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**METHODOLOGY FOR DEVELOPING NATURAL SCIENCE TEACHING
THROUGH DIGITAL WEB RESOURCES**

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Abstract : This article analyzes the pedagogical and methodological foundations of using digital web resources in teaching natural sciences. In modern education, the role of information and communication technologies is rapidly increasing. Therefore, the use of interactive platforms, virtual laboratories, and multimedia resources in teaching natural sciences has become highly important. The article highlights the role of digital technologies in developing students' scientific thinking, independent learning skills, and motivation for learning. In addition, methodological recommendations for the effective integration of web resources into natural science education are presented.

Keywords: digital education, web resources, natural sciences, innovative teaching methods, virtual laboratory, ICT in education.

INTRODUCTION

Today, the modernization of the education system, improving its quality and efficiency is one of the priority areas of state policy. In his speeches, the President of the Republic of Uzbekistan Shavkat Mirziyoyev pays special attention to the issue of radically renewing the education sector, developing it in accordance with modern requirements, especially the widespread introduction of digital technologies. In particular, measures to improve the quality of education in natural sciences are highlighted in the resolutions and decrees of the President. In particular, PQ-5117 (May 19, 2021). This resolution directly provides for the use of modern methodologies in teaching natural sciences, the equipment of educational laboratories, and the expansion of the use of electronic resources. The goal is to improve the national curriculum based on international standards (PISA, TIMSS). We can also see it in the Decrees PF-134 (February 21, 2024 - within the framework of the "Uzbekistan - 2030" strategy) On Acceleration of Reforms in the Education Sector. This decree sets the tasks of raising the use of digital technologies in schools to a new level, developing LMS (Learning Management System) systems to form students' critical thinking and practical skills, and increasing the number of modern "Smart" classrooms in each school.

Our President, assessing education and science as the most important factor of development, emphasizes the need to educate a knowledgeable, broad-minded and competitive generation in building a new Uzbekistan. The Head of State notes that the implementation of advanced pedagogical and information and communication technologies in the educational process, and the improvement of teaching methods based on the requirements of the time are urgent tasks today. In particular, the use of innovative



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approaches to teaching subjects in the general secondary education system, including at the primary education stage, is of great importance, as is the development of students' independent thinking and creative abilities. This will allow for a more effective organization of the process of acquiring knowledge by students through the use of digital websites, multimedia tools, virtual laboratories and online platforms in teaching natural sciences. The primary education stage is an important period when students' scientific worldview is formed. It is at this stage that it is necessary to arouse interest in natural sciences, develop skills in understanding the environment, observation and conducting experiments. Improving the methodology of teaching natural sciences using digital websites will help increase students' interest in science, develop their independent learning competencies, and acquire modern knowledge.

However, teaching these subjects through traditional methods may sometimes not be effective enough in explaining complex processes. Therefore, the use of modern pedagogical technologies, including digital web resources, is an important tool in improving the quality of education. Digital educational tools allow students to visually understand complex natural processes, conduct experiments in a virtual environment, and conduct independent research. This plays an important role in developing students' scientific thinking.

The importance of digital web resources in the educational process:

Today, I can say that teaching through traditional methods is sometimes not effective enough in explaining complex processes. Therefore, the use of modern pedagogical technologies, including digital web resources, is an important tool in improving the quality of education. Digital educational tools allow students to visually understand complex natural processes, conduct experiments in a virtual environment, and conduct independent research.

Digital web resources include educational platforms, electronic textbooks, interactive simulations, video lessons, virtual laboratories and other multimedia tools that are used via the Internet.

Digital technologies in the educational process create the following opportunities:

- presentation of educational materials in an interactive form;
- visual modeling of complex processes;
- organization of distance learning;
- rapid assessment of student knowledge;
- development of independent learning.

Digital platforms also allow teachers to organize lessons more effectively. For example, complex processes are easily explained through animations, graphic models and virtual experiments.

Methodology of using digital resources in teaching natural sciences.

The use of digital web resources in teaching natural sciences includes the following methodological stages:



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1. Lesson planning - The teacher determines the purpose of the lesson and selects digital resources appropriate to the topic.
2. Selection of teaching materials - Video lessons, interactive animations, simulations and virtual laboratories are selected.
3. Application of interactive teaching methods - problem-based learning, project method, research-based learning and STEAM approach
4. Knowledge control - The level of students' knowledge is assessed through online tests and interactive quizzes.
5. Analysis of results - The teacher analyzes the level of students' mastery and improves the teaching methodology.

Advantages of digital technologies in teaching natural sciences

The use of digital web resources increases the effectiveness of education. Their main advantages are:

- increases students' interest in science;
- allows for a visual explanation of knowledge;
- develops independent learning skills;
- makes the learning process interactive.

Conclusion and Recommendations

In conclusion, digital web resources significantly increase the effectiveness of teaching natural sciences. They allow for an interactive, interesting and effective organization of the learning process. With the help of digital technologies, students gain a deeper understanding of complex natural processes, conduct independent research and develop their scientific thinking. Therefore, the widespread use of digital resources in the education system is of great importance. In the future, the use of artificial intelligence-based educational platforms, virtual laboratories and interactive educational systems in teaching natural sciences can be effective.

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