

**INNOVATIVE INFORMATION TECHNOLOGIES AND NEW METHODS AND
TOOLS FOR THEIR APPLICATION IN TODAY'S EDUCATION**

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Abstract: The article highlights the advantages of using modern information technologies in the lessons of a general education school. The information about the role of information technologies in modern education is given.

Keywords: Information technology, education, presentation, multimedia, video.

Enter. Today, as Uzbekistan is consistently moving towards building a democratic legal state and a just civil society, fundamental reforms are being implemented in the personnel training system. In the social policy of the state, individual interest and priority of education are decided. The need to provide the educational process with advanced pedagogical and information technologies is one of the conditions for the implementation of the National Personnel Training Program.

As we all know, information is a collection of information about a person, object, evidence, event, event, and process, regardless of the form of presentation. Information technology is the total methods, devices, methods and processes used to collect, store, search, process and distribute information.

The main part. In the educational process, issues of information technologies and their application, innovative changes and approaches, the introduction of any innovation into the system, directly through updating and changing the teacher's activity, are of urgent importance. This activity is continuous work on the basis of news, which is formed and improved over a long period of time. Collection, storage, processing and distribution of information by the teacher contributes to the development of education by introducing innovations into pedagogical activity, has a positive effect on pedagogical activity. In improving the effectiveness of the educational process, information technologies play an important role in independent works such as booklets, informational bulletins, presentations, sample summaries, schemes, graphics and tables. Pupils were given ample opportunities for free creativity and independent work. Presentations prepared on the basis of Internet resources, Power Point, Word computer programs, and programs with informational information are important tools for covering the topic. In such a process, interrelationships between concepts and events are established, personal knowledge of students increases, they actively accept ready-made facts, concepts, and explanations in the situation of independent solving of problematic issues.

The modern world level of development of information and communication technologies is such that the creation of a national system compatible with the integration of the infrastructures of the world information space and the national information and computing network in the republic is an important factor in the effectiveness of the national economy, management, science and education. These problems are very complex and at the same time urgent for our republic. The results of the implementation of economic, structural and other changes that are currently being carried out depend on how and in what time frame the problems related to informatization are solved in the republic.

The creation of electronic educational tools for educational subjects further expands the possibility of using modern information and communication technologies in teaching these subjects. This, in turn, is the main factor of students' in-depth acquisition of knowledge in these subjects and increases the quality and efficiency of education.

Multimedia is a rapidly developing modern information technology. Its distinguishing features include:

- integrates various types of information: traditional (text, tables, decorations, etc.), original (speech, music, excerpts from video films, TV frames, animation, etc.) in one software product. Such an integration of various devices for recording and displaying information
- education of students and retraining of personnel on the basis of multimedia tools is an urgent issue of today. The concept of multimedia entered our lives in the early 90s. The question is what is he himself? Many experts analyze this term in different ways. In our opinion, multimedia is an embodied form of delivery of educational materials to students based on audio, video text, graphics and animation effects based on software and technical tools of informatics.

Teaching students based on multimedia tools has the following advantages:

- a) there is a possibility of deeper and more perfect assimilation of the given materials;
- b) the passion for close contact with new areas of learning will increase;
- c) as a result of reducing the time of education, achieving the opportunity to save time;
- g) acquired knowledge is kept in one's memory for a long time and it is possible to use it in practice if necessary.

The emergence of the multimedia system has led to revolutionary changes in several professional fields such as education, science, art, computer training, advertising, technology, medicine, mathematics, business, scientific research.

Although the idea of using computers in the educational system appeared much earlier, the use of information technology in all areas of the educational system became more complete after the advent of computers equipped with multimedia devices. was put into practice.

