



## **INNOVATIVE METHODS AND TOOLS IN HIGHER EDUCATION**

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<b>ABSTRACT</b>	<b>KEYWORDS</b>
<p>In the current era of information technologies, the use of innovative and electronic programs is finding its place not only in the IT field, but also in the education system. As a result of this, on the one hand, it will increase the computer literacy of students and professors, and on the other hand, it will allow us to organize the teaching and learning process remotely while preserving our health during the current COVID-19 pandemic. The purpose of the article is to improve the effectiveness of education through interactive methods and tools based on a number of changes in the higher education system, to make some recommendations for the development of distance education during the COVID-19 pandemic. In addition, the use of information and communication technologies for the innovative development of higher education, the use of educational platforms, and the use of higher education of Uzbekistan The experience of educational institutions is discussed.</p> <p>In today's age of information technology, the use of innovative and electronic applications is finding its place not only in the field of IT, but also in the education system. As a result, on the one hand, it will increase the computer literacy of students and professors, on the other hand, it will allow us to remotely organize the teaching and learning process while maintaining our health during the current COVID-19 pandemic. The purpose of the article is to increase the effectiveness of education through interactive methods and tools based on a number</p>	<p><i>interactive communication, pedagogical software tools, communication service, pedagogical skills, creativity, innovative methods, modern information technologies, web technologies.</i></p>

of changes in the higher education system, to provide some recommendations for the development of distance learning in the COVID-19 pandemic. In addition, the Uzbek Institute of Higher

## Abstract

International scientific-practical conference on the topic of "Problems and perspectives of modern technology in teaching foreign languages" Education on advanced methods of teaching and learning, remote organization of the educational process, the use of information and communication technologies for the innovative development of higher education, educational platforms and their use. The experience of the universities is discussed.

## INTRODUCTION

Fulfilling the tasks assigned by the government of the Republic of Uzbekistan in the field of higher education largely depends on the personality of the teacher [Mirziyoyev, 2017: 47]. Teaching is an honorable but very difficult profession. In the conditions of the transition to the market economy, it is the responsibility of the teacher to achieve the intended goal of education, to organize various activities of students, to raise them to be educated, polite, faithful, hardworking, business-minded, well-rounded people. The future of our people, the prospects of Uzbekistan depend to a large extent on the teacher, his level, training, selflessness, and his attitude to the work of teaching and educating the young generation. To become a good teacher, it is not enough to master pedagogical theory. Because in the pedagogical theory, the general rules, principles, generalized methodical ideas about the education and upbringing of children are described, it is emphasized to take into account the age and individual characteristics of students [Mirziyoyev, 2017: 485]. University life and the practical pedagogical process are very diverse and complex. There are many situations that do not correspond to the pedagogical theory. This requires extensive knowledge, thorough practical training and high pedagogical skills and creativity from the teacher. To become a true master of a profession, a person must have natural abilities, certain physical and mental qualities, thorough training, and certain personal qualities. A person who chooses the profession of pedagogy must first be healthy, be able to pronounce words correctly and well, be calm and composed, and be able to maintain self-control in dealing with others. Also, it is necessary for the teacher to have personal qualities such as liking students, willingness to work with them, politeness, observation, ability to think broadly, organization, demanding towards himself and others [Alex Moore, 2012: 202].

With the development of technology, the presence of a single computer is enough for teaching using technical tools. In addition, the transmission of information,

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storage, imaging quality has increased significantly. By now, computer literacy has become an important sign of culture, and in the future it will become a necessity for everyone, no matter where they work. Therefore, computer work, teaching how to use a computer will undoubtedly become a general job in the near future [Mirziyoyev, 2017: 29].

