

EUROPEAN INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY RESEARCH AND MANAGEMENT STUDIES

VOLUME03 ISSUE10

DOI: <https://doi.org/10.55640/eijmrms-03-10-05>

Pages: 22-30



IMPROVING VARIATIVE CONCEPTS IN TEACHING NATURAL SCIENCES IN PRIMARY EDUCATION

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ABOUT ARTICLE

Key words: primary class, students, invariant, variable, concepts, thinking, environment, extracurricular activities, educational activity, lesson, education, innovation, theory, methodology, approach, problem situation, imagination, scientific concepts, improvement, knowledge, skill, competence, competence, teaching, content.

Received: 03.10.2023

Accepted: 08.10.2023

Published: 13.10.2023

Abstract: In the article, the essence of the specific features of the introduction of alternative concepts into the educational process in the teaching of natural sciences in primary education, the principles of choosing materials related to the content of these educational subjects, the interdisciplinary connection of acquired knowledge, skills, skills and competencies implementation in its content, to understand the essence of events and process changes between nature and society, as well as to develop a careful attitude towards the environment, nature, to feel the interrelationship of animate and inanimate nature and to know nature the possibilities of creating interest, the holistic visualization of scientific concepts, the aspects of developing students' thinking by applying them to practice are highlighted.

INTRODUCTION

In the 21st century, the human community is recognized as one of the important issues of human survival, to approach social relations from a humanistic point of view and to develop a concept of interaction with nature that ensures a more positive development of the biosphere in order to solve global environmental problems and overcome the crisis. . Therefore, every state and society should reconsider its approach to ecology and the environment, in which the essence of the human factor, its place in nature and society, goals and tasks, duties and obligations, trends in the development of cultural consciousness and social activity, human It is necessary to take into account the relationship between nature and the result and consequence of the course of interaction [9].

Development of the nature of natural sciences, ideological content, its laws, conditions of effectiveness, philosophical and cultural context through factors of effectiveness remains one of the issues on the agenda.

In particular, the basis of comprehensive education of children of primary school age is to form a scientific worldview in them. The role of natural sciences in the implementation of this task is great. According to this, one of the most important tasks for teachers who educate young souls is to make students see the beauty of nature, love it, and learn about the events that occur in nature. It consists of having an understanding of human nature, as well as educating in the spirit of rational use of the resources created by nature.

Therefore, let's take a look at the essence of the concept in the process of forming the first invariant and variable concepts in the teaching of natural sciences in elementary grades. A concept is a product of thought. Concepts arise as a result of thinking about things that are perceived and imagined. For example, to imagine a flower, it is enough to look at it. In order to create an understanding of that flower, it is necessary to have specific knowledge and to think about their systematization [11]. A form of thinking that reflects the important characteristics, connections and relationships of concepts and events. A concept is a product of cognition, which progresses from simple to complex, perfecting, clarifying, and forming new concepts. The main logical function of the concept is to mentally separate something from something else. Dividing sciences into categories and generalizing natural sciences in the concept is a necessary condition for knowing the laws of nature. Each subject deals with certain concepts, in which knowledge is concentrated. The concept, unlike the forms of emotional cognition, is not directly reflected in the human mind. It is created using logical methods such as comparison, analysis, synthesis, abstraction, generalization.

The formation of the concept is related to the word. The organic connection between them is a clear manifestation of the connection between thought and language. Concepts are expressed using words and phrases. Any concept consists of an abstraction, even if it seems that it is far from reality in the concept, but in reality it is learned more deeply by separating and researching the important aspects of reality with the help of the concept. One of the important aspects of the rule of dialectical logic is that concepts are interrelated and overlap each other.

At the same time, Western pedagogues have also left their legacy in educating young people through the elements of nature. One of their major representatives is Jan Amos Comenius, a famous Czech

pedagogue. He devoted his conscious life and practical pedagogical work to the noble work of teaching and educating children in his scientific works [7].

Ya. A. Komensky explained everything in connection with nature. In order to attract the attention of readers, he named the books interestingly and fully expressed their content. He says the most beautiful thing about this area is sampling the different views of the garden. For example, why can't the book for the 1st grade be called "Sunflower Furrow", the 2nd grade book - "Rose Bush", the 3rd grade book - "The Park" and so on? Ya. A. Komensky also revealed in his other works that children should be brought up in the bosom of nature.

