

**METHODOLOGY OF USING INTERACTIVE METHODS IN BIOLOGY LESSONS*****Madina Imomova Botirovna****A doctoral candidate at the National Institute of Educational Pedagogy named after Qori Niyazi, Uzbekistan***ABOUT ARTICLE**

Key words: Natural and scientific literacy, pedagogical technology, non-traditional method, innovative approach, educational and methodological complex, interactive method, integration, educational process.

Abstract: This article discusses the development of scientific literacy in biology among secondary school students through innovative approaches, the application of interactive methods to biology, and the design of biology lessons based on interactive methods.

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INTRODUCTION

Today, existing and developing new technologies have a huge potential to transform the education system. The introduction of information and communication technologies into the education system has been proven to be a necessary tool for creating opportunities for children and adolescents with mental and physical development problems. Therefore, serious attention is being paid to this issue when developing educational policies by various countries. Lessons prepared using information and communication technologies are not limited to providing opportunities for children and adolescents with mental and physical development problems, but are now creating opportunities for healthy children and adolescents, as well as adults who have graduated from school, to learn information and knowledge in each subject while sitting at home.

Literature review

Today, the further development of our country and its place among the leading developed countries of the world largely depends on the growing generation. Therefore, it is a priority for every educator working in the education system to fulfill his or her responsibility and duty to educate and nurture today's youth, to organize educational processes in a high-quality and effective manner based on modern educational technologies. After all, in 2019, the President of the Republic of Uzbekistan developed the Concept for the Development of the Higher Education System of the Republic of Uzbekistan until 2030. This concept envisages the development of the higher education system based on the needs of the social sphere and economic sectors, improving the quality of education, training

competitive personnel, effectively organizing scientific and innovative activities, and developing international cooperation.

One of the pressing problems of the present time is to improve the quality of the education system and provide quality education to students. This requires teachers to effectively use interactive methods, make the right choice and arouse interest in students. At the same time, one of the main issues is that teachers should work more on themselves and search for new interactive methods.

RESULTS

About the concept of new pedagogical technology in teaching subjects.

Although the concept of "new pedagogical technology" or "innovation" has been used in recent years, its roots go back to the distant past. Great thinkers of the Middle Ages such as Omar Khayyam, Abu Nasr Al-Farabi, Abu Ali Ibn Sina put forward the idea of learning based on research.

In his "Mathematical Treatises," Omar Khayyam notes the need to teach based on the following exhortations: "Think a little, and you will find," and "Think and you will know." Abu Nasr al-Farabi teaches that the basis of understanding and knowing material existence lies in thinking.

The currently widely used "New pedagogical technology" (or the application of innovations in practice) is interpreted as the use of non-traditional methods. Many reviewers and teachers understand the use of game tasks in biology lessons, as well as the organization of lessons in various forms, as new pedagogical technology. In our opinion, new pedagogical technology consists of two elements:

1. Correctly define the content of biology education.
2. Use modern methods and tools that are consistent with the defined educational content.

New pedagogical technology is based on the balance between "teacher + learning task + student". The learning task is an important unity connecting the activities of the teacher and the student, which requires the teacher to be viewed as the organizer and manager of the educational process, and the student as a subjective (active) worker of this complex process.

Now the student is not the object of the educational process, the recipient of the information provided, but rather a creative and active performer of the assigned learning tasks. This, in turn, requires a new approach to the use of learning tasks.

Nowadays, modern teaching methods are widely used in the educational process. The use of modern teaching methods leads to high efficiency in the educational process. It is advisable to choose these methods based on the didactic task of each lesson.

Currently, in a number of developed countries, methods that form the basis of extensive experience in the use of modern pedagogical technologies that guarantee the effectiveness of the educational process are being developed under the name of interactive methods.

Interactive educational methods are currently the most widespread and widely used methods in all types of educational institutions and in the subjects taught in them.

At the same time, there are many types of interactive educational methods, and there are currently suitable ones for the implementation of almost all tasks of the educational process. In practice, it is possible to distinguish those that are suitable for specific purposes and apply them accordingly. This situation has now created the problem of choosing the right interactive educational methods to implement specific goals.

In didactics, the teaching process is also considered as an activity of the teacher and the student, the research was based on these theories and the following were taken into account.

