

CONDITIONS FOR THE FORMATION OF STUDENTS' COGNITIVE INTERESTS.

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Abstract

The article is devoted to one of the urgent problems of modern mathematical education - to activate students' cognitive interest. The article shows and describes the factors of various lessons and methods that influence the activation of cognitive interests of 5-6 graders. To demonstrate the theoretical principles, the article presents examples of entertaining tasks aimed at activating the cognitive interest of students.

Key words

cognitive interest, human factor, external environment, educational process, pedagogical conditions, educational content, cognitive activity.

Modern society expects thoughtful, enterprising, creative, broad-minded and well-educated graduates from the school. In this regard, the search for new content and new forms of teaching continues in the field of education, new educational technologies are created, because the changes taking place in society determine the priority directions for the development of general education. One of them is to ensure the transition to new educational standards, the development potential of which is provided by a systematic activity approach.

According to the new standards, first of all, it is necessary to strengthen the child's motivation to understand the world around him, to show him that work at school is not necessary to get abstract knowledge from life, but on the contrary. skills to prepare for life, to recognize it, to search for useful information and to apply it in life. The student should become a living participant of the educational process.

The main component of the state standard is the focus on learning outcomes: subject, meta-subject, personal. Today, education is becoming personality-oriented, i.e. aimed at the formation and education of a competent and important person, capable of self-education and striving for self-improvement. The teacher is assigned

the task of stimulating the student based on cognitive interest in various fields of activity [1].

In the learning process, cognitive interest is manifested in feelings towards the subject, asking questions to the teacher, studying additional material, etc.

Analyzing different approaches to the concept of cognitive interest, it was found that psychologists [6] describe cognitive interest as a specially selected direction of the cognitive process of a person, the selected nature of which is manifested in one or another objective activity. 7].

Sources of formation of cognitive interests in mathematics lessons:

content of educational material;

organization of students' cognitive activities, that is, methods and methods used by the teacher in teaching.

During one lesson, each source of cognitive interest does not act alone, but interacts with other sources of interest. The group of incentives available at the first source includes:

novelty of the content of the educational material;

practical importance of knowledge content;

historicity.

Teacher-methodologists emphasize such a quality as deep personal education, which is not reduced to personal characteristics and manifestations, and define cognitive interest as a stable desire of a person for purposeful active-cognitive activity in relation to objects that are important to him (T L Blinov).) or as a specially selected orientation of a person to the cognitive process in a certain field of knowledge (F. K. Savina) [8].

Thus, cognitive interest is the satisfaction of the student's needs for learning a specific subject activity, including self-study and self-development (self-management). can be defined as ability.

Innovations in the educational process allow expanding the definition to include elements of activity. The teacher should create conditions for the student to independently define his educational goals, to set new tasks and develop them, to develop his motivations and interests for his educational activity; the ability to independently plan ways to achieve goals; mastering the basics of self-control and self-esteem [3].

One of the important factors affecting the activation of cognitive interest is the creation of effective and efficient conditions for the development of children's cognitive abilities, intelligence and creativity, and for expanding their worldview. An integral part of the successful implementation of these conditions is motivation.

For example, for 5-6th grade students who are in a new environment with new teachers, new requirements, it creates a lot of stress for the student. It is important for him to meet the requirements of teachers, and the need to communicate with his peers increases. Motivation and successful educational activity decrease because... it is difficult for the student to absorb a large amount of new knowledge, he cannot use his intellectual potential. In order to activate the cognitive interest of such students, it is necessary to motivate them with success: to avoid failures, to encourage them to achieve personal success, to maintain self-esteem and self-esteem, or increasing, and then fearing the extent of the student's emerging responsibilities. disappears.

At this age, the student develops the ability to act by means of representation, master analysis and synthesis operations, concrete thinking skills, and the transition to formal operations begins. So, the student will be able to independently analyze problems and find solutions. All types of thinking begin to develop: abstract, hypothetical (thinking with assumptions), reflective. There is an ability to maintain attention to logically organized material, a desire for independence, a desire for generality, and a tendency to ask questions [5].

Thus, this is a favorable period for intensive formation of theoretical thinking. And the best way to organize a young teenager will be an activity where he will not have the opportunity to be distracted for a long time, will be able to express himself and will be interested in himself and his classmates.

Currently, there are many ways to organize the educational process, for example, a test lesson, an excursion lesson, a master lesson, a conference lesson, a problem situation, an oral journal, etc. This type of activity helps to activate the cognitive interest of students and to form the ability to regulate [4].

One of the ways to activate cognitive interest is to use non-standard and interesting tasks in mathematics lessons. The teacher should be able to reformulate the problem in a way that arouses interest in solving it.

It is also very useful to use humorous problems to develop students' mathematical skills and develop their interest in mathematics [2].

For example:

Task 1. Winnie the Pooh and Piglet visited each other at the same time. But since Winnie the Pooh made another "noisemaker" all the way, and Piglet was counting the flying crows, they did not notice each other when they met. After the meeting, Piglet approached Winnie the Pooh's house 4 minutes later, and Winnie the Pooh approached Piglet's house 1 minute later. How many minutes did each of them walk?

Answer: Winnie the Pooh was 3 minutes away and Piglet was 6 minutes away

Problem 2. The length of a rectangular garden plot is 86 m, and the width is 39 m. Calculate the perimeter and area of the plot.

Let's formulate the problem differently: "The length of our rectangular plot is 86 m, the width is 39 m. The fox started coming to us at night. And there are more problems than that. He steals one chicken and devours the rest, leaving none alive. Will 260 linear meters of wire mesh be enough to fence our site? What land does this fence protect? "

Problem 3. How to arrange 45 rabbits in 9 cells so that all cells have different rabbits?

This task can be offered in the 5th grade. This problem should not end with the answer: $1+2+3+4+5+6+7+8+9=45$. The answer is an interesting math fact to remember: the sum of all one-digit numbers. the number is 45.

Problem 4. There are rabbits and pheasants in a cage. There are a total of 7 heads and 22 paws in the cage. How many rabbits and how many pheasants are in the cage?

Work on the task is carried out in three stages.

Students' independent search for a solution to the problem. For 10-15 minutes, schoolchildren look for a possible solution to the problem (individually or in pairs).

Discuss the obtained results, determine a reasonable solution.

Method 1: selection method: 4 rabbits, 3 pheasants. This method is the most common among student responses. When discussing it, it is necessary to explain why this method is not always wise when solving this type of problem, and we should continue to look for other solutions.

Method 3. Guessing method. It is necessary to pay special attention to the mastery of this method by all students, because this method will be used to solve this type of problems in the future.

The overestimation method (assume there are only rabbits in the cage) and the underestimation method (assume there are only pheasants in the cage).

Independent preparation of assignments by students. How students change the status of the assignment (content

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