Modern information technology tools include: computer, scanner, video camera, LCD projector, interactive whiteboard, fax modem, telephone, e-mail, multimedia tools, Internet networks, mobile communication systems, database management systems, artificial intelligence systems. possible

In the educational process, computers are mainly used in four ways:

- passive application - the computer is like a simple counter;
- reactive communication - the computer as an examiner;
- active communication - when guiding a computer student and taking an exam;
- interactive communication - the computer is used as artificial intelligence, that is, in communication with the student.

Wide introduction of modern information and communication technologies in education:

- informatization of science fields;
- intellectualization of educational activity;
- deepening of integration processes;
- leads to improvement of educational system infrastructure and its management mechanisms.

Effective organization of pedagogical education processes based on modern information technologies:

- the union of pedagogues, computer programmers, and relevant specialists into a team that creates distance learning courses and electronic literature;
- distribution of tasks among pedagogues ;
- requires improving the organization of the educational process and monitoring the effectiveness of pedagogical activities.

Implementation of modern information technologies in educational processes:

- the student acquires professional knowledge;
- deep mastery of the field of science by modeling the studied phenomena and processes;

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- the expansion of the field of independent activity of the student due to the diverse organization of educational activities;
- to individualize and differentiate the teaching process based on the introduction of interactive communication opportunities;
- by using the capabilities of the artificial intelligence system, the student acquires the strategy of mastering educational materials;
- formation of information culture in him as a member of the information society;
- presentation of the studied processes and events through computer technologies is of great importance as it increases students' interest and activity in the basics of science.

The concept of pedagogical software tools

Pedagogical software tools are didactic tools designed for partial or complete automation of the learning process with the help of computer technologies. They are considered one of the promising forms of increasing the efficiency of the educational process and are used as a teaching tool of modern technologies. Pedagogical software tools include: a software product (set of programs) aimed at achieving specific didactic goals in a subject, technical and methodical support, additional auxiliary tools.

Pedagogical software tools can be divided into the following: ^ educational programs - based on the level of knowledge and interests of students, they guide the acquisition of new knowledge;

used for the purposes of checking or evaluating acquired knowledge, skills and abilities;

^ exercisers (trainers) - serve to repeat and strengthen previously mastered educational material;

^ Virtual existence systems - programs that form a virtual learning environment with the participation of the teacher.

of practical and pedagogical software tools in pedagogical activities

In order to implement the technology of creating pedagogical software tools, there are a number of positive factors that confirm their superiority over traditional tools. These factors were divided into didactic, psychological, economic and physiological groups.

Didactic requirements for pedagogical software tools include: scientific, intelligible, rigorous and systematic description (basic principles of pedagogy, psychology, informatics, modern science

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fundamental principles and ensuring the possibility of building the content of educational activities), continuity and integrity (it is considered a logical consequence and complement of previously learned knowledge), consistency, problematic, demonstrativeness, activation (independence of teaching and the presence of the feature of activity), the consistency of mastering the results of training, the interactivity of communication, the unity of teaching, education, development and practice.

Methodological requirements include: taking into account the specific characteristics of a particular academic discipline, taking into account the uniqueness of a particular discipline, the interdependence, interrelationship, diversity, implementation of modern methods of information .

Psychological requirements include perception (verbal-logical, sensory-perceptive), thinking (conceptual-theoretical, demonstrative-practical), attention (persistence, transference), motivation (active forms of work, high degree of visibility, continuous stimulation of high-level motivation of students with the help of timely feedback), taking into account memory, imagination, age and individual psychological characteristics (taking into account the acquired knowledge, skills and competencies, the content of the academic subject and (the level of complexity of educational issues corresponds to the age capabilities and individual characteristics of students, protection from being affected by excessive emotional, nervous, mental loads when learning the educational material).

Technical requirements include modern universal personal computers, peripherals, test resources.

Network requirements include "client-server" architecture, Internet navigators, network operating systems, telecommunications, management tools (individual and collective work of the educational process, external feedback).

Aesthetic requirements include: orderliness and expressiveness (elements, location, size, color), functional function of decoration and compatibility with ergonomic requirements.

