



PROSPECTS FOR THE DEVELOPMENT OF DISTANCE LEARNING BASED ON
DIGITAL INNOVATIONS

Shukhratjon Umarov, *Phd, associate professor,*
Fergana State Technical University, Fergana, Uzbekistan,

Odina Tuychieva, *associate professor,*

Marufjon Ganiev, *senior teacher,*

Manzura Abdurakhimova, *lecturer,*

Shakhlo Ergasheva, *lecturer,*

Fergana Medical Institute of Public Health, Fergana, Uzbekistan

Abstract: *This article analyzes the role and importance of digital innovation in the development of the distance education system. Proposals have also been made for innovative approaches to improving distance learning, establishing effective communication between teacher and student, and improving the quality of the learning process. The results of the study serve to develop scientific and practical recommendations for the further development of distance education and its effectiveness.*

Keywords: *distance education, digital innovation, information technology, artificial intelligence, interactive education, cloud technology, educational effectiveness.*

INTRODUCTION

In today's era of globalization and digital transformation, the need to implement innovative approaches in the education system is steadily increasing. In particular, digital innovations play a crucial role in organizing the process of distance learning. Digital technologies make it possible to conduct education free from geographical, time, and resource limitations, establishing a new form of interactive communication between students and teachers.

In recent years, the rapid development of information and communication technologies has fundamentally transformed the form, content, and methodology of the educational process. Electronic platforms, virtual classrooms, AI-based learning systems, and cloud technologies contribute to improving the quality of education, personalizing the learning process, and enhancing students' independent learning skills.

Therefore, the integration of digital innovations into distance learning should be considered not only as a technological process but also as a pedagogical transformation. This article provides a scientific analysis of the current state of distance education, the impact of digital innovations on the learning process, and prospects for its future development.

Advancement in information technologies (IT) is one of the major driving forces of change in organizations and society. In the fast-changing world we live, a convergence of factors such as global economy, complexity of information technologies, growing demand for sustainable competitive advantage and the emerging operations and business systems has a strong impact on higher education. Infrastructures are growing stronger as computers



double in speed while decreasing in computing and storage cost, and high-speed network connections continue to expand.

IT is an essential infrastructure for competitiveness of finance, manufacturing, trade, transportation, entertainment and education. IT is transforming organizations into global networked infrastructures, with processes extended all over the world, creating virtual global distributed markets and systems. However, “in an economy where the only certainty is uncertainty, the one sure source of lasting competitive advantage is knowledge.” Knowledge is power in any society. An important aspect of education is its role as a determinant of national competitive advantage. The availability of a pool of skilled and educated workers seems to be a major determinant of the likely economic success of a country.

It develops skills and professional competencies for students to be able to digitize and work in digital technologies related to their future profession. For this reason it is necessary to carry out the goals of professional orientation and development of professional competence in the implementation of subjects related to students and requirements in our country, full-fledged work is being carried out in the digital world to receive and educate with digital technologies and to digitize the educational system. Development of literacy in learning students in the digital world, increasing the effectiveness of education in digital education, shaping the culture and ethics of digital learning, digital the rational use of technology and the development of information exchange and communication skills in digital education requires responsibility from our state and our teachers.

Today, special attention is paid to the informatization of the educational system in our country. In this regard, ways to develop education, improve its effectiveness are being sought, new information in education the issue of technology implementation is gaining popularity. The use of the internet by the student youth in the educational process makes students deeply aware of the educational material the rational use of technology and the developn.

Distance learning - it is an opportunity to learn in an individual mode, regardless of time and place, the possibility of lifelong learning. In all countries of the world, an increasing number of students studying remotely, increasing the number of universities that use these technologies in the educational process; created a large number of international educational institutions etc. Modern education - is the integration of content and technology training.

Not so long ago, the distance format was considered difficult and incomprehensible. But today it is actively used in all educational areas - for example, in the system of school, secondary vocational and higher education, in staff development in companies and in training clients of online schools. By online learning, many still understand the work of a teacher and a distance learner. In fact, this concept is much broader. Distance learning technologies are a set of the latest information methods and forms of development that ensure the learning process at a distance. Distance no longer hinders live communication, interaction and gaining practical experience.

One of the main advantages of the distance learning system is the possibility of organizing the educational process in a way independent of space and time limits. Modern



ICT (ICT)-e - learning platforms, virtual classrooms, mobile applications, artificial intelligence (AI) Systems, cloud services and interactive applications are widely used in this process. In particular, AI-based learning systems are making it possible to identify the individual needs of students and offer personalized learning pathways.

