

THE IMPORTANCE OF INNOVATIVE METHODS IN INCREASING THE COGNITIVE ACTIVITY OF 7th GRADE STUDENTS

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Abstract

The article discusses methods and techniques for deepening the content of education, the development of skills and skills of independent work through the activation of cognitive activity of students in the process of teaching biology. Teaching a student not only the methods of performing given cognitive tasks, but also leads to results only if he is motivated to independently perform these tasks in various innovative ways.

Keywords: science, research, cognition, activity, innovation, method, approach, skill, personality.

Currently, modern education requires deep and thorough education of schoolchildren. To implement this, the most important problem of the educational process is the use of new methods in the lesson. He is considered a leading person with high knowledge and skills only when he works creatively, is passionate about novelty in modern education, and masterfully owns new technologies of teaching and upbringing. Head of State Nursultan Nazarbayev noted that "those who work and live in the future are today's schoolchildren, as their teacher educates them, Kazakhstan will be at the same level. Therefore, the task assigned to the teacher is difficult " [1].

The first substantiated actions of the XVI – XVIII century on children's activity (Ya. A. Komensky, J. J. Rousseau) and the support of these positions by A. Disterveg, K. D. Ushinsky and other progressive teachers of the XIX century confirm the methodological assessment and confirmation of the essence of human activity at the physiological and psychological level (I. V. Sechenov, V. M. Bekhterev, I. P. Pavlov, L. S. Vygotsky, S. L. Rubinstein, A. Leontiev).

The basis of the teaching methodology for the development of cognitive curiosity was laid by Ya. A. Komensky. He said: "The beginning of cognition is from feelings, when a child is not aware, no changes occur in his thinking. Learning should be developed in the student by observing this subject, and not by words about the subject." "I always consider independent observation of my student in practice as a means of achieving basic success in education" [2].

For cognitive education of students, first of all, it is necessary to adhere to the principle of awareness in teaching, because it is known that in the process of teaching nature, the external environment, and life in general, educational tasks are also solved.

It can be said that the activation of the cognitive activity of the student is the activation of the ability to think. We can say that each subject has a lot of cognitive education for students, including biology, and the ability to develop students' mental and cognitive abilities.

In accordance with the program of the educational content of the discipline biology, guided by the principles of life, for the educational purpose of the lesson in addition, it contributes to the implementation of the cognitive goal. This student it leads to understanding the relationship between the external environment and a living organism, to mastering the laws of nature.

Each step of a student in improving his educational skills and abilities in a deep understanding of the meaning, laws of natural phenomena, social and social life expands his worldview.

Biology is one of the most qualified subjects that can help a student in his activities in society, give him the knowledge necessary in everyday life. Therefore, raising the status of the subject of biology with the help of knowledge, skills and abilities is the task of future biology teachers.

In our work, we have studied the types of work performed in the direction of improving cognition.

Technology-comes from the Greek word meaning techno (art, craft, science) and logos (concept, training). Modern technologies in education are considered as a means of implementing a new educational paradigm. Trends in the development of educational technologies are directly related to the humanization of education, contribute to self-awareness and self-realization of the individual. The term "educational technologies" is more capacious than "learning technologies", since learning also includes an educational aspect related to the formation and development of personal qualities of students.

Pedagogical technologies are complex systems of methods and techniques united by priority educational goals, conceptually interrelated tasks and content, forms and methods of organizing the educational process, where each position leaves an imprint on others, which ultimately creates a certain set of conditions. Educational technology is a system of techniques, steps, the sequence of which ensures the solution of the tasks of teaching, upbringing and personal development of the student, and the activity itself is presented as a procedural, that is, a system of certain actions; the development and procedural implementation of the components of the pedagogical process in the form of a system of actions with a guaranteed result is considered. . The task of teachers is to change traditional education aimed at accumulating knowledge, skills, and abilities in the process of forming a child's personality. To implement the cognitive and creative activity of the student in the educational process, modern educational technologies are used to improve the quality of education, effectively use school time and reduce the proportion of reproductive activity of students by reducing the time allotted for homework. Modern educational technologies are aimed at individualization, distance and variability of the educational process, academic mobility of students regardless of the level of education and age. The school presents a wide range of pedagogical technologies used in the educational process.

Before explaining a new topic, the teacher should ask himself three questions: 1. Why am I teaching? 2. Why am I studying? 3. How do I study? If the first question is answered by the educational standard, then the second question is answered by the chosen profession " "how do I teach?"the answer to the question is the teacher's skill, new teaching methods.

A teacher can continue to invent new teaching methods, no matter how well educated, has strong feelings and strong thinking. If the lesson should be connected with the everyday life of today, because the processes of education, upbringing, and labor development go hand in hand.

Each lesson conducted by the teacher plays a crucial role in the development of the student as a person. The quality of students' knowledge directly depends on the teacher's lecture skills and the ability to effectively use new technologies, i.e. professional competence. For a student, each subject studied at school occupies a special place [4].

And in order to increase the student's interest in the subject, the task of each teacher is to organize each lesson correctly, update it with searches.