Special requirements include: interactivity, goal orientation, independence and flexibility, audioization, visibility, access control, intellectual development, differentiation (classification), creativity, openness, feedback, functionality, reliability.

Ergonomic requirements include: friendliness, adaptability to the user, organization of screen shapes.

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Methodological requirements take into account the specific features of the subject, its laws, research methods, and the possibilities of introducing modern methods of information processing.

Using Internet resources in the educational process There are many advantages of using Web sites in the educational process. Therefore, the creation and updating of such sites is of great importance in the activity of a higher education institution. Therefore, the creation of dedicated sites for educational institutions is one of the primary tasks facing each educational institution. When studying the creation of such sites, it is necessary to take into account the factors related to the Internet system. The following can be mentioned as such factors:

- the breadth of Internet service opportunities worldwide ;
- ease of use of website service;
- ease of distribution of web technologies ;
- requirements for information on a real- time scale;
- Institutions and private individuals seek to post information about themselves on the Internet;
- collection of voluntary information on a global scale in the network database [Tokhtakhodjayeva, 2010].

The importance of the sites created for the educational institution. The wide range of possibilities and simplicity of Internet technologies lead to an increase in the number of Internet users every minute. Most of these users are students, readers, and employees engaged in scientific research. Based on this, it can be said that the use of Internet technologies in the educational process, in particular, websites dedicated to educational institutions, helps to bring the quality and efficiency of education to a significantly higher level.

new information technology tools are improving and developing, the ability of students studying in an educational institution (in general, those working in any field) to find the necessary information independently from the Internet system, the problems related to their current specialty that they face are full and accurate. is becoming one of the important conditions for solving problems [Karimov, 2008: 148].

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It is extremely important to first determine the types of Internet services and their nature in order to determine the possibilities of using Internet sites in the educational process and its effectiveness. It is this identified information that helps to distinguish organizational forms and methods of working on the Internet . Based on the classification, it is possible to get the working method of the internet. In this case, Internet server services should be divided into two types: informational and communication services.

WWW (data set) and GTR (program set) are included in the information service.

The communication service can be divided into two types: direct (PC, chat) and indirect communication (e-mail, forum, teleconference).

All "sites created for an educational institution" on the Internet can be divided into several types:

- educational Internet resources;
- consulting Internet resources;
- informative Internet sources;
- evaluative Internet resources;
- Internet resources with presentations ;

Below we will discuss each of them separately.

online learning resources include distance learning, virtual schools, labs, and web classrooms.

of Internet sources of advice include various teleconferences, virtual pedagogical councils, virtual methodical, associational problem councils, virtual cafes, etc.

Electronic educational manuals, reference books, electronic libraries, dictionaries, catalogs, and virtual museums can be cited as sources of information on the Internet.

Evaluative Internet sources include teletesting, remote contests, various quizzes, and Olympiads.

It is possible to provide separate pages with detailed information about the educational directions of educational institutions [Egamberdiyeva, 2009].

With the help of sites created for educational institutions, teachers make it possible for students to learn remotely. Sites created for educational institutions are especially difficult to participate in teaching sites

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It is convenient for learners who have In addition, students will acquire the culture, skills and competences of working with information technologies. The use of sites created for educational institutions in the course of the lesson creates great opportunities.

Teaching with the help of sites created for educational institutions includes the main forms of traditional organization of the educational process. These include lectures, seminars and practical exercises, laboratory practice, control system, scientific research and independent work of students. All these forms of organizing the educational process in practice allow the students to easily combine their independent knowledge activities with various information sources, to quickly and systematically communicate with the teacher conducting the course, and to enable the students to work in groups [Hasanboyev, 2011].