The use of multimedia tools in education provides an opportunity to:

- ensure the humanization of education;
- increase the efficiency of the educational process;
- development of the learner's personal qualities (assimilation, thirst for knowledge, independent education, self-education, self-improvement, creative abilities, ability to apply acquired knowledge in practice, interest in learning, attitude to work);
- development of the learner's communicative and social skills;
- with the help of computer tools and information electronic educational resources, the possibilities of individualization and differentiation of open and distance education will be significantly expanded due to the separate (individual) education of each person;
- to look at the learner as an active learning subject, to recognize his value;
- taking into account the personal experience and individual characteristics of the learner;
- conducting independent educational activities, in which the learner studies and develops independently;
- formation of students' skills in the use of modern educational technologies, which help them to adapt to the current rapidly changing social conditions in order to successfully perform their professional tasks.

According to the possibilities of taking into account the individual characteristics of learners and helping to increase their interest (motivation), as well as according to the qualities of compatibility, interactivity, flexibility of various types of multimedia educational information, multimedia is useful and productive education. lim technology.

Teachers who struggle with computer skills can use simple presentation methods without animation and sound. A presentation may include key concepts and phrases, key words, brochures, diagrams, and visuals on the topic. If the screen for the presentation is set at an angle of 45 degrees, the teacher will be able to attach a presentation on the topic to the students while standing in the center. Visualization and short texts play an important role in the presentation.

The process of creating a Power Point presentation is carried out in the following actions: choosing the general decoration of the presentation; choosing the size of the content of the slides (maximum 36 words of 6 lines); add a new slide and its components; selection of slide sizes; use the necessary changes in the decoration of slides; creating sound animation aspects in slide shows.

Videos also play an important role in creating knowledge in the teaching process. Viewing videos autonomously or optional does not give any results. Selected videos should be relevant to the topic and focus on specific goals. The method of using video materials should increase students' interest in the subject and have an emotional impact. When showing videos, the teacher should comment on each video and draw students' attention to a specific goal.

The duration of videos should not exceed 5-7 minutes. According to the theorists of pedagogical technology, it is possible to put the didactic process, that is, technologies into practice, on the basis of clearly defining the didactic issues (didactic purpose, content, and student's mastery) on the topics. Accordingly, the didactic process will consist of the following components:

Motivation. At this stage, the teacher creates the need to learn the subject using different methods.

The following are recommended for such methods:

1. Thematic footage, showing films, showing pictures.
2. Use of statistical materials related to the topic.
3. Working with documents.

These methods encourage students to learn the subject with interest from the very beginning of the lesson. Organization of the student's educational activity on the basis of the taxonomy of educational goals developed by the American pedagogue scientist B. Bloom will have a positive effect. "Knowing" is the lowest level of the cognitive domain, which means remembering concepts, facts, and principles. At this stage, the student should be able to memorize, remember, name and tell the acquired knowledge.

At the "Understanding" stage, the essence of acquired knowledge is clarified and understood.

At the "Application" stage, the acquired theoretical knowledge and the theoretical aspects of various forms of practical application are mastered (the student knows how to apply the acquired knowledge in practice, but this does not mean that he can apply it).

At the "Analysis" stage, the student has the potential to analyze the acquired knowledge.

At the "synthesis" stage, the student connects the acquired knowledge to each other and can identify common connections.

The "Evaluation" level is considered the highest level, and at this level, the student acquires the skills to express his opinion and evaluate certain concepts, arguments and principles based on the knowledge he has acquired.

The implementation of this process in a sequence creates conditions for the formation of skills and competences in the subject, not only for the student to acquire knowledge. The last component of the didactic process is management of educational activities. In the lesson, the necessary information is transmitted directly from the teacher to the students using communication.

An important aspect of control is that if the learning activity is performed by the student, the control algorithm can be performed by both the teacher and the student.

At the end of the academic subject, it is necessary to control the knowledge of students. The form of control can be as follows: conducting a survey; conducting written work; test taking; creating and solving crossword puzzles; write reviews of scientific articles; writing an abstract.

SummaryBased on the requirements of the present time, in the training of highly qualified personnel, implementation of teaching on the basis of pedagogical and information technologies

plays an important role in increasing the quality and efficiency of education. They plan and implement the educational process that guarantees the achievement of the set goals. Provides emotional impact to students through visual materials. After all, 80 percent of the successful course depends on the correct design, organization and implementation of the educational process.

