

The Role Of Information Technology In Modern Pedagogical Education Processes

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Abstract

As the President of our Republic, Sh.M. Mirziyoyev, emphasized, “Ensuring the development of education and upbringing, science, culture and art, and sports, as well as enabling our youth to gain profound knowledge, master foreign languages, and acquire modern information and communication technologies will remain our constant priority.” Transforming today’s youth, especially highly educated specialists, into initiators and creators of socio-economic progress and cultural life, rather than just participants or implementers, is an essential socio-pedagogical need.

INTRODUCTION

In view of this, several decrees and resolutions have been adopted to improve this area in the Republic. For instance, the Presidential Decree of the Republic of Uzbekistan № PF – 60, dated January 28, 2022, “On the Development Strategy of New Uzbekistan for 2022 – 2026,” the Presidential Resolution of the Republic of Uzbekistan № PQ - 2909, dated April 20, 2017, “On Measures to Further Develop the Higher Education System,” and the Presidential Resolution of the Republic of Uzbekistan № PQ-3775, dated June 5, 2018, “On Additional Measures to Improve the Quality of Education in Higher Educational Institutions and Ensure Their Active Participation in the Comprehensive Reforms Being Implemented in the Country,” along with other regulatory documents related to this issue, provide the framework for implementing these tasks, which this article will support to a certain extent.

The application of modern information technologies in the educational process enhances the effectiveness of teaching methods, influences

changes in the work activities of teachers, improves their pedagogical skills, and affects the structural changes within pedagogical systems. This, in turn, sets specific tasks in organizing and managing the informatization of pedagogical processes. The effective organization of pedagogical educational processes based on modern information technologies enables: the collaboration of educators, computer programmers, and relevant specialists to create distance learning courses and electronic materials; the balanced distribution of tasks among teachers; the improvement of the educational and upbringing process organization and the creation of monitoring systems to enhance the effectiveness of pedagogical activities; the facilitation of complex processes related to developing the technological foundation of education at the required modern level; the development of specific skills and competencies for organizing lessons based on modern technical tools; the emergence of a need to monitor and ensure the quality of educational materials due to the openness of distance courses; the enhancement of students’ independent activities within the learning process,

shifting the effectiveness of lessons from the teacher to the student; the increase in students' organizational skills and personal involvement in the learning process; the creation of opportunities for two-way communication between teachers and each student, supported by the use of modern communication technologies.

The constantly growing volume of information contributes to the increase in intellectual potential within society. Consequently, teachers can continuously improve their professional and pedagogical skills through modern information technologies. Each teacher must first establish their information environment to effectively use information technologies in their work. Modern information technologies integrate information objects, their interconnections, technologies, and tools for creating, distributing, processing, and storing information, as well as the organizational and legal aspects of information processes. Today, teachers must consider students' needs and abilities within the educational process.

The education and upbringing system promoted by a teacher should be learner-centered, that is, it should be differentiated, taking into account the diverse characteristics and qualities of individuals. Any education and upbringing system is formed and developed in a specific social, scientific-technical, economic, cultural, and, ultimately, political environment. This environment is the most essential socio-economic factor in education. Scientific and technical progress, as well as cultural and political conditions, can either foster or slow down socio-economic changes.

The education system serves to fulfill the main tasks of a society's socio-economic and cultural development since general education schools and higher education institutions prepare individuals to actively participate in economic, cultural, and political life. Therefore, teachers in educational

institutions are of paramount importance as the foundation of the educational process. At the same time, social and economic changes, as well as scientific and technical advancements, are gradually being reflected among teachers in general and higher education institutions.

Adopting new ideas and modern information technologies in the thinking and perceptive activities of teachers and students takes a certain amount of time. Learner-centered teaching, first and foremost, changes the paradigm of education. While teaching has traditionally been prioritized within the education system, in the current age of information society, the priority has shifted toward learning and guiding. This has led to a shift from the "teacher-textbook-student" paradigm to a "student-textbook-teacher" paradigm.

A teacher now acquires a new role, where the task is to create opportunities for students to acquire knowledge independently and engage in creative activities, teaching them to acquire knowledge on their own and apply it in practice. In pursuing this goal, teachers must select teaching methods and technologies that not only enable students to acquire ready-made knowledge but also empower them to seek knowledge from various sources, acquire it independently, develop and substantiate their own perspectives, and use previous knowledge to derive new insights. This type of teaching can also be referred to as "developmental".

While knowledge acquisition is an essential factor in developing thinking, not all forms of knowledge acquisition contribute to the development of students' critical thinking. To achieve this, active forms of knowledge acquisition need to be promoted. Simply reproducing acquired knowledge cannot serve as a sufficient source for developing students' independent thinking; active knowledge acquisition and independent thinking are highly necessary. Independent knowledge

acquisition and the process of applying acquired knowledge contribute to the formation of new knowledge, making students sources of effective thought.

Therefore, in the process of reforming the education sector, both in our country and in developed countries worldwide, pedagogical technologies are directed toward the ability to independently search for essential information, identify and solve problems, critically analyze acquired knowledge, and apply this knowledge to solve new problems. The necessity of learner-centered education is now becoming evident to all. Learner-centered teaching is an approach that takes into account the student's age and individual characteristics, abilities, and potential, effectively using advanced pedagogical and information technologies to foster student development. In learner-centered teaching, differentiation and individualization are considered key principles. The diversity of modern information technologies, both in form and content, offers students the opportunity to choose from options tailored to their interests, capabilities, and personal characteristics. This flexibility needs to be reflected in the educational system as well.

A teacher can address these challenges by organizing teaching based on various methods, utilizing modern information technologies. Structuring learning activities around the set of subjects and daily assignments for each day, with each covered topic being evaluated in the next lesson, can lead to numerous issues. In such cases, students may find it difficult to fully concentrate on a particular subject. Modular teaching could be a potential solution to these inconsistencies. The strategic direction for developing the education system in modern society involves fostering intellectual and moral development through

purposeful, independent activity in various fields. This approach focuses on three main tasks:

- Reforming the education system.
- Recognizing the principle of independent activity as a fundamental principle of education and upbringing.
- Integrating modern information technologies into the education and upbringing process.

In the modern world, the educational journey of an individual does not end with preschool, general education schools, academic lyceums, vocational colleges, or higher education institutions. Lifelong learning is essential, meaning that education should be continuous. Therefore, continuous education is a necessity of our time, and this need undoubtedly emphasizes the growing importance of modern information technologies. In the information age of the XXI - st century, informatization of the education sector requires every educational institution to ensure the informatization of: the teaching and learning process, the management of the educational institution, the divisions of the educational institution, the educational institution's operational environment.

Educational researchers recognize that enhancing the use of computer technologies in current educational institutions is among the most critical indicators of implementing technology in the learning process. U.Sh. Begimqulov, for instance, emphasizes the need to create a computer-based information environment and a database in educational institutions that meets modern requirements. He suggests developing hypertext and multimedia resources, simulation in teaching, and communication systems, as well as creating a database that can store, systematize, and utilize essential information through computer technology.

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