

## THE CONCEPT OF INFORMATED EDUCATION AND ITS PEDAGOGICAL SIGNIFICANCE

**Ochilov Shokir Bakhtiyorovich,  
Khalikulova Umida Komiljon kizi,  
Allayarova Tumaris Nuriddin kizi**  
*Navoi State University, Uzbekistan*

**Abstract.** *This article analyzes the essence of the concept of informed learning, its theoretical foundations, and pedagogical significance. The didactic possibilities of introducing information and communication technologies into the educational process, increasing the cognitive activity of students, the formation of independent learning skills, and the role of individualization of education are substantiated. Also, the requirements for the professional activity and information and communication competence of a teacher in the digital educational environment were highlighted.*

**Keywords:** *information education, information and communication technologies, digital educational environment, electronic educational resources, pedagogical technologies, distance learning, interactive learning, educational effectiveness, digital competence, modernization of education.*

**Introduction.** Today, the widespread introduction of information and communication technologies in all spheres of society is also having a significant impact on the education system. As a result of the deep penetration of digital tools into everyday life, the organization of the educational process, forms of knowledge transfer and teaching methods are also acquiring a new meaning. In this regard, the issue of informatization of education is recognized as one of the relevant areas of modern pedagogy.

Informatized education is understood as the organization of the educational process on the basis of information technologies, electronic resources and digital platforms. Such an approach serves to increase the efficiency of education, develop students' independent work skills and expand educational opportunities. In particular, the use of electronic textbooks, multimedia materials, distance learning systems and interactive methods helps to increase students' interest in science and deepen their knowledge.

Informatization of the educational process is not limited to the introduction of technical means. It requires updating the pedagogical content, reorganizing the activities of teachers and students, and using modern methods and technologies. Therefore, it is important to study information-based education on a scientific and pedagogical basis, analyze its theoretical and practical aspects.

In the current environment, improving the quality of education, creating an open and flexible learning environment, and forming students' competencies in working with information are among the main tasks of information-based education. This requires

conducting scientific research in this area, summarizing existing experience, and developing effective pedagogical mechanisms.

**Literature review.** The issues of informatization of education, digital pedagogy and integration of information and communication technologies into the educational process have been widely studied by many foreign and domestic scientists in recent years. Scientific research in this area is aimed at developing theoretical and practical foundations for modernizing the educational process, increasing the effectiveness of teaching, and creating a person-centered learning environment.

Among foreign researchers, Michael G. Moore plays an important role in the formation of the theory of distance and digital education. He put forward the concept of "transactional distance" in distance education and substantiated that the effectiveness of pedagogical communication between a teacher and a student is ensured through technological means. Also, Tony Bates, in his research on the organization of electronic learning systems, emphasizes that the pedagogical goal should be a priority when choosing digital technologies and develops methodological principles for designing online education [1].

The socio-pedagogical aspects of the informatization of the educational process were highlighted by Manuel Castells within the framework of the theory of the information society, showing the need for digital transformation of the education system in conditions where knowledge and information have become the main resources. In addition, Neil Selwyn, critically analyzing the process of digitalization of education, notes the need to pay special attention to the issues of pedagogical efficiency and social equality in the introduction of technologies. These approaches enrich the theoretical foundations of informationized education [2, 3].

The problem of informatization of education has also been widely studied by scientists from the CIS countries. In particular, Evgeny S. Polat developed the didactic foundations of organizing distance learning technologies, creating electronic training courses, and using interactive methods [4]. Andrey A. Andreev interpreted electronic education as a pedagogical system and studied the issues of improving the mechanisms for managing, monitoring, and evaluating the educational process [5].

Also, Igor V. Robert developed the theory of informatization of education based on an integrated approach and scientifically substantiated the fact that the use of ICT activates students' cognitive activity and develops independent learning skills. The works of these scientists created the methodological foundation for the introduction of electronic and distance learning in the CIS [6].

Theoretical and practical issues of informatized education are also being consistently studied by Uzbek researchers. In particular, A.O. Dedakhanov developed a methodological system for the use of information technologies in the educational process and analyzed the problems of forming teachers' information and communication competence [7]. Kh.Kh.Muratov substantiated the didactic possibilities of digital educational resources and electronic educational and methodological complexes [8].

In addition, the studies of Sh.O.Bobomirzayeva, F.Qodirov and M.Safarova covered the issues of modernization of the educational process, the use of innovative pedagogical

technologies, and the formation of information culture [9, 10]. These scientific developments are of great importance in determining the methodological foundations of creating an information-based educational environment in the national education system.

