



THE IMPORTANCE OF USING PEDAGOGICAL SOFTWARE TOOLS IN SCHOOL EDUCATION

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Abstract

Today, the emergence of multimedia and Internet technologies has opened a wide way for the use of information technology as an effective tool in the processes of education and education, communication of secondary schools. Abstract: Today, the emergence of multimedia and Internet technologies has opened a wide way for the use of information technologies as an effective tool in education and training, communication processes in general education schools. In this article, the increasing role and influence of information technologies in the development of a well-rounded person, his independent choice of profession and professional self-formation, professional skill development, the use of computer programs in classes, the shift of focus from reproductive activities to creative activities, enriching learning, enabling the development of associative and emotional memory and audiovisual perception, especially activating the learning process and providing students with a comfortable learning environment are highlighted.

Key words: multimedia, pedagogical software tools, computer training programs, instructional programs, trainers, test programs, UNESCO, Cloud Computing, Mobile Learning, Tablet Computing, Open Content Learning, Analytic Learning, Virtual and Remote Laboratories, work with dictionary.

”We consider it our first-class task to improve the activities of all branches of the educational and educational system based on the requirements of today's times.”

Shavkat Mirziyoyev

The trends of development in the world educational sphere indicate the relevance of the wider introduction of modern didactic means of teaching in an informed society and the further increase in their effectiveness. The 21st century-the age of informatization has undoubtedly had its impact on the traditional teaching of foreign languages. The purpose of this is to learn the correct and effective use of modern information technologies in the educational process. In keeping with the period, one of the pressing issues was the introduction of information technologies into the





educational process of secondary schools, which are rapidly expanding into the practice of all spheres from day to day. A Worldwide Information Network is able to provide information in any field regardless of the size and speed of the information, to be received at any quantity. The emergence of multimedia and Internet technologies has opened a wide path to the use of information technology as an effective tool in the processes of education and education, communication of secondary schools. It cannot be denied that the role and influence of Information Technology on the development of a harmonious personality, its choice of an independent profession and professional self-formation, the development of professional skills are increasing.

"We consider it our first-level task to improve the activities of all branches of the educational and educational system on the basis of the requirements of today's time," stressed the head of state Shavkat Mirziyoyev. Moreover, as the first president of our country noted, "we set ourselves the goal of creating all the opportunities and conditions necessary for our children not only to grow up physically and spiritually healthy, but also to grow up, being harmoniously developed people with the most modern intellectual knowledge, a harmonious generation that fully meets the requirements of the 21st century." These thoughts became the foundation for our next steps. Therefore, the role of Informatics and Information Technology in today's advanced educational process is extremely incomparable. Today, this information technology for each educator must fulfill the most leading task in its development. Modern information resources will help the teacher improve his professional skills. Because at present, humanity, as well as information technology, are faced with the inevitable reality, and the activities of educational institutions of our country are carried out in cooperation with a number of leading organizations around the world in an effort to bring new pedagogical technologies.

In the process of education in general education schools, the following opportunities are opened before the teacher and students through the means of Information Technology, in particular:

- ✚ they will learn new ways to collect information and their application;
- ✚ the circle of children's thinking expands, their interest in acquiring knowledge increases;
- ✚ the role of independent work increases, efficiency improves;
- ✚ helps to mentally develop a child, expand his emotional-aesthetic circle, cultivate positive abilities.

Using computer and information technology, new opportunities are created in the field of education, educational activities and the development of creative thinking of





students. Information technology allows you to harmonize education with life in the process of implementation. The opportunity arises to closely connect training with future professional activities. Through computer tools, it is necessary to strive to realize the child's cognitive, moral, creative, communicative and aesthetic capabilities, abilities. In order to turn computer and information technology into a full-fledged means of developing the personality of a student, the teacher himself must be knowledgeable (competent) in the field of Information Technology.

The very rapid development of equipment and software tools of information technology, such as the release of new generation computers, new programs, the solution of various educational tasks, opens up favorable technical opportunities. However, scientific research shows that information systems used for educational purposes are still at an unsatisfactory level according to their didactic qualities. This is because the methodological (pedagogical) means of using information technology for teaching purposes are far behind the development of technical means of informatization. The capabilities of the computer are huge, but for pedagogical purposes it is not used enough. Information for the purpose of training is entered at the stage of its design. In particular, it is included in the creation of a database of information and automated teaching systems, in the preparation of educational material for drawing up electronic textbooks, in the compilation of scenarios of educational work with computer systems of the modeling type, issues and exercises, test assignments. Information technology combines information related to disciplines such as informatics, mathematics, cybernetics, psychology, pedagogy in one way or another. However, the psychological and pedagogical basis plays a leading role in this harmony. An important place is occupied by the development of Information Technology and its introduction into the training process. New information technologies are of great importance for the educational process and research work. In contrast to the usual educational technologies, information technologies are served by the subject of Labor and, as a result of it, information, and the technical means of informatization serve as a weapon of Labor.