To do this, the biology teacher should pay attention to the following:

- analysis of the initial situation of biology teaching, selection of content, means and methods to achieve the goal in the teaching process. Their suitability for the mental and physiological state of the students, their motivation, needs, interests;
- design of the teaching process, selection of means to achieve the goal in accordance with the content of the teaching, delivery of educational material using various methods and achieving conscious mastery by students;
- effective organization of educational work (students' activities for a high level of mastery of educational material) of the teacher and students;
- regular organization of feedback in the teaching process, making appropriate changes to the process of control and mastering educational material, and self-control;
- analysis and self-analysis, determining the results of learning and the degree of achievement of the goal;
- organizing the lesson in harmony with other forms of learning (lesson, classroom, extracurricular activities, excursions). In solving these tasks, the teacher, as the organizer and manager of the learning process, plays an important role.

The teacher's activity is the organization and management of the educational and cognitive activities of students in accordance with the content of education in order to harmoniously activate the mental, moral, spiritual, physical abilities of the younger generation.

This activity includes the following stages:

- selection, systematization, logical sequence design of educational material;
- selection of teaching aids, methods and forms that allow students to perceive, understand and consciously master the educational material;
- organization of the pedagogical process as a whole, achieving their mastery of the knowledge system and methods of mastering knowledge;
- planning their own and students' activities during the lesson;
- determining methods of organizing and stimulating the conscious activity of students aimed at mastering the methods of mastering knowledge and skills;
- determining ways to improve the quality of students' performance of educational tasks;
- to determine the measures to be taken in the future to monitor, analyze the results of training and activate the personality of students;
- to make appropriate changes to the organization and management of this process in accordance with the results of the training process.

The teacher's ability to manage the educational process is not limited to making appropriate changes to the educational process, but also involves the formation of moral qualities in the individuals of students who are the subjects of this process, their spiritual growth. To manage such activities, the teacher must first of all plan the types of activities, external and internal factors affecting them, future goals and objectives, and predict the results to be obtained.

The teacher's leadership role in the educational process is to manage the conscious and active assimilation of educational material by students. To do this, the teacher:

- sets scientifically based educational tasks;
- creates a favorable psychological environment that allows students to implement these tasks;
- gives clear instructions on the activities to be carried out to solve educational tasks;
- anticipate the difficulties that students may encounter, provide them with timely and adequate assistance;

– it is necessary to instill in students a sense of mutual cooperation, assistance, sincere communication, duty and responsibility.

- Analysis and results. Each stage of the teacher's activity in the educational process leads to changes in the nature of the activity and personality of students. Therefore, when implementing the activity, the teacher must clearly know and deeply analyze the educational goals of a particular stage, subject and each of its sections, and determine ways to implement them in an evolutionary manner. In the educational process, the activities of students have an educational and cognitive character. The effectiveness of the educational process depends on the degree to which the teacher has mastered the skills of organizing the educational and cognitive activities of students in accordance with the tasks and goals of education. Accordingly, based on the above considerations, the following requirements were put forward for biology teaching:

- development and implementation of effective forms and methods of spiritual and moral education for students in all forms of biology teaching, including lessons, extracurricular activities, and excursions;
- individualization and differentiation of studying biology, independent knowledge acquisition;
- achieving efficiency in biology teaching using new pedagogical and information technologies;
- ensuring the humanistic orientation of education in the process of biology education based on the rich spiritual and intellectual heritage of the people and universal values;
- development and implementation of mechanisms for integrating the achievements of didactics with pedagogical practice in biology teaching;
- development and implementation of a new generation of educational and methodological complexes in biology;
- implementation of providing the educational process with advanced pedagogical technologies;
- improving the spiritual and moral qualities, legal, economic, environmental and sanitary-hygienic education and upbringing of students at all levels and stages of education, based on the principles of national independence and the rich intellectual heritage of the people and the priority of universal values;
- instilling the ideology of national independence in the minds and hearts of students and young people in biology education, raising ideological education to the current level.

The main principles of the state policy of our country in the field of education, the principles used in teaching biology in an integral way to the principle of operating in the continuous education system, the principles of teaching applied in pedagogical practice on the basis of these principles, were determined, the principles of teaching were divided into principles that determine the content and essence of biology education and the direction of the educational process, the requirements for biology teaching in the continuous education system were developed based on the requirements for the educational process in the main ideas of the "National Personnel Training Program", the established principles of teaching, laws and requirements for biology education require the improvement of biological education.

It is clear from this that there are a lot of methods and technologies, graphic organizers that a biology teacher can use in biology, and it is not possible to get acquainted with them in detail in one article. At the same time, it is certain that new teaching methods and technologies will be formed in the future in teaching biology.

In general, the use of methods used in teaching biology to increase the effectiveness of lessons creates a basis for increasing students' interest in biology lessons and biology. This will allow students to deeply master biology information in the future and correctly understand the content of biology education, and

to understand and know modern methods and tools that are in accordance with the content of education. First of all, the teacher himself must have mastered interactive methods well.

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