ETHIOPIAN INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY RESEARCH

eISSN: 2349-5715 pISSN: 2349-5707

Volume: 12, Issue 02, February-2025 SJIF 2019: 4.702 2020: 4.737 2021: 5.071 2022: 4.919 2023: 6.980 2024: 7,662

UDC 372.857

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USE OF ELEMENTS OF CREATIVE EDUCATION FOR THE PURPOSE OF FORMING AN ECOLOGICAL CULTURE OF STUDENTS IN BIOLOGY LESSONS

Anotation: This article covers the issues of developing environmental culture in young people when teaching biology using creative teaching methods.

Keywords: environmental culture, creative teaching methods, learning, thinking

Today, the use of modern information technologies in the educational process allows us to improve the quality of educational material and enhance the effectiveness of education. Modern society sets the task of developing personally significant qualities of schoolchildren, and not just the transfer of knowledge, before the teacher. Knowledge is not a goal, but a way, a means of developing a personality. In its simplest sense, biology is the science of life and the development of living bodies. Studying the subject "Biology" at school at the verbal level does not create a correct understanding of the objects and phenomena being studied. Therefore, the main task of biology teachers is the reasonable use of modern visual teaching aids in the educational process. In the modern world, one of the most serious problems of humanity is the environmental problem, which has become global in nature in recent decades. Increased pressure on the environment through consumerist, immoral attitudes towards natural resources and their irrational use, environmental illiteracy have led to severe pollution of all natural environments with waste, the main danger of which lies in the possibility of complete degradation of natural ecosystems .

The global scientific community identifies two main tasks for solving environmental problems:

• taking practical priority measures to overcome the crisis;

• nurturing environmental awareness in the younger generation.

The lesson was and remains the main component of the educational process. The quality of students' preparation is determined by the use of new pedagogical technologies. The use of multimedia technologies is advisable at any stage of the lesson, to develop skills: to generalize, analyze, systematize information, work in a group, find information in various sources. The term “Environmental education” appeared in pedagogical science relatively recently, but the problem of the relationship between man and the environment has been considered throughout the history of pedagogical thought. In connection with the actualization of the ideas of environmental education, the ideas of “nature and culture” and the ability to educate, expressing the desire to consider the process of education and upbringing from the standpoint of the integrity of the human personality, the unity of

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man and nature, society and space, are acquiring special significance . Responsible attitude of students to the environment is the final and desired result of environmental education in school. Environmental responsibility includes a person's understanding of the value of their correct behavior in the natural environment, awareness nature as a national public asset, the ability to foresee the consequences of human behavior in the surrounding nature and a caring attitude towards everything around [10].

The goal of environmental education is achieved in the unity of the following tasks:

- Educational. - the formation of a system of knowledge about environmental problems of our time and ways to resolve them;

Developing. - development of a system of intellectual and practical skills for studying, assessing the state and improving the environment of one's locality; - Development of a desire for active work to protect the environment; intellectual (ability to analyze environmental situations), emotional (attitude to nature as a universal value), moral (will and perseverance, responsibility). Environmental education is the acquisition of knowledge about environmental laws, which allows for a significant reduction in damage to wildlife during human economic activity. Thus, any person who has received at least a minimal environmental education is able to organize their actions in such a way as to reduce or even eliminate this damage. The formation of environmental culture of schoolchildren is carried out both in the educational process, as well as in extracurricular activities and in extracurricular work on the subject.

Forms of environmental work at school can be different:

1. Research (drawing up an environmental passport for the school, making environmental leaflets, studying the composition of air, water, soil, etc.);

2. Competitive (poster, drawing, environmental propaganda team competitions, holding environmental Olympiads, etc.);

3. Game (eco-case, eco-casino, eco-boomerang and others);

4. Educational (lessons-lectures, lessons-seminars, "round tables", environmental briefings, debates, excursions, hikes and others);

5. Productive (planting flowers, trees, landscaping school grounds, environmental landings and others).

The goal of environmental education is to form a caring attitude towards the environment, which is built on the basis of environmental awareness. This goal is achieved as the following tasks are solved in unity:

Educational - the formation of a system of knowledge about modern environmental problems and ways to resolve them.