The analyzed literature shows that, although the issue of information-based education has been widely studied in various scientific schools, it is necessary to conduct additional research to adapt it to the national educational conditions, increase pedagogical efficiency, and develop practical mechanisms. Therefore, this article will analyze the pedagogical aspects of this problem in more depth.

**Main part.** The process of informatization of education is one of the priority areas of modern pedagogy, which requires a radical renewal of the content, methods and organizational forms of education. Informatized education, first of all, means pedagogical activities aimed at increasing the effectiveness of education through the systematic introduction of information and communication technologies into the educational process. In this case, computer equipment, multimedia tools, Internet networks, electronic learning platforms and digital resources serve not only as additional tools, but also as an important didactic element of teaching. As a result, the process of imparting knowledge moves from the traditional “teacher-textbook-student” model to an interactive, multi-source and open educational environment. In the context of informatized education, the cognitive activity of students is significantly activated, since they become subjects who search for information, analyze it and draw independent conclusions, rather than recipients of ready-made information. Electronic resources, virtual laboratories, simulations and presentation materials allow for a demonstrative explanation of complex processes and phenomena. This helps to master the subject more deeply and clearly visualize abstract concepts. In particular, modeling and visualization tools in computer science, natural sciences, and technical areas are giving effective results in improving the quality of education.

At the same time, information-based education creates favorable conditions for individualization and differentiation of the educational process. With the help of digital platforms, it is possible to provide appropriate tasks, taking into account the level of preparation, interest, and learning pace of each student. For example, testing systems and adaptive programs automatically analyze student activity and offer materials of complexity appropriate to their level of knowledge. This approach reduces differences in learning and ensures that education is focused on the individual.

Another important aspect of information-based education is the change in the requirements for the teacher's professional activity. Now the teacher acts not only as a provider of knowledge, but also as an organizer, consultant, and guide of the educational process. He must have the skills to select electronic resources, create digital materials, organize distance communication, and manage the educational process. Therefore, the development of information and communication competence of teachers is one of the important conditions for information-based education. The teacher's methodological literacy and ability to use technologies appropriately are directly related to the quality of education.

Digital technologies also expand the forms of organizing the educational process. Along with traditional classroom training, forms such as distance learning, blended learning, and

independent online learning are being effectively used. This eliminates the territorial and time restrictions of education and creates the opportunity for continuous learning. Students can use educational materials, complete assignments, and communicate with the teacher anywhere and at any convenient time. As a result, the educational process becomes more flexible and open.

Informatized education also introduces new approaches to the control and assessment process. Electronic tests, automated monitoring systems, ratings, and portfolios allow for a quick and objective assessment of students' knowledge. These methods reduce the influence of the human factor and ensure transparency of assessment. At the same time, they serve to improve the educational process through constant analysis of learning outcomes.

However, the process of informatization of education will not be effective only with the introduction of technical means. It is important to organize this process pedagogically, methodologically and organizationally correctly. Otherwise, technologies may remain only an appearance, not a goal. Therefore, when introducing information-based education, didactic goals should be clearly defined, educational materials should be developed qualitatively, and teachers should be adequately trained.

**Conclusion.** The conducted analysis shows that the informatization of the educational process is an important condition and one of the effective factors for the development of a modern education system. The systematic introduction of information and communication technologies into the educational process enriches the content of education, improves teaching methods, and brings the activities of teachers and students to a new level. As a result, the process of mastering knowledge becomes interactive, demonstrative, and highly effective.

During the study, it was found that informatized education increases the cognitive activity of students, forms independent learning skills, and develops competencies in searching, analyzing, and processing information. The use of electronic resources and digital platforms allows for the individualization and differentiation of education, serving to organize education taking into account the needs and abilities of each student. This is of great importance in improving the quality of education and ensuring its effectiveness.

Informatized education also reinterprets the professional role of the teacher. The teacher is no longer just a source of knowledge, but also a subject that manages, guides and advises the educational process. Therefore, developing the information and communication competence of teachers and preparing them to work with modern pedagogical and digital technologies is one of the priority tasks.

However, in the process of informatization of education, it is important to use technologies appropriately and on a pedagogical basis. The introduction of technical means alone does not guarantee the effectiveness of education. This process will give the expected result only when combined with thorough methodological support, high-quality electronic resources and scientifically based approaches.

In general, the widespread introduction of information education in educational institutions will serve to improve the quality of education, train personnel with modern competencies, and form a continuous learning environment. In the future, improving innovative pedagogical technologies, creating digital educational resources appropriate to

national conditions, and expanding practical experience will remain one of the important scientific and practical tasks in this area.

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