (values) with what is accumulated in culture;

– the principle of plurality of choices accompanies the educational process with the selection of values and further development paths; the choice is usually determined by the

semantic significance of the studied realities for the student; the learning process includes various trends, which are accompanied by spontaneous and controlled processes of destruction of old and emergence of new systems, search, and acquisition of new meanings;

– the principle of non-linearity of interaction: education will become innovative if it is a process of non-linear interaction of a person with the intellectual environment, in the conditions of which the individual enriches his own inner world;

– the principle of openness: an innovative educational environment must be an open system (consist of subsystems between which there is a constant exchange of information; be a subsystem of a higher-order system and exchange information with its other subsystems);

– the principle of self-development: in an innovative educational environment, the transition from management to self-governance, from development under the influence of external factors to self-development under the influence of internal factors should be ensured [8].

Thus, primary education provides an opportunity to form the skills of self-organization of educational activities of primary school students, if the teacher carries out his pedagogical activity on the basis of a synergistic paradigm if he possesses innovative pedagogical technologies and corresponding models of pedagogical interaction.

CONCLUSION

In connection with the fact that the goals of primary education are changing, the content of education in primary school is being reformed (the influence of the state of development of pedagogy, the information environment, psycho-pedagogical characteristics of students, trends in the development of education), and the requirements for methodical teacher training are also changing. An important task of a teacher's professional training should be the activation of his pedagogical self-organization, the expansion of the limits of his self-development and self-realization, and the involvement of the teacher in the process of professional self-improvement.

Modern realities make the development of synergy methods for forecasting the educational process extremely relevant. The implementation of a synergistic approach to the management and organization of the educational environment of the primary school will significantly increase its effectiveness, and make it more flexible and universal. The formation of a synergistic paradigm contributes to the solution of many problems of modern primary education. It provides a new direction for the integration of knowledge and competencies in education and at the same time is itself the result of such integration.

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