Today, the problems of innovation and the application of digital technologies are one of the pressing issues that, along with the rapid development of technological progress, present various difficulties.



Although there has been great progress in industry, education, health, and other areas due to digital technologies, there are also problems and limitations in the process of their application. Solving these problems is necessary to ensure the widespread use of technological innovation and the development of society.

Digital literacy is a set of knowledge, skills and competencies necessary for life in the modern world, for the safe and efficient use of digital technologies and internet resources. The ability to create and maintain dynamic online modes is the ability to manage large and complex online social networks. Digital literacy is the ability for a person to effectively solve problems in a digital environment means the main set of knowledge, skills and relationships that allow.

Digital innovation is radically changing not only the technical side of the educational process, but also pedagogical approaches. The teacher is now manifested not as a knowledgeable person, but as a guide to the educational process, motivator and administrator of the student's activities. At the same time, digital technologies serve to form the skills of the 21st century in students, such as independent thinking, working with information, analyzing, solving problems.

The prospects for the development of distance education are closely related to the expansion of the digital ecosystem, the creation of national online platforms, the integration of educational resources and the increase in the digital competence of teachers. In this sense, the organization of the educational process on the basis of digital innovation is in harmony with the policy of digital education of Uzbekistan, which is established as one of the priorities within the framework of the Strategy "Digital Uzbekistan – 2030".

Prospects for the development of distance education The prospects for the development of distance education can be seen in the following areas:



- Expanding digital ecosystems-integrating national and international educational resources, creating online libraries, electronic laboratories and virtual learning environments.
- Personalization of educational resources-the introduction of personalized educational programs that take into account the individual needs of students.
- Increase teacher competence-development of pedagogical trainings and certification systems aimed at the effective application of digital technologies.
- Introduction of innovative technologies-integration of new tools such as artificial intelligence, virtual and augmented reality, mobile applications, blockchain technologies into the educational process

Among the technological means of distance learning are three main groups: case-technology, TV-technology and network technology.

When a case-technology training materials are completed in a special set (case). This set is sent to the student for independent study with occasional reference to the faculty advisors in created for these purposes Training Centers. In particular, this group includes the traditional technology of distance learning. It was believed that with sufficient motivation student is able to self-learn and a considerable amount of material on a wide range of disciplines. TV-technology, as its name implies, is based on the use of television lectures.

By networking, technologies include Internet technology and client-server technology in local area networks. As Internet, technology is used to provide Internet training students teaching materials, as well as for the interaction between teachers and students [1].

Internet - is a convenient and accessible source of diverse information. It opens up new horizons in the information support of science, providing access to information in electronic form, creating fundamentally new resources, forms of organization and direction of research and educational activities. Internet technology is currently the most modern and advanced technological means of distance learning. It is appropriate to consider in combination with the technologies CD-ROM. The content of the courses can be delivered on CD-ROM, which provides cheaper delivery and eliminates the need to have a good channel to access the Internet. And the Internet should be used for interactive communication between the students and to provide timely help and more information. The above approach is the basis of technology web-CD - the most promising now to support distance learning [2].

Distance education through the Internet democratizes the education system, eliminates geographical limitations and makes it possible to obtain permanent knowledge. At the same time, with the development of technological innovation, distance education is expected to be more interactive, personalized and effective. In the future, artificial intelligence and virtual reality technologies will further enrich distance learning, allowing students to create individual lesson plans.

The Internet is an almost perfect technical tool for distance learning. It can deliver up to any student teaching material (textbook, video lectures or demonstrations of the experiment), and even to test. Any training requires a certain organizational and



information support. Must have the following components: training center (school) - the organizational structure of distance education; information resources - training courses, reference, methodical and other materials; means of providing distance learning technologies - organizational, technical, and other software; teachers, students; [3].



Therefore, for a distance course requires four components that provide the educational process: information resources; means of communication; system testing; system administration. “The most important component of a distance course - Information Resources, which focuses substantial part. Today, the materials on which are e-learning courses, has a multimedia nature - text, images, video, computer animation, music and voice”[4]. Therefore, one of the most important tasks is to organize heterogeneous (multimedia) information in the form of a unified information system, which is a training course.

Use as a tool of the Internet and other data transmission systems “bring together” the teacher and students who are away from each other, closer to the traditional distance education, in direct communication with the student teacher, lecturer with the audience, group seminars, proven for centuries. That is why distance learning is often called the form of education of the XXI century.

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