Educational - the formation of motives, needs and habits of environmentally appropriate behavior and activity, a healthy lifestyle. Developing - development of a system of intellectual and practical skills

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for studying, assessing the state and improving the environment of one's locality, development of a desire for active work to protect the environment . At all times, the relationship between man and nature has been one of the most important factors determining the status of civilization in the history of mankind. The most serious ecological crisis that has struck our planet has made significant adjustments to the relationship between man and nature, and forced us to rethink all the achievements of world civilization. In connection with the global environmental crisis, it is necessary to analyze the relationship between man and nature, on the basis of which to determine how human activity affects the environment. The Constitution of the Republic of Uzbekistan has become a solid legal basis for young people, which reflects the legal and legislative bases for obtaining an education and profession. In particular, in the upbringing of young people and their formation as individuals, an important role is played by guaranteeing the right to education, as well as state guarantees for receiving free general education (Article 4 of the Constitution of the Republic of Uzbekistan). The Law "On State Youth Policy", adopted on September 14, 2016, created a solid legal basis for the upbringing of harmoniously developed, independently thinking, proactive and energetic young people. Environmental education in modern conditions is aimed at the formation of a new environmental consciousness that would contribute to understanding the role of nature in the life of society, personal responsibility, and the state of the environment, a way out of the current environmental crisis. Over the past decades, the use of modern technical means has become a global phenomenon of educational and information culture, which has changed the approach to education in many countries around the world. In our country, only in the last decade have information educational technologies received intensive development, but have already confidently begun to gain their place in the educational process along with traditional forms of education. The need for such a teaching method is due to various factors, among which are: the need for interactive interaction between students and teachers. Creative learning technologies allow solving a number of significant pedagogical tasks:

- creation of an educational space;

- formation of students' cognitive independence and activity;

- development of critical thinking, tolerance, readiness to constructively discuss different points of view [3].

Unique opportunities for advanced training in the national education development program are also opened up for teachers, ensuring the development of the education system in the interests of the formation harmoniously developed, socially active, creative personality as one of the factors of economic and social progress of society. New educational technologies are understood as educational technologies implemented mainly with the use of information and telecommunication networks in the interaction of students and teaching staff. The use of information technologies in biology lessons pursues the implementation of didactic goals. The introduction of new information technologies allows solving the implementation of general educational, educational and developing concepts and collecting the necessary educational, selecting the necessary material, using in the educational process When using information technology in the educational process, the level of preparedness and the ability to learn each individual student is taken into account. Also, the biology teacher has the opportunity to reuse this material to improve the quality of the student's preparedness. Using information technology in the educational process allows you to radically change The basis for the formation of the basics of logical, creative, independent, systemic thinking is being prepared. It

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becomes possible to virtually demonstrate a number of experiments that cannot be performed in the classroom due to poor material resources and the harmful effects of experiments on the body of schoolchildren. the possibility of studying a number of technological processes in production. New multimedia technologies such as VR and AI - a plurality of content channels of information (information environments). The conditions created in the classroom with the help of a computer and multimedia programs allow students to simulate a virtual environment while working with an automatic system. (that is, existing only in the process of interaction) learning environment. For this purpose, computers equipped with multimedia tools are used. Among such teaching methods, one can single out a multimedia lecture and multimedia practical work, which allows one to carry out laboratory work on biology and even a virtual excursion into nature using VR technologies and AI . The way of transmitting information is called an information channel, which in creative education actually becomes a source of knowledge.

