

## THE ROLE OF SOLVING PROBLEMS AND EXERCISES IN BIOLOGY IN THE ACTIVATION OF COGNITIVE ACTIVITY OF STUDENTS

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### Annotation

The use of innovative technologies, including personality-oriented, in the process of teaching biology allows us to form the concept of self-development of students as a person. In particular, when teaching biology, it is possible to achieve the activation of their cognitive activity with the help of mass exercises.

**Keywords:** personality, cognitive activity, PISA, TIMSS, traditional education, modular training, integrative application, communicative components.

State order in the education and education system of the Republic of Uzbekistan in the new taxrir, pp. 637 23.09. The law "on education" "2020 has found its expression in the decree of the president of the Republic of Uzbekistan" on approval of the concept of the development of Science until 2030 " PF-6097, as well as in state standards and educational programs. The person is considered the main subject and object of the educational system, the consumer of services in the field of education and their implementation. Raising young people who are educated as individuals, spiritually-moral mature, physically strong, loyal to their homeland and people, who have integrated the National idea into their consciousness, who have matured in every possible way is a task that is currently relevant and of State importance.[1,2.]

In subsequent years, the role of biological science, as well as educational disciplines, in the upbringing of such a harmonious personality is growing exponentially. This is understandable, of course. It is now clear to many that the solution of the food problem, the protection of nature, the study of hereditary diseases, the development of measures to improve human health, the conquest of the universe, the acquisition of a template in technique from the structure and function of living beings and other similar issues are inextricably linked with the development of Biological Science. The provision of quality knowledge to students, students from biology is inextricably linked with the acquisition of their interest in the study of the basics of Science, the activation of cognitive activity, the development of skills for obtaining independent knowledge. There are several forms and methods of activating the cognitive activity of Students, Students, developing skills and abilities to acquire independent knowledge. Among them, a special place is occupied by solving issues and performing exercises.

But from experience it turns out that most students and students master the content of the subject blank. One of the reasons is that when teaching biology, little attention is paid to performing exercises and solving issues in practical classes. This, in turn, negatively affects their comprehensive development, assimilation of biological knowledge and its use in practice. [3;3-4p]

Assessment of the cognitive activity of students plays a special role in the formation of their knowledge. For Suning, scientific research is being carried out in the world in such studies as international programs for assessing students' literacy in mathematical and Natural Sciences (PISA, TIMSS) on the design of independent work of students in teaching biology, the creation of information resource supplies aimed at professional fields. The theoretical significance of these studies is seen in the use of technologies such as natural sciences, including updating the methodological support of teaching biology, increasing the possibilities of interdisciplinary communication and modular education, the introduction of an online system of control and evaluation of independent work as a practical value, virtual laboratory classes, web quest. The reforms carried out in our country to create the material and technical base of educational institutions, the

necessary conditions for the pedagogical activity of teachers, to support students of general secondary schools and academic lyceums, to increase the effectiveness of teaching natural sciences, including biological advanced pedagogical and modern information technologies, opportunities such as the use of a multimedia educational resource create the need to improve the methodological conditions for the use of information resources in teaching information Biology in teaching biology. In the strategy of actions for the further development of the Republic of Uzbekistan, the priority task is “to teach, improve and develop the quality of secondary special education in a deep way such important and high-demand subjects as Chemistry, Biology, Physics, Mathematics, Computer Science, Foreign Language.” [4; 3 p]

In order to solve the above-mentioned tasks and eliminate the shortcomings of the traditional educational system, to increase the effectiveness of the educational process, it is advisable to organize training in individual and small groups, in addition to gross training of students' cognitive activity.

In order to effectively organize and manage the cognitive activity of students, the biology teacher must perform the following steps:

1. In what form to organize the cognitive activity of students, based on the educational, educational and developmental goals of the studied topic;
2. Design of cognitive activity of students;
3. Setting ways to implement the intended goal from training;
4. To analyze the result obtained from the cognitive activity of students during the lesson and check its feasibility;
5. Making appropriate changes to the project of cognitive activity of students if necessary. [5; 8-9 p]

When organizing the cognitive activity of students, it is necessary to note the need for the formation of the educational process in a holistic, one-system State, knowledge, skills and competencies with each other. It should be noted that in order to increase the effectiveness of teaching in biology lessons, the current traditional teaching, modular education work in small groups, conference, press conference of didactic Game Technology, game-exercises, role-playing games, methods of collaborative learning technology “saw”, “work in small groups”, “training in a team”, “brainstorming” of problem learning technology, “discussion” are used by students, creates the possibility of developing communicative competencies at the time of the formation of skills and abilities. [6; 44-51 p]

### **List of Used Literature**

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6. K.A. Rakhimov, abstract.