

CAMPUTER TECHNOLOGY IN BIOLOGY

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Abstract *The results of the study showed that there was a significant difference between the academic performance of students in Biology who were exposed to computer technology and those exposed to the traditional method of teaching. It was therefore recommended that computer technology be integrated into the teaching of Biology to enhance students' academic performance.*

Key words: *computer, technology, academic performance Biology is the study of life. It entails what life needs to survive, what makes life possible and how life forms interact with each other.*

The fact that teachers are able to convey information to students with the help of presentations, videos, tables, handouts, multimedia preparations and presentation tools, shows how high their pedagogical skills are. On the topic of problems in the use of new modern technologies in the teaching of biological sciences, there are such ideas that bringing pedagogical technologies and modern information technologies together in the teaching of biological sciences will further increase the potential of students' mastery.

Since biology is one of the natural sciences, it is more effective to use natural objects in mastering biology. It can be seen that if the student sees the information he has read in the book, the information he has seen on the slide, the concept he has in the tests he has worked with, the ability of the student to learn will increase by two times.

Today, effective methods, types, problems of using new modern technologies in the teaching of biological sciences in higher educational institutions, as well as new modern technologies, tasks, educational tasks, demonstrative tasks, control tasks, developmental tasks, educational tasks, The article discusses the products of the application of new modern innovative information technologies and the goals of new modern technologies with the task of developing the scientific worldview of students. Biology teaching technologies include didactic game technology, problem-based learning technology, collaborative learning technology, design technologies, and traditional technologies. In the teaching of biology, it is necessary to use local pedagogical technologies such as "Cluster", "Venn diagram" and





"Chain of terms". When using a cluster, the students of the class are divided into groups of equal number, they are protected by forming a cluster, and the group that formed the best cluster and described it well is determined as the winner. A Venn diagram is used to analyze, synthesize, and compare concepts. A term chain is a technique about a list of terms in a textbook and their definitions. In this technique, students are divided into groups. Students will have to define the terms or find the terms through the definitions. This method is useful in strengthening memory. One of the most effective ways to teach biology is the use of information technology. The tasks of these are:

The most convenient side of information technology is now that online education is developing in Uzbekistan. In this educational system, the role of information technologies is very large, and the student should learn the lesson without leaving home. The presence of new modern technologies is very important in the teacher's teaching and in the student's understanding of the lesson. The fact that teachers are able to convey information to students through information technology, using presentation, video, tables, handouts, multimedia preparations and presentation tools, shows how high their pedagogical skills are. On the topic of problems in the use of new modern technologies in the teaching of biological sciences, such ideas arise that the combination of pedagogical technologies and modern information technologies in the teaching of biological sciences will further increase the students' mastery potential.

Since biology is one of the natural sciences, it is more effective to use natural objects to master biology. It can be seen from this that if the student sees with his own eyes the information he has read in the book, the information he has seen on the slide, the understanding he has in the tests he has worked on, the ability of the student to learn will increase by two times.

The third component of the content of biological education is creative activity experiences, and in order to develop this activity, first of all, it is necessary to develop independent and creative thinking skills in students. Thought is a spiritual-human quality that constitutes human activity, his own strength, power and knowledge. Since the development of thought is the main driving force of socio-economic development, it is necessary to develop students' independent and creative thinking skills in the process of teaching biology. In order to develop students' independent and creative thinking skills in teaching biology, the teacher should first of all: - create educational tasks for students to work independently in class, prepare instructions for conducting experiments and observations in order to study biological objects, seasonal changes in nature; - taking into account the





interests of students, it is necessary to choose additional literature and multimedia for their independent education; - to develop independent and creative thinking skills of students, it is necessary to use developmental educational technology in the educational process. In developing students' creative thinking skills, the teacher can use the components of creative thinking, in particular, the skills of independent thinking. It should be noted that it is impossible to form and develop creative thinking skills in students without developing the skills of independent thinking. Students should be able to analyze, compare, divide the studied object into components, synthesize, imagine cause-and-effect relationships, generalize and draw conclusions, which are methods of mental activity when acquiring creative activity experiences.

Only then, the characteristics that form the basis of creative activity of students:

- finding new features and functions of familiar objects;
- solving problems in familiar situations independently;
- problem solving by applying knowledge and skills in new unexpected situations;
- can learn to creatively apply acquired knowledge and skills in practice.

An important condition for the development of students' independent and creative thinking skills is to prove and justify their opinions. Therefore, independent and creative thinking skills of students are developed mainly through the use of educational technologies based on modern approaches. In particular, the effectiveness of developing students' creative activities through the use of problem-based, cooperative teaching, didactic game technologies in the educational process is considered high. In the development of creative activities of biology students, it is recommended to give creative research assignments in the form of lessons and excursions related to them, homework, extracurricular activities and extracurricular activities. For example, in the Man and his health training course, a laboratory exercise on the topic "Determining the amount of protein, fat, carbohydrates and energy needed in a person's daily diet" is organized in small groups, and the following tasks are recommended to them:

Group 1. For middle-aged people engaged in mental and light physical work, prepare their food ration in accordance with the amount of energy spent in one night.

Group 2. For middle-aged people who do heavy physical work, make their food ration according to the amount of energy spent in one night.



Group 3. Create a diet for elementary school students based on their daily energy intake.

Group 4. For teenage students, plan their meals according to the amount of energy they spend in one night. Creative research should be organized in the following stages:

1. Determining the goal of creative research, organizing independent work according to this goal, exchanging ideas and information between group members.

2. Visualize the obtained results and design it.

3. Analysis of the achievement of the goal and the obtained result.

4. Make appropriate changes if necessary. In biology education, the use of educational technologies aimed at ensuring the competence of the student's personality and based on modern educational approaches in the development of students' creative activities increases the effectiveness of education.

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