Using new information technologies in a biology course significantly raises the level of learning with low student motivation. One of the advantages of using multimedia technologies in teaching is improving the quality of learning due to novelty activity, interest in working with modern devices. With the help of modern devices, it is possible to model complex biological processes and patterns, control students' knowledge, organize independent work, explain and consolidate new material. To obtain multimedia information in a modern lesson, three channels are necessary: visual, auditory and tactile . A multimedia lecture can be conducted with each student working individually or in class. This is necessary for full immersion in the virtual information environment and the completion of all tasks. The narration text can be recorded in advance, or it can be pronounced by the teacher. The multimedia program shows successive frames that reveal the content of the lesson, give tasks to students, and evaluate their actions. Each frame is shown for 1-2 minutes, a video clip - 5 minutes. The first frame contains the topic, tasks, lesson plan, and assignments for work in the notebook. The teacher explains the tasks and monitors their implementation. The second frame contains educational information: definition of the concept, factual information. At this time, a video with a narrator's text begins, demonstrating the material on the topic of the lecture. After the video, a new frame follows, the teacher explains its content. Thus, as the frames are shown, the teacher reveals the content of the lessons. With the last frame, the teacher consolidates and summarizes the material covered. Then a frame appears on the screen with the main concepts of the lesson and homework. After this, students are given 10 minutes to work with the frames in manual (not automatic) mode: each student views the footage, completes the assignments, selects the most difficult frame for themselves (usually 1-3 per lesson), and the teacher gives an explanation. During the remaining time, the students discuss the solutions to the problems.

"Pros" of this method:

- Teaching is individualized taking into account the personal characteristics of the students; - Multimedia tools make learning more visual;

- No extra time is wasted on working with the board, on dictating terms;

- The teacher can provide individual assistance during independent work.

"Cons" of this method:

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- You need a lot of new modern devices - Internet, computers, video projectors, VR glasses (expensive equipment); - The teacher spends many times more time preparing such a media library lesson than when preparing a regular lesson1[3].

The use of computer technologies in biology lessons can become a new method of organizing active and meaningful work for students, making the lessons more visual and interesting. When using modern technologies, it is possible to create: Eco-art projects: Creating art objects from recycled materials or natural elements to explore the impact of humans on the environment.

Virtual excursions: Using glasses with VR technology for virtual travel to different ecosystems, allowing students to observe real ecological processes and the consequences of human activity, as well as and the use of AI - artificial intelligence.

Development of environmental applications or games: Projects to create educational applications or computer games aimed at raising environmental awareness and culture. Interactive methods such as learning through discussions, role-playing, debates and brainstorming can be particularly effective in biology classes for discussing environmental issues. These methods promote critical thinking, the ability to express one's point of view in a reasoned manner and to work in a team . Virtual tours: Using glasses with VR technology from Meta for virtual travel to various ecosystems, allowing students to observe real ecological processes and the consequences of human activity, as well as using AI artificial intelligence and the voice assistant Alice from Yandex. Essence and principles: Creative education is aimed at developing the creative abilities of students, stimulating them to innovative thinking and the ability to solve non-standard problems. The main principles include the active involvement of students in the educational process, support and development of their individuality, as well as the creation of an environment conducive to creative search and experimentation. Creative learning methods and techniques: include the use of gaming technologies, group projects, problem solving, case methods, brainstorming, as well as the use of digital technologies and social media to stimulate creativity and self-expression in students The multimedia 3D excursion on the topic "Forest - the wealth of mankind" is very interesting. The next frame after the designation of the topic shows the rules of behavior in nature. Then the frames introduce the forest, its individual parts, tiers, population. The show is accompanied by the voices of birds, the noise of tree crowns. Changing frames, students move from object to object This acquaintance with the forest can be called a virtual excursion, since the virtual natural environment created by multimedia creates the effect of presence. Information technologies are recommended for use in the following cases: Demonstration of visual aids, multimedia attachments - visuality.

- The introduction of modular programs allows you to organize the learning process - educational.

Research has shown that the use of creative thinking methods in biology lessons significantly increases the effectiveness of lessons. The use of artificial intelligence in biology lessons arouses significant interest among students in the subject The development of critical thinking and creativity and the use of creative methods stimulates students to analyze, synthesize information and search for non-standard solutions to environmental problems, which is an important component of environmental culture.

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