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PSYCHOLOGICAL BASIS OF DEVELOPMENT OF ORAL SPEECH AND THINKING ACTIVITY OF STUDENTS IN THE PROCESS OF DESIGNING BASIC CONCEPTS

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Abstract
This article describes in detail the issue of "Psychological foundations of the development of students' oral speech and thinking in the process of designing and teaching basic concepts." Designing and teaching of basic concepts implies the systematic presentation of the basic concepts necessary for students to acquire complex and precise knowledge during the educational process. This approach ensures that the student's knowledge is identified, compared and deeply understood. The opinions of psychologists about the cognitive process, emotional cognition, logical cognition, as well as their opinions on the formation of mathematical concepts are presented.

Keywords: Psychology, cognition, elementary school, student, teacher, speech, thinking, intuition, attention, memory, mathematics, understanding, activity.

Introduction

In the modern education system, it is important to develop students' intellectual, social and communicative abilities. In this regard, the method of teaching basic concepts by projecting helps students to master knowledge thoroughly and systematically. Mastering basic concepts deepens students' knowledge, increases their ability to interpret concepts in a complete and meaningful context, and to express their thoughts in a new, creative and independent way.

Also, the development of oral speech and thinking activities has a significant impact on the formation of students' problem-solving, critical thinking and creative approaches. Cultivating these activities in the teaching process, relying on psychological foundations and using new methodologies allows improving students' attitude to education and ensuring their comprehensive development.

This article analyzes the methods of teaching basic concepts by projecting and the psychological foundations of developing students' oral speech and thinking activities. This study serves to strengthen methodological approaches aimed at increasing students' thinking, understanding, and creative expression skills in relation to the concepts they have identified during the teaching process.

LITERATURE REVIEW

In psychology, the youth of schoolchildren aged 7-10 is characterized by late or early maturation. The very absence of a specific, precise term indicates the complexity and heterogeneity of the psychological characteristics of young people.

As a rule, it is at this age that students reach a high level of development in primary, psychological and higher mental functions: perception, attention, memory, thinking, speech, emotions. It has been found that especially during the period of study in primary school, students develop activities and develop interest in various areas [1, p. 64].

The study of the role of a person in the process of language acquisition is one of the problems of the theory of knowledge of dialectical materialism. People cannot think without the help of concepts, discussions and conclusions, that is, the main forms of abstract thinking associated with language. Logical thinking appears only when concepts formed in words appear behind the imagination. The doctrine of the Russian physiologist I.P. Pavlov on the interrelation of the first and second signal systems shows that there is an organic connection between, on the one hand, sensation and thinking, and on the other hand, between thinking and language.

The first signal system consists of the impact of concrete objects and phenomena in objective reality on the sense organs. This system arose in the process of direct relations between living beings and nature.

The second signal system - speech - arose in the process of people's mutual relations, firstly, in society, and secondly, in their relations with nature. Thus, language serves as the main tool of abstract thinking. Therefore, the development of students' speech culture is one of the main tasks of every subject teacher, including mathematics teachers [2, p. 116]. From a psychological point of view, the process of cognition is carried out in two stages:

1. Sensory cognition. This is a process that occurs through sensation, perception and imagination, and a person's sensory cognition finds its expression in his sensations, perceptions and imagination. Because a person interacts with the real world through his sensory organs. As a result, a subjective image of an objective being is formed in the human mind through sensations. The emotional process that occurs as a result of the interaction of an external object (stimulus) that exists independently of the human mind and the subject (human sensory organs, nervous system) is called sensations.

From the definition, it can be seen that some properties of a thing, event or phenomenon are reflected with the help of sensations. The complete reflection of this thing, event or phenomenon in the human mind is called perception.

As a result of scientific research by psychologists and physiologists, it is known that objects, events and phenomena existing in the external world leave a certain mark on the human cerebral cortex through perception and perception. After a certain time, these marks can intensify and be restored as a subjective image of an object, event or phenomenon. The process of restoring the subjective image of this objective world in the human mind after a certain time is called imagination.

2. Logical knowledge. This is carried out through understanding, judgment and conclusion. Any logical knowledge is initially carried out through sensory knowledge, therefore, objects in

each mathematical object under study are perceived, perceived and imagined from an abstract point of view. In this case, imagination acts as a bridge between sensory knowledge and logical knowledge, and especially acts as an emotional support in the formation of scientific concepts. It should be remembered that through imagination, which is one of the main forms of sensory knowledge, the external signs of objects, events and phenomena in the material world are reflected in the human mind. But it cannot reveal their essence. A person acquires the ability to think logically (reflect) in the process of knowing about things, events and phenomena that he has perceived, perceived and imagined. Through logical thinking, he achieves deeper, broader and more complete knowledge about the most important properties of things, events and phenomena. As a result, when studying any science, including mathematics, a certain mathematical understanding of the object being studied is formed. In general, logical thinking (reflection) is expressed through a certain system of scientific concepts.

RESEARCH METHODOLOGY

The level of formation of logical thinking is largely determined by the formation and coordination of appropriate mental activities, the initial basis of which is practical activity.

