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CURRENT PROBLEMS OF FORMATION AND DEVELOPMENT OF PRIMARY SCHOOL PUPILS' NATURAL IDEAS AND CONCEPTS

Summary. The report reveals the relevance of the problem of primary school pupils' natural ideas and concepts formation and development; the process essence of forming primary school pupils' natural concepts has been characterized; the ways of problem solving have been identified.

Key words: primary school pupils, ideas, concepts, natural concepts, type of thinking, age characteristics of junior pupils.

Formation and development of natural ideas and concepts has been and remains the most pressing problem in primary school science education. Throughout the history of primary science education, psychologists (L. Vygotsky, P. Halperin, N. Talyzina, L. Zankov, D. Elkonin, and others), teachers (S. Baranov, N. Versilin, I. Zverev, N. Rusova, M. Skatkin, K. Ushinsky, etc.), methodists (T. Baibara, N. Bibik, L. Kozetova, N. Koval, N. Pidgorna, K. Yagodovsky, etc.) have paid attention to this problem.

In child's scientific concepts formation L. Vygotsky identified three main psychological points:

- firstly, it is to establish dependencies between concepts, to create their system;
- secondly, awareness of one's own mental activity;
- thirdly, this is why the child acquires a special attitude to the object, which allows him to reflect in it what is inaccessible to life concepts (penetration into the object essence) [3, p. 279].

A significant contribution to the further theoretical and applied research of the concepts and their formation problem was made by V. Davydov. The process of concept formation is related to theoretical thinking. Theoretical knowledge is firstly expressed in ways of mental activity, and then in various symbolic-sign systems, in particular, by means of natural and artificial language. The concept is a means of imaginary reproduction of any object as a whole system [4, p. 43].

Pupils do not create concepts, images, values and norms of social morality, but transform them in the educational activity process. In their educational activities, pupils reproduce the real process of creating concepts and images by people [5].

Starting the study of the subject, including science, primary school pupils with the teacher's help try to analyze the educational material content, highlight some initial general position in it, reveal the natural connection of the original relations with its various manifestations and thus obtain meaningful and necessary content. When schoolchildren begin to use source abstractions and generalizations as a means of creating and integrating other abstractions, they transform these initial mental actions into concepts [2].

This path of knowledge acquisition has two characteristic features. First, the schoolchildren's opinion in such learning purposefully moves from the general to the concrete. Secondly, such assimilation is aimed at revealing to pupils the conditions of content origin of the concepts they have learned. If the pupil is aware of the origin of a particular object or phenomenon, then the pupil may have a concept about the object.

It's vital to say that the most important feature of mastering concepts is that they cannot be learned, one cannot simply attach knowledge to the subject. The concept must be formed, and it must be formed by the pupil under the teacher's guidance.

The concepts assimilation occurs through the establishment of such relationships as community relationships, subordination. Junior pupils' concepts formation occurs in the vertical system of species hierarchy, genus, class and simultaneously in the horizontal system with wide species comparison of a certain genus, genera of the relevant class.

Researchers who have studied the problem of concept development [1; 3; 4, etc.] distinguish several concepts levels.

The first level is characterized by a "diffuse-scattered" idea of the object, phenomenon. The pupil may distinguish one subject from another, but he cannot indicate particular features. The second level: the pupil can indicate the signs of concepts, but cannot separate the essential from the insignificant. The third level: the pupil learns all the essential features, but the concept is still stifled single images, which served as a support in the concept formation. The concept is not yet generalized. The fourth level: the concept is generalized. Pupils freely operate the concept in solving various kinds of problems.

In a generalized form, the process of forming concepts in junior pupils' minds from a formal-logical point of view can be represented in this way:

- 1) the sensory images emergence of objects and reality phenomena based on feelings and perceptions;
- 2) creating ideas as a transitional stage to abstract thinking;
- 3) the concepts formation on the basis of generalizations and the essential features identification.

Thus, theoretical thinking contributes to the organization of educational activities, the formation of its components. The system of educational tasks allows to trace the way of becoming a geographical concept, that is, to identify its structural components, in particular, the common concept feature, its essential feature, as well as the interrelations. The concept definition is then constructed.

The empirical type of thinking that underlies the traditional teaching science to pupils, focused on the acquisition of ready-made knowledge. This is captured for the purpose of lessons. The content of science is aimed at solving problems and does not fully contribute to the identification of all specific features of geographical concepts.

The formation of thinking types are components of a very complex and multifaceted problem of child's mental development, in particular, its initial stages.

The content of learning is differently assimilated by the pupils and influences their development depending on the teaching method, which determines the way and nature of their actions with the educational material. It largely depends on the opportunities realization and development for pupils to acquire knowledge [5].

The qualitative changes that characterize each age stage of the child's mind are holistic. They manifest themselves in its substantive side (creation of concepts systems, pictures of the world, outlook), in the operational structure (systems of actions, operations, changes of their functional interconnections), in which the mental qualities (observation, intelligence, criticality, etc.) are formed. All these qualities are at the heart of the neurodynamic structures through which the child's increasingly complex relationship with the environment is realized. Their maturation opens up new opportunities for child's mental development of the, although it does not determine its content and forms [3].

Age-specific features of children's mental development are known to always have their individual variations, individual differences are observed in the interests of junior pupils, their inclinations, general and special abilities, in their ability to learn. Being relatively stable, individual personality traits affect the learning process, its effectiveness, and thus the pupil's attitude to it, the child's activity, his confidence in his abilities, etc. The learning impact on the pupils' development is not limited to their individual characteristics. Hence the importance of studying these features in order to develop ways of primary education differentiation and individualization. Differentiated, individualized approach to pupils is a necessary link in the system of measures aimed at improving primary education, increasing its impact on all pupils.

The individual approach to each pupil should help him / her in time to overcome learning difficulties, to succeed in mastering the educational material.

The junior pupils are attracted by the procedural side of the activity. They prefer to accomplish difficult tasks. The question arises by all means to arouse the intellectual activity of the junior pupils during the lesson. This should be an activity aimed at knowing the essence of the phenomenon, its hidden properties, patterns, scientific concepts. If a school introduces a child to the world of theory, then it is out of competition. The child should enjoy the process of analyzing things and their origin. The studies show that children with their abilities are prepared for mastering more sophisticated material and at the highest level. The objective of primary education is not to offset individual differences (such task is impractical and unfeasible), but to broaden and more fully develop each pupil's mental strengths according to his or her abilities.

LITERATURE

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