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INDIVIDUALIZATION OF EDUCATIONAL PROCESSES BASED ON DIGITAL TECHNOLOGIES AND DEVELOPMENT OF DISTANCE EDUCATION SERVICES

Professor Muborak Yusupovna Maxkamova
Renaissance Education University
"Pedagogical Education and Psychology" Department

Abstract
This article provides information on the individualization of educational processes based on digital technologies and the development of distance education services through the effective use of information technologies.

Keywords: education, digital technologies, informatization, information technologies, distance education services, pedagogical ideas.

Introduction

Currently, the development of high technologies and informatization processes worldwide leads to the formation of new scientific and pedagogical ideas regarding the organization of the educational process, the quality review of educational approaches, and the acceleration of the education system, as well as the preparation of highly qualified personnel and the development of electronic education systems. The widespread integration of digital and information technologies into the education system and the learning process is a global trend and has recently become one of the most significant developments in the education system.

It is necessary to adapt the education system to the digital generation through the widespread and effective use of innovative educational technologies and didactic models based on information and communication technologies. At the same time, a research-based approach should be actively utilized in the educational process, which would help develop students' skills in scientific research and form their creative abilities and critical thinking based on IT competencies. Information and communication technologies are not the solution to all problems in the education system, but rather serve as tools to make lectures and seminars more data-rich and interactive for the digital generation. It is also important to emphasize that in interactive learning processes focused on students' needs, teachers still play a key role.

The prestige of a teacher and the effectiveness of their work depend not only on the knowledge level of the course content and their pedagogical skills but also on how effectively the teacher integrates modern information and communication technologies in gathering, processing, and teaching specific educational material. In the current stage of societal development, some researchers and educators view informatization in education as a component of digitalization.

For instance, D. Sviridenko, in his works, considers digitalization as the next phase following informatization and computerization, which is primarily related to the use of computing technologies, computers, and information technologies.

In the education systems of Norway and Denmark, the digitalization of education is viewed in two aspects: as an external process developing under the influence of government strategies and international initiatives, and as an internal process based on the individual experiences of teachers or small structures. Foreign studies on the digitalization of education encompass various aspects, starting from organizational issues, technological infrastructure, and concluding with pedagogical approaches. The organization of education on an international scale is influenced by offering interactive and flexible educational programs. Almost all studies are associated with the understanding that digitalizing education leads to the development of flexible skills that adapt people to changes in society and the professional environment.

In higher education, electronic education (or online education) is increasingly taking a significant role, offering the opportunity to implement these features and, in principle, building new pedagogical systems and developing pedagogical methods. This leads to a new stage in the development of the educational process, which will transition into the digitalization of education based on the need for pedagogical design in approaches, methodological systems, and the creation of new pedagogical methods.

The transition to the digitalization stage of the education system ensures a smooth shift to the digital age for society and digital transformation of the economy, providing highly qualified specialists in the fields of information technologies, technological process automation, and information security.

Due to digital transformation, the development of the higher education system in modern conditions requires the creation of a modern electronic information-educational environment, implementing advanced educational technologies, educational management strategies, and adapting teaching materials based on individual characteristics.

The rapid implementation of electronic education and the development of the digital educational environment are changing the formats of education. The educational paradigm is transitioning to a hybrid learning process that integrates offline and online education. Electronic education, by applying innovative approaches, is based on the use of multimedia and internet technologies to improve the quality and opportunities of education. Many foreign open and virtual universities work based on the principles of electronic education, competing with traditional forms of education. Electronic education changes the format and environment of education according to the preferences of the student and the teacher.

The current state of the education system is characterized by the increasing role of non-traditional educational technologies. With their help, learners are able to acquire knowledge much faster compared to traditional technologies. These technologies change the nature of knowledge development, acquisition, and dissemination, allow for the deepening and expansion of the content of the studied subjects, quick updating, the application of more effective teaching methods, and significantly enhance educational opportunities for each individual. To answer the question of what digital technology is, we can say that it is a modern form of management in which large sets of data in digital form and the process of data

processing serve as the main factor in production and management. The use of the results obtained in practice allows for significantly greater efficiency compared to traditional forms of management. Examples include various automated production processes, 3D technology, cloud technologies, telemedicine services, smart technologies for product production and delivery, as well as the storage and sale of different goods. In this article, we will focus on the digitalization of the education system. When education is provided through digital technologies, learning methods for students become easier. In this context, the role of educational tools is played by multimedia, projectors, computers, laptops, internet-connected televisions, telephone lines, smart boards, and projectors. Using such tools for lessons ensures the improvement of education quality. The application of digital technologies in online lessons is known to yield good results. For example, online lessons broadcasted through television can be considered a form of digital education. Therefore, in digital education:

Students have the opportunity to learn at any time and place;

It fosters the culture of obtaining and using information from the internet;

It raises the education system to a new level;

It significantly reduces time and financial expenses;

It provides an advantage in not getting lost in the "digital world" and in finding good job opportunities, among other benefits.