List of used literature:

1. Abduqadirov AA, Pardayev A. Theory and methodology of pedagogical technology. T. Science and Technology. 2012.
2. Mavlyanov A., Abdalova S., Yusupova L.Yu., Mavlyanova I. Development of independent thinking of learners in training based on interactive methods // Study guide. - Tashkent: Science and Technology Publishing House, 2009.
3. Ikromovna, A. Z. (2023). USING THE USEFUL ASPECTS OF THE MOODLE SYSTEM AND ITS POSSIBILITIES. *American Journal of Public Diplomacy and International Studies* (2993-2157), 1(9), 201-205.
4. Axmedova, Z. (2023). MOODLE TIZIMI VA UNING IMKONIYATLARI. *Development and innovations in science*, 2(11), 29-35.
5. Zulxumor, A. (2022). IMPLEMENTATION OF INTERACTIVE COURSES IN THE EDUCATIONAL PROCESS. *ILMIY TADQIQOT VA INNOVATSIYA*, 1(6), 128-132.
6. Муродов, О. Т. (2023). РАЗРАБОТКА АВТОМАТИЗИРОВАННОЙ СИСТЕМЫ УПРАВЛЕНИЯ ТЕМПЕРАТУРЫ И ВЛАЖНОСТИ В ПРОИЗВОДСТВЕННЫХ КОМНАТАХ. *GOLDEN BRAIN*, 1(26), 91-95.
7. Murodov, O. T. R. (2023). ZAMONAVIY TA'LIMDA AXBOROT TEXNOLOGIYALARI VA ULARNI QO'LLASH USUL VA VOSITALARI. *Educational Research in Universal Sciences*, 2(10), 481-486.
8. Murodov, O. T. (2023). INFORMATIKA FANINI O'QITISHDA YANGI INNOVATSION USULLARDAN FOYDALANISH METODIKASI. *GOLDEN BRAIN*, 1(34), 130-139.
9. Sharopova, M. M. qizi . (2023). JAVA TILI YORDAMIDA OB'YEKTGA YUNALTIRILGAN DASTURLASH ASOSLARI BILAN TANISHISH. *GOLDEN BRAIN*, 1(34), 111-119.
10. qizi Sharopova, M. M. (2023). RSA VA EL-GAMAL OCHIQ KALITLI SHIFRLASH ALGORITMI ASOSIDA ELEKTRON RAQMLI IMZOLARI. RSA OCHIQ KALITLI SHIFRLASH ALGORITMI ASOSIDAGI ELEKTRON RAQAMLI IMZO. *Educational Research in Universal Sciences*, 2(10), 316-319
11. Sharipova, M. P. L. (2023). CAPUTA MA'NOSIDA KASR TARTIBLI HOSILALAR VA UNI HISOBLASH USULLARI. *Educational Research in Universal Sciences*, 2(9), 360-365.
12. Sharipova, M. P. (2023). MAXSUS SOHALARDA KARLEMAN MATRITSASI. *Educational Research in Universal Sciences*, 2(10), 137-141.
13. Madina Polatovna Sharipova. (2023). APPROXIMATION OF FUNCTIONS WITH COEFFICIENTS. *American Journal of Public Diplomacy and International Studies* (2993-2157), 1(9), 135-138.
14. Madina Polatovna Sharipova. (2023). Applications of the double integral to mechanical problems. *International journal of sciearchers*, 2(2), 101-103.
15. Sharipova, M. P. L. (2023). FINDING THE MAXIMUM AND MINIMUM VALUE OF A FUNCTION ON A SEGMENT. *American Journal of Public Diplomacy and International Studies* (2993-2157), 1(9), 245-248.