Computer tools at different stages of the educational process:

- ❖ at the stage of providing educational materials to students;
- ❖ interfacial interaction with the computer in mastering the educational material in the process of moving;
- ❖ in reproducing and strengthening acquired knowledge, skills and skills;
- ❖ at the stage of intermediate and final control and self-control of the results achieved in teaching;





❖ it can be used at the stage of making corrections to the teaching process and its results by dividing the teaching material into parts, classifying it and improving the systematization of the moment.

Properly organized computerized teaching programs allow you to individualize and differentiate teaching in the event of consideration of the psychological and pedagogical rules for the assimilation of information by the student, to stimulate children's interests and independent activities in reading.

In recent years, more attention has been paid to the use of new modern technologies in teaching foreign languages in school education. This means not only new technical means, but also new forms and methods of training and a new approach to the learning process. In modern pedagogical practice, various teaching technologies are used, with which students' interest in science, academic performance and the level of intellectual culture are also sharply increasing. Modern pedagogical technologies, such as collaborative teaching, project methodology, the use of new information and communication technologies and Internet resources, help to implement a person-oriented approach to teaching, provide individualization and stratification of education, taking into account the abilities of children, their level of education and inclinations.

The rapid development of information and Communication Technologies has not only had an impact on the educational system, but also became the main instrument of its organization. As an example, the most rapidly developed and highly effective educational technologies are organized on the basis of Information Communications. Examples include Cloud Computing, Mobile Learning, Tablet Computing, Open Content Learning, Analytic Learning, Virtual and Remote Laboratories. With the introduction of ICT into the educational process, a new approach to education began to take shape, characteristic of the modern information environment.

UNESCO¹ believes that ICT can contribute to the openness and validity of education, to improve the quality of teaching and training, and to the professional development of teachers. In addition, with appropriate policies, technologies and capabilities, ICT helps improve education management, leadership and administration. UNESCO takes a comprehensive approach to the ways to use ICT in education. The United Nations has a strong focus on the joint activities of the fields of communication and informatization, education and Natural Sciences, which address issues of access, inclusion, equality and quality in education.

UNESCO programs to use ICT in education include:

¹ <https://ru.unesco.org/themes/ikt-v-oblasti-obrazovaniya>





- capacity building on the use of mobile teaching technologies in education;
- teaching teachers the skills necessary to use ICT in all aspects of their professional activities, using tools such as " ICT Competence Framework for teachers;
- promote the creation and use of multilingual educational resources and software available for reuse through open licenses (open educational resources-OER; free source software-BOOOOIK);
- collection of statistical data on the use of ICT in education and the development of indicators.

The effective organization of pedagogical educational processes on the basis of modern information technologies assumes the creation of distance learning courses and Electronic Literature to the team the unification of educators, computer programmers, relevant specialists, the distribution of tasks among educators, improving the organization of the educational process and monitoring the effectiveness of pedagogical activity.

Currently, various forms of Organization of the educational process are used. Since information technology is both a material delivery tool and a controlling tool – such technologies provide a high quality of material supply and use different communication channels (text, sound, graphics and touch). All this makes it possible to increase the motivation of students and form their communicative competence. In particular, the program tools used in the educational process - multimedias developed using pedagogical software tools, educational programs are important in the effective organization of the educational process. After all, the training process is a holistic system, which includes both data statement, demonstration, training and control processes. Therefore, it is advisable to say that PDV with a common name, depending on all types of application tools that can be used in the training process as a holistic system.

Pedagogical software tools are didactic tools designed to partially or completely automate the educational process using computer technology. They are considered one of the promising forms of improving the effectiveness of the educational process and are used as a teaching tool of modern technologies. Pedagogical software tools include: a software product (a set of programs), technical and methodological support, additional auxiliary tools aimed at achieving specific didactic goals in educational science.

N.N.Gorlushkina argues that “Pedagogical software is the technological support of the educational process based on the use of computer and telecommunication technologies.”

Pedagogical software tools can be divided into:





teaching programs-direct students to the acquisition of new knowledge based on their level of knowledge and interests;

test programs-applied for the purposes of testing or evaluating acquired knowledge, skills and skills;

exercises-serve to repeat and strengthen the previously mastered training material;

programs that form a virtual learning environment with the participation of a teacher.

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

Requirements for pedagogical software tools	
Didactic requirements	together with scientificity, understandable, strict and systematic description (to ensure the possibility of constructing the content of educational activities taking into account the basic principles of pedagogy, psychology, informatics, ergonomics, the fundamental foundations of modern science), continuity and integrity (previously is a logical consequence and complement of learned knowledge), consistency, problem, demonstrability, activation (independence of teaching and the presence of the feature of activity), solidity of assimilation of teaching results, interactivity of communication, teaching, education, development and a holistic unit of practice.
Methodological requirements	taking into account the specific features of a specific educational subject, taking into account the uniqueness of a certain subject, the interdependence, interrelationship, diversity, implementation of modern methods of information.
Psychological requirements	perception (verbal-logical, sensory-perceptive), thinking (conceptual-theoretical, visual-practical), attention (persistence, transference), motivation (active forms in work, high degree of visibility, o constant 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 qualifications, the content of the academic subject and the the level of complexity of educational issues, matching the age capabilities and individual characteristics of students, protection from being affected by excessive emotional, nervous, mental loads when mastering the educational material.