The implementation of modern standards requires not only high qualifications and continuous professional development from teachers, but also a creative approach to their work. A teacher's creativity involves revisiting and improving their experience, being able to change well-known things and use them creatively, and creating innovations that are qualitatively new, which is becoming increasingly important. The concept of creativity (from the Latin word create meaning "to create," and creative meaning "creator, innovator") translates to "creation" in English. Creativity can be defined as striving for creation, approaching life creatively, and constantly self-critically reflecting and analyzing oneself. Based on modern psychological and pedagogical dictionaries, a teacher's creativity can be defined as their ability to creatively approach ideas, communication, and specific types of activities, as well as their level of cognition. Creativity in humans is the ability to reprocess existing information and create an infinite number of new models. The "father of creativity," Paul Torrance, identified four creativity skills. His research shows that these creative skills can be developed and assessed:

Fluency: The ability to generate many ideas, based on the idea of "many."

Flexibility: The ability to come up with different ideas, based on the idea of "change."

Originality: The ability to come up with ideas that are unique and distinct from others, based on the idea of "uniqueness."

Elaboration: The ability to expand ideas, based on the idea of "addition."

Patti Drepeau has also outlined four ways to successfully develop creative qualities in an individual:

Developing creative thinking skills;

Developing practical creative action skills;

Organizing creative activity processes;

Using creative products (works).

Thus, digital electronic education provides students with the opportunity to acquire knowledge in a well-organized environment.

According to foreign educators, especially Patti Drepeau, a person's creativity, particularly that of a teacher, inspires others to organize their own creative processes. Imagine walking down the street and noticing additional information about the things and people around you. Examples of augmented reality are already available and actively applied, and in some amusement parks, you can already see signs that demonstrate connections between physical objects in the real world and the virtual world. Games with augmented reality elements are widely spread, and virtual mirrors and dressing rooms are available in clothing stores. Augmented reality is already being tested in cars. However, there are still issues that need to be addressed for the active use of augmented reality technologies. For example, the accuracy of geolocation tools is still insufficient, and technologies to link physical world objects with their virtual counterparts are imperfect. Nevertheless, it can be confidently said that in the near future, this technology may be associated with breakthroughs.

Currently, digital technologies are rapidly developing and require progress in every field in line with the times. For example, the implementation of artificial intelligence technology helps detect cases of tax evasion, prevent fraud, analyze data, automate repetitive processes, and increase transparency. Big data, on the other hand, allows tax authorities to store, process, and forecast large amounts of data more effectively, as well as improve document exchange between taxpayers and tax authorities. In the era of advancing digital technologies, the most important factor is data.

In this work, general didactic principles characteristic of electronic education have been considered. These principles are divided into general (such as openness of education; awareness and activity in education; knowledge acquisition; visibility of education; mass education; humanism in education; scientific education) and specific principles (such as individuality of education; continuity of education; modularity of education; interactivity of education).

Based on the above principles, the following characteristic features of electronic education have been developed: flexibility of education (individualized learning schedule); economic and time efficiency; the provision of free and voluntary access to education through electronic resources; the opportunity to study outside the classroom or workplace; unrestricted access to content; the development of students' information competencies; the ability to communicate with teachers at any time through various communication tools (mobile phones, smartphones, tablets) and internet services (e-mail, chats, social networks); the formation of students' independence, self-management, responsibility, organizational skills, as well as their ability to assess their own knowledge and make effective decisions; continuity of education; and the collaboration between users through the free exchange of information via electronic resources and internet services.

A structure for organizing the educational process in electronic education based on general didactic principles has been developed. This structure consists of theoretical, practical, and laboratory sessions, individual learning and control forms, and components for monitoring students' academic progress. In terms of teaching methods, lectures, seminars, and independent learning are organized asynchronously and synchronously. Control forms include ongoing,

intermediate, and final assessments, with the results presented on the platform, through e-mail, or via social networks.

In electronic education, the teacher's main task is to manage students' independent work, including shaping emerging motivations, setting goals and objectives, providing knowledge and experience, organizing activities, facilitating communication among students, and monitoring the educational process.

It should be noted that digitalization of education primarily enhances the integration of online communication between students and teachers and, secondly, helps develop students' skills to work independently using advanced educational technologies. This is of great significance in the current developmental process, as it applies the new trends in digitalization to the educational process.

As a result of data tracking, the following conclusion has been drawn:

It can be stated that the introduction of digital technologies into various fields, not only the education system, plays a significant role in modernizing the country's education system. It serves to organize modern education and improve educational effectiveness, and today's classrooms differ greatly from those of ten years ago. Classrooms are now equipped with computers, iPads, tablets, smart boards, and other types of educational technologies. Just like in other parts of the world, Uzbekistan is seeing the emergence of the seven-screen generation of the digital age—television, computers, tablets, smartphones, and smartwatches. Being in such a dense digital environment and having constant interaction with it has led to a fundamental shift in the thinking and information processing processes of today's students, compared to the thinking and information processes of the past. The digital generation cannot and should not be taught in the way our parents learned. Using blackboards and white chalk in teaching this generation is no longer possible. Changing a blackboard to a whiteboard and chalk to a marker does not make any real difference, as this method will not encourage modern students to acquire knowledge and develop the skills needed to succeed in the labor market. It is necessary to adapt the education system to the digital generation by widely and effectively applying innovative educational technologies and didactic models based on modern information and communication technologies.

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