16. Sharipova, M. P. (2023). FUNKSIYALARNI KOEFFITSIENTLAR ORQALI FUNKSIYALARNI YAKINLASHTIRISH HAQIDA MA'LUMOTLAR. *GOLDEN BRAIN*, 1(34), 102–110.
17. qizi Latipova, S. S. (2023). KASR TARTIBLI HOSILA TUSHUNCHASI. *SCHOLAR*, 1(31), 263-269.
18. qizi Latipova, S. S. (2023). RIMAN-LUIVILL KASR TARTIBLI INTEGRALI VA HOSILASIGA OID AYRIM MASALALARNING ISHLANISHI. *Educational Research in Universal Sciences*, 2(12), 216-220.
19. qizi Latipova, S. S. (2023). MITTAG-LIFFLER FUNKSIYASI VA UNI HISOBLASH USULLARI. *Educational Research in Universal Sciences*, 2(9), 238-244.
20. Shahnoza, L. (2023, March). KASR TARTIBLI TENGLAMALARDA MANBA VA BOSHLANG'ICH FUNKSIYANI ANIQLASH BO'YICHA TESKARI MASALALAR. In " *Conference on Universal Science Research 2023*" (Vol. 1, No. 3, pp. 8-10).
21. Latipova, S. S. qizi . (2023). BETA FUNKSIYA XOSSALARI VA BU FUNKSIYA YORDAMIDA TURLI MASALALARNI YECHISH. *GOLDEN BRAIN*, 1(34), 66–76.
22. Jurakulov, SZ (2023). NUCLEAR ENERGY. *Educational Research in Universal Sciences* , 2 (10), 514-518.
23. Oghly, JSZ (2023). PHYSICO-CHEMICAL PROPERTIES OF POLYMER COMPOSITES. *American Journal of Applied Science and Technology* , 3 (10), 25-33.
24. Oghly, JSZ (2023). THE RELATIONSHIP OF PHYSICS AND ART IN ARISTOTLE'S SYSTEM. *International Journal of Pedagogics* , 3 (11), 67-73.
25. Oghly, JSZ (2023). BASIC PHILOSOPHICAL AND METHODOLOGICAL IDEAS IN THE EVOLUTION OF PHYSICAL SCIENCES. *Gospodarka i Innowacje* . , 41 , 233-241.
26. Jalolov, T. S. (2023). SPSS YOKI IJTIMOY FANLAR UCHUN STATISTIK PAKET BILAN PSIXOLOGIK MA'LUMOTLARNI QAYTA ISHLASH. *Journal of Universal Science Research*, 1(12), 207–215.
27. Jalolov, T. S. (2023). THE MECHANISMS OF USING MATHEMATICAL STATISTICAL ANALYSIS METHODS IN PSYCHOLOGY. *TECHNICAL SCIENCE RESEARCH IN UZBEKISTAN*, 1(5), 138-144.
28. Jalolov, T. S. (2023). PROGRAMMING LANGUAGES, THEIR TYPES AND BASICS. *TECHNICAL SCIENCE RESEARCH IN UZBEKISTAN*, 1(5), 145-152.
29. Jalolov, T. S. (2023). PYTHON TILINING AFZALLIKLARI VA KAMCHILIKLARI. *TECHNICAL SCIENCE RESEARCH IN UZBEKISTAN*, 1(5), 153-159.
30. Jalolov, T. S. (2023). PYTHON DASTUR TILIDADA WEB-ILOVALAR ISHLAB CHIQISH. *TECHNICAL SCIENCE RESEARCH IN UZBEKISTAN*, 1(5), 160-166.
31. Jalolov, T. S. (2023). SUN'IY INTELLEKTDI PYTHONNING (PYTORCH) KUTUBXONASIDAN FOYDALANISH. *TECHNICAL SCIENCE RESEARCH IN UZBEKISTAN*, 1(5), 167-171.
32. Jalolov, T. S. (2023). WORKING WITH MATHEMATICAL FUNCTIONS IN PYTHON. *TECHNICAL SCIENCE RESEARCH IN UZBEKISTAN*, 1(5), 172-177.
33. Jalolov, T. S. (2023). PARALLEL PROGRAMMING IN PYTHON. *TECHNICAL SCIENCE RESEARCH IN UZBEKISTAN*, 1(5), 178-183.
34. Турсунов, Б. Ж., & Шомуродов, А. Ю. (2021). Перспективный метод утилизации отходов нефтеперерабатывающей промышленности. *TA'LIM VA RIVOJLANISH TAHLILI ONLAYN ILMIY JURNALI*, 1(6), 239-243.
35. Bakhodir, T., Bakhtiyor, G., & Makhfuza, O. (2021). Oil sludge and their impact on the environment. *Universum: технические науки*, (6-5 (87)), 69-71.