Also, in Y. A. Komensky's didactics, the method of natural education is consistently expressed, and according to his opinion, natural laws and pedagogical laws should ensure compatibility. He tried to base human education from childhood, organization of learning and teaching according to the child's age from a scientific point of view, and based on the laws of nature in the formulas of his pedagogical laws, "Nature prepares material for itself before starting to give it form. "Any form of nature begins with the most general and ends with uniqueness." I. G. Pestalossi was a famous pedagogue of his time. His ideas are still used in the field of pedagogy. He created such works as "How Gertrude Teaches Her Children", "Observation Alphabet", "Instructive Teaching of Number", "Swan Song". According to I. G. Pestalossi, the upbringing given to the child should be in harmony with nature [4].

I. G. Pestalossi promotes the following didactic rules that foster the mental maturity of children:

1. Harmony of education with nature.
2. Orientation from simple to complex.
3. Adapting to the child's strength and abilities.
4. Instructiveness.

Also, I. G. Pestalozzi considered a person to be a perfect being and, putting forward the idea of conformity to nature in education, emphasized the need to organize the educational process in accordance with the characteristics of human nature and the laws of its development. He also puts forward the view that harmonious development of all human powers and abilities is the main goal of education.

In the spiritual and material heritage left to us by Western and Eastern scientists, there are instructions on how to preserve and use nature, and it is appropriate to choose materials that are easy to teach through these instructions. According to the instructions, things in nature consist of two parts: animate and inanimate nature. Inanimate nature includes the earth, sun, stars, water, air, stones, soil, and living nature includes plants and animals.

The role of environmental education in ensuring the harmony between nature and man is extremely large. Continuous ecological education and upbringing, which is carried out at all stages of the educational system, requires the formation of new attitudes towards the nature of a person, as well as towards himself. This, in turn, can serve as a foundation for the formation of a well-rounded person. Cultivating love for nature leads to education in the spirit of respect for the Motherland, its natural monuments, historical monuments, traditions of our people, and the formation of a highly spiritual person.

In this matter, the fact that life on earth itself is a natural phenomenon, the mutual harmony of the relationship between the person and nature, but the creation of conditions for the continuous development of creative potential in order to reduce the sphere of influence, the efficiency of the person for the environment is the most important part of his spiritual and moral development. that it is an important characteristic, the interpretation of man as a natural-social being and a thinking part of nature, the theory that man unites with nature and opens the way to higher spirituality through a new perception of the world, the idea of general unity and interdependence providing education to young people on the basis of which serves as another methodological basis of the work. D.Ye.Gurikov, a researcher who thought about this issue, in his teaching, in his teaching, unifies the destiny of man and universal life, in the project of regulating nature, he relies on moral criteria to an unprecedented level for man's self-realization, and this process unites man with nature. emphasizes that it should cover the entire field of relations [2].

According to the concept of V. I. Vernadsky, nature is a product of natural processes based on the principles of constant development, self-regulation and healing. In this regard, one can agree with V. I. Vernadsky's opinion that the destruction of today's ecosystem is due to the increasing human influence on its development and self-healing process [16].

V.A. Sukhomlinsky should purposefully use knowledge related to solving environmental problems and introducing students to nature at school. Having studied the scientific and theoretical aspects of

instilling ecological education in students, it is necessary to emphasize its inextricable connection with the system of practical and historical knowledge [12].

K. D. Ushinsky proposed a comprehensive scientific system based on studying and revealing all aspects of the child's all-round development and formation, all complex aspects of character traits, and relations with the natural and social environment. This scientific system owns the idea of the nation in the upbringing of the child, that is, it states that all traditions characteristic of the nation are traditions arising from the relationship of the human child with nature [15].

"Nature is our most important wealth", "Forest must be protected, because the pencil is made of it" is estimated as a result of anthropocentric, pragmatic school education, using the tasks suggested by adults for 50% of the students of S.D. Deryabo junior school age. The researcher V. A. Yasvin, who analyzed the personal attitude of schoolchildren to nature, interprets the maximum age period of intensity towards nature as 10-11 years old [3].

In particular, the psychological S.D. Deryabo, studying the subjective attitude of the student to nature, identified two: modality and meaningful feature (any role subject or object works subjectively for a person, natural objects and which goals of interaction prevail level) and as an indicator of intensity, he singled out the main parameter of the attitude towards this or that nature in which areas and to what extent. He said that at the age of elementary school, the child gradually overcomes the egocentrism characteristic of the preschool age, and begins to clearly distinguish his "I" from the world around him. However, the expansion of life experience leads to the beginning of objectification of natural objects, and they become an "important process" for many young schoolchildren. In these views, it is assumed that the student's psychological relationship with the environment is a process of direct interaction, and that it is manifested in mental states that reflect his inner attitude. It is worth noting that in this regard, first of all, certain needs, as well as values and beliefs, interest, dreams and desires, goals, emotional experience and will, level of mental activity should be considered as the main factor.

