

WAYS TO INCREASE EDUCATIONAL EFFICIENCY IN TEACHING BIOLOGY

Muhitdinov Shavkat Muhamedjanovich

Associate president professor, Department of medical biology

and general genetics, Samarkand state medical university

Abstract: by using modern pedagogical technologies, interactive lessons and practical experiences in the process of teaching biology, it is possible to increase students' interest and consolidate knowledge. Also, strategies aimed at ensuring the active participation of students, developing their independent thinking skills and improving teamwork skills are discussed.

Key words: interactive lessons, modern pedagogical technologies, innovative methods, teaching methods, practical experiences, student activity.

Annotatsiya:biologiya o'qitish jarayonida zamonaviy pedagogik texnologiyalarni, interaktiv darslarni va amaliy tajribalarni qo'llash orqali o'quvchilarning qiziqishini oshirish va bilimlarni mustahkamlash mumkin. huningdek, o'quvchilarning faol ishtirokini ta'minlash, ularning mustaqil fikrlash qobiliyatlarini rivojlantirish va jamoaviy ish ko'nikmalarini oshirishga qaratilgan strategiyalar ham muhokama qilinadi.

Kalit so'zlar:interaktiv darslar,zamonaviy pedagogim texnologiyalar,innovatsion usullar,ta'lim metodlari,amaliy tajribalar,o'quvchilar faolligi.

Аннотация: используя современные педагогические технологии, интерактивные уроки и практические занятия в процессе обучения биологии, можно повысить интерес учащихся и закрепить знания. Также обсуждаются стратегии, направленные на обеспечение активного участия учащихся, развитие их навыков самостоятельного мышления и улучшение навыков работы в команде.

Ключевые слова: интерактивные уроки, современные педагогические технологии, инновационные методы, методы обучения, практические занятия, активность учащихся.

It is known from biology that our ancestors also conducted a number of studies on the improvement of education based on pedagogical technologies. Great scholars of the East such as Musa al-Khwarizmi, Ahmad al-Farghani, Abu Nasr Farobi, Abu Rayhan Beruni, Mirzo Ulugobek, in their works, emphasized the great importance of using various methods and means of education in schools and madrasas to bring a person to intellectual maturity. In the current education system, a new conceptual pedagogical technology of acquiring knowledge requires the use of non-traditional educational technologies. Non-traditional educational technology: It is divided into collaborative learning, modeling, research (project) technologies and is carried out on the basis of an integrated system. The main concept of pedagogical technology is, of course, a systematic approach to the educational process. Non-traditional teaching methods are the basis of the cooperation of the teacher and the learner in achieving the educational goal. While analyzing and studying ways to increase the effectiveness of education in teaching biology. Our biological thinkers explained the effective ways of organizing the educational process as follows.

Ibn Sino attached great importance to the issue of teaching and educating a child at

school and devoted a special section of his work "Tadbir ul Manozil" to this issue. The section of the book "Teaching and educating a child at school" deals with the involvement of a child in school. He emphasized that all children should be involved in school and all children should be educated and educated together. He was against teaching a child individually at home, and expressed the benefits of teaching a child in a team at school as follows:

1. If children study together, they will not get bored, they will develop an interest in learning the subject, they will try not to lag behind each other, and they will develop a desire to compete. All this will help improve their reading.
2. In conversations, children will tell each other what they have read in books and heard from adults.

In order to increase the effectiveness of the biology teaching process, the following should be considered:

- To select means, methods and forms in accordance with the content of the teaching process to achieve the goal. Their compatibility with the motivation, needs and interests of students.
- To design the teaching process, select means to achieve the content of the teaching process and the goal, convey the teaching material using various methods and achieve conscious mastery.
- To carry out the learning operations of students, effectively organize the educational work of teachers and students.

In order to increase the effectiveness of the biology teaching process, the following should be considered:

- To select means, methods and forms in accordance with the content of the teaching process to achieve the goal. Their compatibility with the motivation, needs and interests of students.
- Designing the teaching process, selecting the content of the teaching and the means to achieve the goal, delivering the teaching material using various methods and achieving conscious assimilation.
- Performing the learning operations of the students, effectively organizing the educational work of the teacher and the students.

The teacher's work is to organize and manage the educational and cognitive activities of the younger generation in accordance with the content of education in order to harmoniously develop their mental, moral, spiritual, and physical abilities. It consists of the following:

- Selecting, systematizing, and logically designing educational material;
- Choosing teaching aids, methods, and forms that allow students to perceive, understand, and consciously master the educational material;
- Organizing the pedagogical process as a whole in accordance with the educational goals of each student, achieving their mastery of the knowledge system and methods of mastering knowledge;
- Planning their own and students' activities during the lesson;
- Determining methods for organizing and stimulating students' conscious and active activities aimed at mastering methods of mastering knowledge and skills;
- Identify ways to improve the quality of students' performance of educational tasks;
- Identify future activities to be carried out for monitoring, analyzing learning outcomes, and developing students' personalities;

- In accordance with the results of the learning process, make appropriate changes to the organization and management of this process;

Biology expands the scope of students' knowledge by studying nature and its laws. Interactive lessons ensure the active participation of students. Teachers should use various methods in the lesson process, such as group discussions, role-playing games and other interactive methods. This helps students better understand biological processes. Modern technologies, such as presentation programs, video materials and online platforms, can make lessons more interesting. Preparing visual materials for students increases their interest and helps them to master the subject more deeply. Laboratory work is important for studying the practical aspects of biology. Students have the opportunity to apply their theoretical knowledge in practice by conducting experiments. This develops their analytical thinking skills. Organizing excursions to nature allows students to directly observe biological processes. By going out into nature, studying the world of plants and animals, students understand biodiversity and pay attention to environmental issues. Project-based learning allows students to think independently when solving problems. Students learn to apply their theoretical knowledge in practice by working on biology-related projects. It is important to ensure that students are actively involved in the lesson. Teachers should increase their activity by asking questions, conducting discussions, and encouraging students to express their opinions. Students should be given a variety of tasks to develop independent thinking skills. For example, by solving biological problems or conducting research, students learn to think independently. To develop teamwork skills, it is necessary to form groups and work on team projects. This helps students to exchange ideas with each other and develop new ideas. Students can strengthen their theoretical knowledge by conducting practical experiments in biology. It is important that practical experiments are interesting in themselves and bring new knowledge to students. The use of interesting and interactive materials in lessons attracts the attention of students. Animations, video materials and interactive simulations help to understand biological processes. To increase the effectiveness of education in teaching biology, it is important to use modern pedagogical methods, ensure interactivity and expand practical experiments. By implementing these methods, teachers can interest students in biology and further deepen their knowledge. This will serve to develop their scientific thinking skills in the future.

References

1. Tolipova J.O., Gafurov A.T. Biology teaching methodology. Textbook for students of pedagogical universities. - T.: Finance-Economy, 2007.
2. 5. Tolipova J.O., Gafurov A.T. Biology teaching methodology. Educational and methodological manual. - T.: "Bilim" 2004.
3. 6. Azimov et al. Biology. Methodological manual. - T.: Abu Ali ibn Sino Medical Publishing House. 2002.