He:

- Conducting a daily lesson (especially the unusual organization of the introductory part of the lesson, the use of unprecedented types of games, the use of crosswords, puzzles, problem-based learning, combining with life, creating conditions for the creative work of each student)

- To state the logic of the difficult, to state the complex with attractiveness, hypersensitivity

- Short, basic training version

And in improving the quality of teaching, the teacher:

- Application of new didactic methods,

- Change the types and methods of classes.

- Development of knowledge, skills, and skills of the student

Activation of student participation in competitions, Olympiads, scientific conferences.

Increasing the cognitive activity of students in biology lessons-level learning, developing learning through problematic issues, etc. Learning by innovative methods, combining learning with life leads to the expected result only when creating conditions for the creative work of each student. Therefore, the main task of each lesson is to develop the cognitive competence of the student.

To do this, it is necessary to take into account:

- Take into account the specifics of the student's perception of the material.

- Formation of personal qualities of the student

- Organization of an individual learning process.

Ways to improve cognitive abilities:

- Correlate, connect information with life

- Creating a problem situation.

- Learn to compare, analyze, generalize.

- Development of science and technology.

The process of cognition is a very complex process. The increase in the capital of education also depends on this. A special contribution to the increase of cognitive activity is made by

the discipline of biology. And the main condition for increasing the cognitive activity of students is problem-based learning. Search is the activity of students aimed at solving educational and cognitive problems. From the totality of the ways of its organization, a research method is born, and the problem is solved from it[3]. The main goal of the problem set before us is to increase cognitive activity, thinking of students during extracurricular and after-school hours, instilling skills of independent work. It is possible to increase the cognitive activity of an individual student. As a result:

1. the level of students' cognition is expanding.
2. the tendency to the subject itself, which seems difficult to them, incomprehensible, increases activity.
3. students' honor activity increases, for example, "do I know how to study less than another classmate".

Cognitive biology training includes the following questions:

In our work, innovative methods and techniques for increasing the cognitive activity of students are identified. At the same time, practical classes in school biology are of great importance.

Cognitive activity is a very active mental activity of a student in relation to knowledge. It is formed from cognitive needs, goals, cognitive logic and cognitive activity of students based on activity. Cognitive interest and

Conducting experiments in biology arouses children's interest in research. Draws the work seen and done.

Some children like that they put the experience themselves. When setting up any experiment, it is necessary to strive to increase the cognitive abilities of students with each lesson.



Fig. 1,2. Shaped elements of blood

Biology is a very important subject for children. Every child is interested in both plants and the secrets of his body in an animal. That's why I developed a model of blood composition in the 8th grade. A very simple, time-consuming experiment opened the way for students to a deep understanding of the internal stability (homeostasis) of the function of the elements of

the composition of a blood drop. Any child was injured and was familiar with the feeling of pain. I saw a drop of blood. Why is the color of blood red? - we found the answer to the question ourselves today.

We need to experiment :

1. a large glass jar (I took a jar), another small bowl, a spoon.
2. red beads (I have big red beads)
3. Small white beads or round objects, white facade.
4. water.
5. drawing paper.

To create a model of the composition of blood, we pour water into a glass jar and put several objects in the shape of perfume, red beads and large white beads and small white beads. We explain to the students:

Water is plasma, blood cells move in this liquid.

Red balls are red blood cells that contain a red protein, this protein provides oxygen transport throughout the body.

Small white balls are platelets. When blood vessels are damaged, they act like a plug.

Large white balls are white blood cells that serve to protect our body from harmful enemies (bacteria and viruses).

We put filter paper on top of the seed canal and immerse its end in water. After 1-2 days, we observe the phenomenon of geotropism, in which the root is not damaged. And in the sample with the damaged tip of the root, "geotropism" was not observed. It remained horizontal. Conclusion: a geotropic reaction was observed in the meristem of the root tip.



The phenomenon of root geotropism

Fig. 3, 4. Experiment with the phenomenon of geotropism

If so, then interesting lessons are the teacher's discoveries, his own signature, methodical search, achievements, honorary title, goal-ideals. Didactically properly organized independent work allows you to deepen, supplement knowledge, form skills and abilities, arouse interest in cognitive activity, master the methods of the cognitive process, develop cognitive abilities, increase the culture of independent work of a person, create opportunities for creativity and work and engage in scientific work. During the lesson, the student has cognitive activity, then the students develop the following elements of mental abilities: intelligence, attentiveness, observation, independence of thinking and speech, deepens interest. The ability to work independently with curiosity, i.e. to choose educational material, to perceive and master new things, to be able to apply the acquired knowledge in practice, to choose optimal methods, to strive to achieve a certain result, etc. is a prerequisite for the formation of creative independence of students. Creative independence, the ability and skills of independent work do not arise by themselves, it is the result of purposeful educational activity and, in turn, is formed in the process of performing various tasks of a creative, practical nature[4]. Thus, innovative teaching methods combined with public social life and science-knowledge expand the student's worldview, teach self-affirmation.

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