The second direction is associated with the research of P.P. Blonsky, L.S. Vygotsky, S.L. Rubenstein, A.N. Leontiev, P.Ya. Galperin, D.B. Elkonin, V.V. Davidov and others. These authors believe that the emergence of logical factors in the experience of an individual occurs with the transfer of knowledge and logical experiences in communication and education. In this case, intellectual activity should participate in the educational process as a special subject of mastery.

L.S. Vygotsky's theory of the “zone of closest formation” opened a promising way to study the child's thinking in the process of formation through the means of education and upbringing that formed it. The organization of this process has a significant and direct impact on the quality of the child's intellectual formation.

This point of view was developed in the scientific research of V.V. Davidov. In them, the evidence on the formation of a child's intellect from 2 to 11 years old allows him to conclude that at this time the properties of objects expressed through the mathematical concept of "relation-structure" are not only "alien", but the latter themselves are also integrally included in the thinking of children.

Leading psychologists put forward claims about the continuity of the connections between figurative and logical thinking, about their constant interaction and penetration into each other (A.N. Leontiev, S.L. Rubinstein).

E.L. Agayev emphasizes that the use of such visual models as the Euler circle and "classification trees" is an adequate method of forming ideas about logical relationships in preschool children. In particular, the material and graphic implementation of relationships turned out to be accessible to 1st grade students and equally effective. One of the conditions for developing the creative abilities of primary school students is to take into account the specific features of the mental formations of children of this age. Children entering the first grade are distinguished by the fact that not all new mental acquisitions are completed. This

requires their education to be unique, in which education should include elements of play, and directed education should include the emerging form of thinking - the newly mastered demonstrative-practical and demonstrative-figurative formation, symbolic functions, elements of logical thinking.

K.D. Ushinsky is associated with the establishment and formation of pedagogical psychology as a branch of psychological science that studies the laws of education and upbringing. His works show the importance of memory, attention, speech, emotions, and thinking in educational activities. In particular, he described the importance of the formation of creative abilities in children.

According to K.D. Ushinsky, the formation of creative abilities at school is to teach children the sequence, clarity, definition, independence, and clarity of expressions.

ANALYSIS AND RESULTS

The analysis of pedagogical research on the problems of students' creative abilities shows that the formation of logical operations is considered by many authors as a prerequisite for the entire educational process.

Mathematics develops human intelligence, attention, cultivates determination and will to achieve the intended goal, provides algorithmic discipline and expands thinking. Mathematics is the basis of knowledge of the world, is of great importance in revealing the specific laws of surrounding events and phenomena, in the development of production, science and technology. The mathematics curriculum of primary education is based on the requirements of the State Educational Standard, aimed at the formation of competencies in students. The term competency is understood as the free mastery of a complex of elementary logical concepts and operations that constitute the alphabet of logical thinking and the basis necessary for its formation. Logical skills acquired in mathematics lessons, in turn, allow them to be widely used in the process of teaching other subjects [3; 7 p.].

According to psychologists, the problem of forming mathematical concepts is complex and multifaceted. By its essence, each thought is a product of a creative, low or high level. Each thought is an independent act aimed at creating research and innovation and popularizing it.

S.L. Rubinstein's research on general mental development is one of the first to be relevant. He introduced and substantiated the category of activity in psychology as the object and goal of mental research. Based on the theory of activity, S.L. Rubinstein introduces the concept of activity as a transition from subject to object. He considers the second stage of activity to be a connection from object to subject.

S.L. Rubinstein's focus is on the fact that in the process of human activity, not only does a person manifest his own characteristics as a unique individual, but also the formation of his psyche as an object is determined.

The fundamental psychological concepts of the concepts of "activity", "action" are covered in the works of A.N. Leontiev.

A.N. Leontiev, who considered activity to be the interaction of the interconnected reality of the subject, believes that the reflection of reality in the child's mind is not the result of "impact", but the result of interaction, that is, the result of processes that encounter each other.

Judging by the conclusions of A.N. Leontiev and S.L. Rubinstein in the teaching practice, the development and use of forms of activity in the formation of mathematical representations and the sequential transfer of the principles of activity in education are the most useful and effective directions.

CONCLUSION

This study analyzed the psychological foundations of the development of students' oral speech and thinking in the process of teaching basic concepts by design. Teaching basic concepts by design, while providing students with a complete and systematic understanding of knowledge, also develops their critical thinking, problem-solving and creative thinking skills. In this process, psychological factors - attention, memory, thinking and interest in education - increase students' attitude to reading and the level of activity.

The development of oral speech and thinking, in turn, strengthens students' commutative skills, their ability to express thoughts clearly and with evidence. Psychological foundations also help to form students' social skills, since these activities directly affect their personal relationships, cooperation and problem-solving processes. At the same time, by taking into account psychological trends in education and introducing new, effective methodologies, it expands the opportunities for developing students' general intelligence and age-appropriate skills. Each student, along with his or her own individual characteristics, reacts to the material being taught, and this process is carried out more effectively through psychological foundations.

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