The use of sites created for educational institutions in the educational process allows teachers to:

- exchange of experience and methods gained from one or another educational subject with other colleagues using the Internet ;
- individualization of the educational process by implementing different teaching methods for different categories of students at the same time ;
- as a result of using control tasks on sites created for educational institutions as exercises, to bring students' acquired knowledge of science to the level of skills and qualifications;
- creating an opportunity for students to work individually and demonstrate their abilities by reducing manual work;
- creates opportunities for students to effectively organize the process of independent learning.

Students use sites created for educational institutions in teaching:

- choose study situations according to their preferences;
  - choose appropriate reading methods and presentation methods based on their preparation and psychophysical characteristics;
  - return to previously studied materials, suspend the study process and refer to it at any time;
  - monitoring the dynamics of various processes and the interaction of mechanisms;
- i Ne možete naiti to, chto vam urgent? Poprobuyte servis [podbora literatury](#).*

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- management of studied objects and review of their corresponding results;



- communication on the computer leads to freedom from psychological obstacles (such as lack of laughter, lack of courage, lack of shame);
- have the ability to patiently use the computer until their readiness levels are sufficient.

The following advantages of sites created for educational institutions in the field of education can be listed:

- improvement of mastering of subjects ;
- increasing network literacy (innovations in communicating with a computer and the Internet);
- improved attitude to learning;
- improvement of independent education and research skills;
- increase the effectiveness of practical skills.

Sites created for an educational institution on the Internet

Today, development is very fast and changing very fast. Almost every minute, changes, updates and unexpected events are happening in different parts of our planet . Every day we live under a strong flow of information. The flow of information haunts us at home, at work and on vacation. A person cannot function normally without the influence of information. Understanding life, studying it, takes place through gathering 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.

Therefore, opening a wide path to modern knowledge, effective use of new information technologies in the improvement of teaching has become a requirement of today. However, significant changes are taking place in the education system. In the educational system, the use of sites created for educational institutions is being used.

Another advantage of sites created for educational institutions is that the student can study at his convenience and even without leaving work.

Another advantage of sites created for educational institutions is that the student himself determines the duration of the study, that is, the student starts studying at the time of his choice, learns the materials under the supervision of the teacher. Mastering is determined by the completion of assignments and tests. The program given to the student

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the faster he learns, the faster he will graduate and get a certificate. If he cannot master the program, he will be given the opportunity to work independently and continue his studies.

The materials provided on the sites created for educational institutions mainly consist of:

- Textbook;
- Audio and video textbooks;
- Online lessons (web page);
- Electronic libraries;
- Tests;
- Multimedia - electronic textbooks [Mavlanova, 2010: 461].

higher and secondary specialized educational institutions of our republic, to promote electronic educational literature prepared in educational institutions of the republic among all educational institutions. The leadership of our country is paying serious attention to finding a positive solution to this issue and implementing electronic educational resources created for educational institutions and

educational institutions' sites in the educational process. As a result of this, the <http://www.ziynet.uz/> information-educational portal established by the decision of the President of the Republic of Uzbekistan was launched, and it is important that educational resources for all educational institutions are placed on this portal.

traditional and electronic educational materials complement each other as a component of a unified educational environment. Using the possibilities of new information technologies serves to eliminate some pedagogical problems.

The creation of a single information portal is intended to lead to the following positive results:

- A unified information environment of republican pedagogic educational institutions will be created;
  - creates a unified library environment (creation of an electronic library, creation of a fund of electronic textbooks and non-traditional information carriers, creation of a unified database, etc.);
  - a unified telecommunication network environment is formed in the field of pedagogical education;
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- forms a new information-educational environment, creates social-psychological foundations for the use of information and communication technologies in education;
  - increases the quality of pedagogical education by forming pedagogical personnel with a new information culture;
  - creates a system of scientific and methodological support of new educational technologies;
  - ensuring public access to educational information, information resources, document transfer, systematization of the accounting mechanism, public access to information on the state of pedagogical education in the republic;
  - distance education system will be developed.

The introduction of a single information space of pedagogical educational institutions creates good conditions for the development of the quality of pedagogical education and information supply.