

## THE IMPORTANCE OF DIGITAL TECHNOLOGIES IN IMPROVING THE QUALITY AND EFFICIENCY OF PHYSICS EDUCATION

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### ABSTRACT

This article is dedicated to the effective organization of physics lessons through digital technologies, and it talks about increasing the effectiveness of lessons by using the latest advances in digital technologies in physics lessons.

**Keywords:** digital technology, digital education, e-textbook, collection of e-lectures, virtual laboratory developments, technical tools, software tools.

### INTRODUCTION

"Digital education" in its essence is an e-textbook, a set of e-lectures, virtual laboratory developments, independent work, in which the educational process works mainly with digital technologies and the educational methods are digital products. is a part of the mechanism of organization of control consisting of systems based on electronic database and remote services. It is known that the understanding of life and its study takes place through the collection and assimilation of information. The level of knowledge of a person is also determined by the amount of information acquired by a person in a certain period of time. Therefore, opening a wide path to modern knowledge, effective use of digital technologies in improving the education system has become a requirement of today.

Graduates of higher educational institutions should be prepared for a creative and professional approach to the new conditions of work in the information society. Therefore, the level of computer literacy of specialists in the voluntary sector, their assessment of the capabilities of computer tools, the effective use of computer tools in automated information systems, and the knowledge of the trends in the development of computer technology are the need of the hour. The Law "On Education" [1], which is the necessary programmatic basis of educational reforms, is an urgent task to open a wide path to the modern knowledge system and effectively use the opportunities of digital technologies in improving education. The introduction of various forms and methods of information exchange into the educational process opens a wide way for the implementation of education with the help of technical and software tools.

In the continuous education system in Uzbekistan, students are taught on the basis of modern technologies, the use of digital technologies in the educational process, the development of the student's educational activity in the educational process as an activity aimed at the development of the creative potential of the student, is considered as the main factor that improves the educational process, increases the quality and effectiveness of education.

Today, in order to provide quality education to students by clarifying the optimized dualism of the methodical-digital space of understanding the single physical landscape of the universe, digital technologies, which are the product of scientific and technical development, and its material and technical basis, widely use the services of computers to create electronic textbooks and multimedia developments and the Internet. the use of resources and software tools of distance education remains a requirement of the time.

The solution to the problem of individualization of the process of training students cannot be understood by reducing the educational material or solving scientific, physical and programmatic problems for some students and changing it for others.

The general pedagogical problem for all stages of education is to improve the efficiency of independent work of students, increase their interest in science, deepen their professional knowledge and increase their activity. It is necessary to use digital technologies in education, to interest students in the training process, to increase their activity, and no method should serve as a pastime or time-passing tool for the learner.

Among the most important goals, the implementation of which justifies the introduction of ICT into the educational process, includes the individualization of the speed and volume of the studied material, the possibility of independent training of students, and the operational control of the quality of mastering the material. The use of the same learning efficiency in education depends on the content and formalization of the textbook material, on the one hand, and on the level of independent work of students, on the other hand.

Organizational-methodical provision of teaching "Physics of atoms, nuclei and elementary particles" to students of physics and astronomy using the interactive capabilities of distance education components of digital technologies, such as controllers, graphic displays and transmitters, physical processes The importance of content development based on prioritizing digital technologies (MX Media Flash; Java) that allow visualization and modeling is that education helps to determine the exact educational efficiency based on automated results, without the influence of the human factor.

In the process of studying atomic, nuclear and elementary particle physics, students get acquainted with the theoretical, scientific, practical and fundamental experiences of science. they can imagine. As mentioned above, most of these experiments are difficult to carry out in the educational conditions of higher educational institutions or due to the lack of technical equipment and the harmful effects of radioactive elements, it is observed that there are difficulties in education. In order to further increase the effectiveness of education, it is advisable to prepare students for the experiment based on the explanation of modeled developments, observing additional experiments on the basis of virtual developments, software tools.

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