Also, effective work related to the teaching of natural sciences and its improvement is reflected in the research work carried out by the scientists of our country. In particular, E.O.Turdigulov's scientific research work talks about the content of environmental education, forms and methods of studying it, and their content based on the interrelationship of natural sciences [14].

Sh.M.Mirzakhmedova's research paper describes the pedagogical foundations of primary school students' interest in nature, solving problems related to nature and environmental education, their prevention and elimination [8].

In Sh.Avezov's scientific-research work, the content of ecological education and upbringing in the process of organizing local history activities of students, emphasizing that the main focus is on the theoretical interpretation of the concept of ecological culture in students and its formation in the process of local history work passed [1].

In the research work of N.J. Isaqulova, the processes of teaching elementary school students to be careful and caring for the environment and to develop ecological thinking are analyzed in the scientific-pedagogical foundations of the formation of concepts related to environmental education among elementary school students. [5].

According to G. Safarova, the elimination or prevention of environmental disasters depends more on the knowledge, talent, desires and wishes of our youth. Therefore, today in other countries, ecology is taught as the main subject in all secondary schools. However, in our country, especially in the Aral Bay region, the educational process in this field is considered as one of the urgent problems, and it requires more attention [13].

In the research work of M.K.Shirinov, enrichment of the natural science curriculum and textbooks with new educational materials in the field of primary education, inculcation of scientific ideas about nature, society and human evolution, based on the principle of continuity and coherence in the teaching of natural sciences the improvement of methodical support is presented as an actual topic [17]. In the research work of R. Ibragimov, the formation of cognitive activity of elementary school students, its didactic foundations, the didactic features of the pedagogical process in order to form the cognitive activity of students are suitable for age characteristics, their level of knowledge, the acquisition of scientific and practical significance of assignments, the psychological and pedagogical foundations of students' ability to develop cognitive activity are highlighted [6].

Thus, the organization of modern education based on the laws and concepts of environmental regulation, balancing the relationship with nature, innovative pedagogical approaches aimed at the development of ecological views of the younger generation, education with the environment among young people a training program based on a rational approach that brings about a fundamental change of interaction can be cited as a methodological and conceptual basis of a natural process.

In particular, in the teaching of natural sciences in elementary grades, the formation of the first invariant and variable concepts of nature for students is not only in the course of the lesson, but also in extracurricular activities, in the correct selection of materials, that is, in the corner of living nature, in separate geographical areas. attention should be paid. The work does not end with the selection of

materials for explaining nature. By applying the selected materials in practice, students' knowledge is strengthened.

For this purpose, students are taken to various excursions, labor and general observation, and activities in the corner of nature. A variety of materials helps to educate students in a comprehensive manner in the formation of the first invariant and variant concepts of nature in the teaching of natural sciences in elementary grades.

In particular, according to the experience of the developed countries of the world, in the research work of N.K. Oripova, the issue of helping and supporting the manifestation of individuality is the only task of the educational process and one of the effective ways to develop pedagogical ethics of students in this process based on variant modeling. says [10].

The development of a person is determined by the environment in which he grew up and what kind of education and upbringing he received, and includes the development of the environment-dependent psyche. Natural events related to the activities of schoolchildren are one of the main factors affecting their mental development. This situation creates and changes the schoolboy's objective attitude to natural phenomena, and also creates new inner emotional experiences.

The occurrence of positive changes in nature is also determined by the influence of the human factor on it. Man's intervention in natural processes through production activities makes it possible to improve the connections between some of its parts: tillage of the earth, its connection with atmospheric air, energy, and moisture.

Knowledge of the interrelationship of nature's benefits and their interdependence expands students' imaginations of natural knowledge. This knowledge, in turn, contributes to the formation of certain competencies. Science-related competencies are important because they encourage a thorough scientific justification of the skills of using nature and changing it.

Natural knowledge studied in primary grades encourages students to perceive the universe as a whole. As a result, students have an individual approach to learning natural knowledge and an experience of emotional and valuable activity. In order to adapt to the environment, students should have the ability to move independently, to establish a conscious dialogue with nature, and to understand the essence of natural phenomena right from the first stages of education.

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- 19.** Описание Methods of working with parents and improving their legal literacy, recreational and psychotherapeutic tasks, methods of organizing the first parents' class meeting are explained. Статьи в Академии METHODS OF ORGANIZING THE WORK OF THE CLASS LEADER
- 20.** B Sirojiddin - American Journal of Pedagogical and Educational ..., 2023