Technical requirements	includes personal computers and their external devices, test resources.
Network requirements	includes "client-server" architecture, Internet navigators, network operating systems, telecommunications, management tools (individual and collective work of the educational process, external feedback).
Aesthetic requirements	orderliness and expressiveness (elements, location, size, color), functional function of decoration and compatibility with ergonomic requirements.
Special requirements	interactivity, goal orientation, independence and flexibility, audioization, visualization, access control, intellectual development, differentiation (classification), creativity, openness, feedback, functionality, reliability.
Ergonomic requirements	friendliness, adaptation to the user, organization of screen forms.

Therefore, it is necessary to take into account these requirements when creating pedagogical software tools.

The use of computer programs allows to shift attention from reproductive activities to creative activities, enrich learning, develop associative and emotional memory and audiovisual perception. Parallel texts in foreign languages (Russian and English) also help to quickly and easily understand the relationship between words. Listening to materials facilitates and accelerates their assimilation, helps to improve the Russian language and develop the correct intonation of the Russian language.

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The use of information technology also facilitates the implementation of group work; allows planning creative activities, active and purposeful communication (within a group and individually); creates opportunities for organizing collective creativity (web 2.0 technology), helps to obtain information on open information networks (creating a project and preparing individual tasks) and preparing reports about the work done or an event.

When creating pedagogical software tools, it is necessary to take into account the psychophysiological characteristics of students. On the basis of the application of pedagogical software tools, the functional and psychophysiological capabilities of students must be taken into account in the formation of skills and competencies of





students to receive independent education. The desire of educators to illuminate as much information as possible on the basis of pedagogical software tools can lead to excessive exhaustion of the reader. In turn, increasing the speed of data transmission, on the other hand, negatively affects the quality of data acquisition, the increase in the number of errors, the feeling and health of the pupil.

Today, various teaching software tools are widely used in the educational systems of developed countries of the world. Instructional visual software tools are created using authoring software. The use of such programs in the educational process is high-performing, the reason is that when receiving information regarding the knowledge transmitted in the audience and performing tasks, the student simultaneously hears and sees and assimilates.

Author software is a software tool designed to partially or completely automate the learning process using computer technology. They are considered one of the promising forms of improving the effectiveness of the educational process and are used as a teaching tool of modern technologies. It is very convenient to create electronic textbooks using author's software. Electronic textbooks, using computer technology, maximize understanding of the most important concepts and laws as well as keeping in mind. Below is an overview of the capabilities of author's software.

Examples of authoring programs include Articulate Storyline, Adobe Captivate, CourseLab, iSpringPro, Lectora, Camtasia Studio, Ulead Gif Animator program. In addition, it is possible to convert a file prepared in a simple Word editor into a graphic file, convert graphic files of one format into graphic files of another format, concentrate several multimedia applications into single multimedia applications, implement multimedia applications in size, size, quality and structure through multimedia applications. Such applications include Adobe PageMaker, Adobe Photoshop, Adobe Flash, 3d Max.

The most commonly used modern foreign-language computer programs developed in the United States, such as Wordstock, Matchmaster, Choicemaster, Crosswordmaster, Gapmaster, etc. These programs reveal the features of language teaching working with vocabulary, matching lexical units, creating multiple choice exercises, and working with texts such as Gapmaster, Pinpoint, and Speedread.

Articulate Storyline, on the other hand, is one of the most popular programs designed to create presentation, test teaching courses that are flexible, easy to use, and designed to create courses of various purposes.

And some programs, such as Adobe Illustrator, are considered drawing programs or graphic editors when creating multimedia, with which the elements of the image are controlled.





In addition, one of the programs that work with animations is the Ulead Gif Animator program. With this program, it is possible to create very interesting videos for elementary school students when learning foreign languages.

Camtasia Studio, Adobe Captivate, iSpringPro and CourseLab programs –with the help of audio, video, online presentation materials enriched with interactive elements and tests and the possibility of organizing several electronic publications, such as training courses, various questionnaires, questionnaires, interactive tests, 3D books. Hence, multimedia for teaching students in a Foreign (Russian) language provides great opportunities. A distinctive feature of multimedia is a high information density and a complete set of the most effective educational components—a synthesis of text, visualization and audio materials that allow multimodal perception of information with the activation of several information channels.

Thus, the use of Information Technology in classes gives a lasting result, primarily due to the use of the creative potential of students, which leads to the formation of a state of success and increases motivation in teaching. The effectiveness of the lesson is achieved due to the optimal combination of innovative tools and teaching methods that maximize cognitive activity, the desire to solve problem situations and the independence of students. Therefore, information and computer technology is a means of activating creative potential and improving the quality of knowledge in the study of a foreign language.

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