



## FEATURES IN THE ACTIVATION OF EDUCATIONAL AND COGNITIVE ACTIVITY IN TEACHING NATURE

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### Abstract

The issues of enhancing the educational and cognitive activity of students are one of the most pressing problems, including both social and psychological aspects. The first of them is that at this stage of the development of our society, profound transformations are taking place in all spheres of people's lives - material production, social relations, and spiritual culture. All this requires from a young person entering an independent life, the most modern education, high intellectual and physical development, deep knowledge of the scientific, technical and economic foundations of production, a conscious creative attitude to work. The purpose of the article is to study and analyze the work of leading teachers and psychologists on the subject of nature and to develop methodological materials to enhance the educational and cognitive activity of students.

**Keywords and phrases:** psychology, activity, needs, regularity, quality, mental activity, concentration, stability of attention, general tone

### Introduction

Human development occurs in activity, and the regularity of this process is such that the more active a person's activity, the more intensively his development proceeds. Active formation of personality in students' age is carried out in the process of the leading type of activity - teaching. The result of training, first of all, is the formation of various mental actions. This means that the effective formation of cognitive activity will necessarily lead to an increase in the effectiveness of the educational process as a whole.

The problems of activity, its content and structuring are given an important place in the works of many psychologists. In the works of A.N. Leontiev, the psychological structure of activity is considered. According to him, the activity has the following components [1]:





need motive goal conditions for achieving the goal (the unity of the goal and conditions constitute the task) and the activity action of the operation correlated with them.

The philosophical interpretation of activity is as follows: “Activity is a specific, human form of relations to the surrounding world, the content of which is its expedient change and transformation in the interests of people.

From the point of view of psychology, activity is an active interaction with the surrounding reality, during which a living being acts as a subject, and thus satisfies its needs.

The effectiveness of training is directly dependent on the level of activity of the student in this process. The student's activity in this learning process is considered by us as cognitive activity. Signs of cognitive activity of students: a) attitude to learning (what they see as the meaning of learning, the regularity and quality of homework preparation); b) the quality of knowledge (knowledge of the program material, the ability to apply it in practice); c) characteristic features of educational activity (mental activity, concentration, stability of attention, general tone in work, degree of higher activity, emotional-volitional manifestation); d) attitude towards extracurricular cognitive activity (enthusiasm, consistency, orientation) [2].

The study of motives in learning among students, conducted by M.V. Matyukhina, showed that their motivational sphere is a rather complex system. The motives included in this system can be characterized in two ways: by content and by state, level of formation. According to the content, the motives of the teaching of students can be divided into: 1) educational and cognitive, related to the content and process of learning; 2) broad social, associated with the entire system of life relations of students. As for the state of the motivational sphere of a student, it is characterized by such properties as the degree of awareness of the motives that encourage the student to learn; understanding of their significance, a measure of the effectiveness of the motive. The content of these characteristics gives an idea of the degree of formation of one or another type of motivation.

Along with the content of the educational material, the methods by which training is organized, and students are included in the learning process, play an important role. The main scientists include problem-based learning methods. Among them are:

1. Problematic presentation of knowledge. The teacher shows solutions to the problem, “thinks aloud”.
2. Heuristic conversation. The teacher poses a problem, presents the educational material, but with the help of separate questions.



3. Research method of teaching. Its use is possible provided that students are able to carry out all stages of search activity [3].

Setting cognitive tasks for students always creates a problem situation, during which they may experience certain difficulties.

Independent work plays a significant role in activating the cognitive activity of student as a teaching method. In the educational process, it develops the cognitive abilities of students, improves the culture of mental work and makes the acquired knowledge meaningful and deep.

The main method of developing value relations to nature is the study of objects and phenomena of the surrounding reality on the basis of systematic observations. They contribute to the development of the emotional-sensual sphere of students; independence of thought; such logical operations as the ability to collect and accumulate facts, develop the skills of analysis and synthesis, comparison and analogy. In the process of observation, a very important quality of a person is formed - Observation, i.e. the ability to notice in objects and phenomena the essential, often subtle, not distinguished from the environment.

In the nature course, much attention is paid to identifying the properties of natural objects, establishing the causes of phenomena, connections and relationships between objects and phenomena. To this end, the program provides for the extensive use of experiments. In the pedagogical literature, experience is considered as one of the teaching methods, consisting in the practical or theoretical transformation of the conditions in which the phenomenon occurs, in order to establish or illustrate a certain theoretical position”.

Compared to simple observation, experience is a more complex form of studying nature, since he suggests:

1. Active influence on the studied phenomenon or object;
2. The ability to correlate the phenomena and processes observed in experience with what happens in nature, and draw conclusions;
3. Specially prepared conditions for the event.

When setting and using the results of the experience, students receive new knowledge and acquire skills; they are convinced of the reality of natural phenomena and their material conditionality, they check in practice the correctness of theoretical knowledge; learn to analyze; compare the observed; draw conclusions from experience. In addition, experience teaches students to be accurate, accurate, develops their thinking, i.e. requires the search for ways of knowing wildlife.

Practical work is a type of activity where motor movements are combined with mental activity. The purpose of practical work can be different: some of them form and







improve nature knowledge, others - practical skills and contribute to a deeper and more solid assimilation of the material being studied. The effectiveness of practical work will be higher if they are carried out systematically, from the beginning of the study of the nature course, with a gradual complication of the given material, and students' independence in their implementation. Practical work can be used in the classroom: when explaining new material, consolidating what has been learned. Their use ensures the active activity of student, tk. helps to comprehend the material more deeply, to assimilate it, contributes to the development of thinking and imagination, because such work is based not on stereotypical repetition, but on setting and solving a new practical problem that requires the use of knowledge, skills and abilities [3].

Attracting works of fiction to the study of nature enriches the educational process. Skillfully included in the lesson excerpts from stories, fairy tales, epics enliven the teacher's story, awakens and maintains the interest of students.

Each of the methods of increasing the activation of cognition performs a specific function depending on the form of organization of learning. The institute has developed a wide variety of forms of education. These are: a lesson, an excursion, additional classes, circles, homework. But it must be borne in mind that learning will be successful if the teacher is able to observe the unity of educational and upbringing tasks, arouse interest in learning, develop and encourage the independence of student, and be able to organize collective, group, individual work with them [4].

A large place in the lessons of nature is occupied by such a form of organization of educational work as an excursion. On the excursion, the main methods of enhancing student's knowledge of nature are observation, independent work, and conversation. Excursion provides the greatest opportunity to enrich the student's mind with living concrete ideas. In addition, working directly in nature instills in students an attentive, thoughtful attitude towards them and nature itself, a sense of love for their native land, the ability to see beauty in the world around them.

Overall, in order to enhance the educational and cognitive activity of students in the lessons of nature, they use educational content, entertaining material, problem-based learning, independent work, observations, experiments, practical work, visual teaching aids, an excursion, and the creation of positive motivation.

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