



## **THE CONNECTION OF DIGITAL EDUCATION AND ECOLOGY**

***Khamroyeva Madina***

*Navoi State University, basic doctoral student*

***Boriyeva Gulshan***

*Navoi State University*

*Faculty of Natural Sciences and Medicine, Biology student*

**Abstract:** Currently, many changes are taking place in the field of ecology using digital technology. Also, in the article, the methodology of teaching ecology using digital technology, that is, the impact of technologies on ecology, achieving ecological sustainability, waste management, use of renewable energy, solutions to problems such as water shortage and energy efficiency are found. At the same time, attention should be paid to the use of technologies in the transport and industrial sectors to reduce the environmental impact. Adaptation of ecological development based on digital technologies can be the main impetus for ensuring sustainable development in the future.

**Keywords:** Use of digital technology, ecological, ecological problems, environmental sustainability, water scarcity, environmental impact of waste, renewable energy.

Digital technologies are becoming the main means of development for the modern world. It is based on the creation, transmission, storage and use of any information in digital form. In the modern world, digital technologies have become an integral part of our daily life. They are entering all spheres of society, including education. In the last decade, digital technologies have significantly changed the educational process, providing students and teachers with new opportunities and tools for teaching and learning. Technological improvements in education make life easier for students. Today, instead of using pen and paper, students use a variety of software and tools to create presentations and projects.

There is a close connection between digital technology and ecology, because digital technologies play a key role in ensuring environmental sustainability. Digital technologies help support environmental sustainability in many areas (1). When these two key areas work together, they help create new opportunities to solve social, economic and environmental problems.

Ecology is a department that studies the relationships of organisms with each other and with the environment. The concept of ecology was first introduced to science by the German biologist Ernst Haeckel in 1866. Ecology studies the development, survival, reproduction of certain individuals, populations and the composition and changes of communities depending on the habitat. Ecology is studied at the levels of organism, population, society, ecosystem, and biosphere. (4) Have you ever walked in a forest and noticed the variety of strange organisms that live there, from grasshoppers to trees to mushrooms? Or have you ever traveled in a car and watched the scenery change from the glass to the tall pines from the oak forest to the meadows. If so, you will enjoy a classic example of ecology, a branch of biology that studies the relationship of organisms to each other and to their environment. Digital technologies and ecology are complementary concepts, and their rational use serves as an important factor in solving global environmental problems. Therefore, technological progress must be carried out with environmental responsibility. Advanced technologies help to protect the environment and ensure a stable future of society. The world is facing many environmental problems every day.

One of the main problems is air pollution, unusability of water, climate change, loss of forests and cutting down of trees for no reason, which have a negative effect on ecology. (3)

Currently, the demand and need for water is increasing more than ever, as a result, water shortages are increasing all over the world. Water scarcity is a global problem. Along with many countries of the world, important measures related to the rational use of water resources are being implemented in Uzbekistan. It should be noted that today digital technologies are being used in water management as well as on all fronts. Smart water pumping stations, online control devices, diver devices are being installed on them. Uzbekistan ranks second among the CIS countries in Central Asia, fourth in Asia, and thirteenth in the world in terms of introducing water-saving technologies.

Man is a direct and indirect factor in water pollution, i.e. it becomes unusable. The reason for this is human waste. The most common case is chemical pollution of water. Water flowing from plants, factories and fields usually contains harmful chemicals. Unfortunately, developing countries are lagging behind in controlling major sources of pollution. As a result, their environment and the quality of drinking water is gradually deteriorating. (3) Air pollution is due to the presence of substances in the atmosphere that harm the health of people and other living beings and the climate. Air pollution can make people sick and develop allergies and even death. Along with factories, the factory is another mile of vehicles that cause air pollution. The gases released from them are harmful to life. Climate change is considered the main environmental problem, and artificially generated gases accumulate in the atmosphere and turn the world into a heatwave over time. As a result, glaciers are melting and disappearing.

Renewable energy is energy collected from renewable sources that replenish naturally over time. Examples of this are sources such as sunlight, wind, water movement, and geothermal heat (1). Renewable energy technology projects are usually large-scale. In its various forms, it originates directly from the sun or from heat generated deep within the earth. The share of renewable energy sources is steadily increasing due to three main factors:

- Decreasing stock of natural resources
- To be able to provide a certain level of mitigation of the ecological crisis
- The need to ensure energy security

#### **Used literature:**

1. Sh. Mavlonov Sh and F. B. Jurayeva “Development of the ecology and economy of regions using modern technologies 10(125) pp. 234-238
2. Google . Wikipedia-<https://uz.wikipedia.org>
3. Saidovna . T. G (2024) Problems and solutions in the process of digital technology . 1187-1190
4. Ergashev A . General ecology Tashkent 2003
5. This article uses information from the National Encyclopedia of Uzbekistan (2000-2005).