36. Турсунов, Б. Ж. (2021). АНАЛИЗ МЕТОДОВ УТИЛИЗАЦИИ ОТХОДОВ НЕФТЕПЕРЕРАБАТЫВАЮЩЕЙ ПРОМЫШЛЕННОСТИ. Scientific progress, 2(4), 669-674.
37. Турсунов, Б. Ж., Ботиров, Т. В., Ташпулатов, Д. К., & Хайруллаев, Б. И. (2018). ПЕРСПЕКТИВА ПРИМЕНЕНИЯ ОПТИМАЛЬНОГО ПРОЦЕССА РУДООТДЕЛЕНИЯ В КАРЬЕРЕ МУРУНТАУ. In Инновационные геотехнологии при разработке рудных и нерудных месторождений (pp. 160-164).
38. ТУРСУНОВ, Б., & ТАШПУЛАТОВ, Д. (2018). ЭФФЕКТИВНОСТЬ ПРИМЕНЕНИЯ ПРЕДВАРИТЕЛЬНОГО ОБОГАЩЕНИЯ РУД В КАРЬЕРЕ КАЛЬМАКИР. In Инновационные геотехнологии при разработке рудных и нерудных месторождений (pp. 165-168).
39. Jalolov, T. S. (2023). PSIXOLOGIYA YO 'NALISHIDA TAHSIL OLAYOTGAN TALABALARGA SPSS YORDAMIDA MATEMATIK USULLARNI O 'RGATISHNING METODIK USULLARI. Educational Research in Universal Sciences, 2(10), 323-326.
40. Jalolov, T. S. (2023). PYTHON INSTRUMENTLARI BILAN KATTA MA'LUMOTLARNI QAYTA ISHLASH. Educational Research in Universal Sciences, 2(10), 320-322.
41. Jalolov, T. S., & Usmonov, A. U. (2021). "AQLLI ISSIQXONA" BOSHQARISH TIZIMINI MODELLASHTIRISH VA TADQIQ QILISH. Экономика и социум, (9 (88)), 74-77.
42. Sadriddinovich, J. T. (2023). Capabilities of SPSS Software in High Volume Data Processing Testing. American Journal of Public Diplomacy and International Studies (2993-2157), 1(9), 82-86.
43. Sadriddinovich, J. T. (2023, November). IDENTIFYING THE POSITIVE EFFECTS OF PSYCHOLOGICAL AND SOCIAL WORK FACTORS BETWEEN INDIVIDUALS AND DEPARTMENTS THROUGH SPSS SOFTWARE. In INTERNATIONAL SCIENTIFIC RESEARCH CONFERENCE (Vol. 2, No. 18, pp. 150-153).
44. Jalolov, T. S. (2023). TEACHING THE BASICS OF PYTHON PROGRAMMING. International Multidisciplinary Journal for Research & Development, 10(11).
45. Jalolov, T. S. (2023). Solving Complex Problems in Python. American Journal of Language, Literacy and Learning in STEM Education (2993-2769), 1(9), 481-484.
46. Jalolov, T. S. (2023). PEDAGOGICAL-PSYCHOLOGICAL FOUNDATIONS OF DATA PROCESSING USING THE SPSS PROGRAM. INNOVATIVE DEVELOPMENTS AND RESEARCH IN EDUCATION, 2(23), 220-223.
47. Jalolov, T. S. (2023). ADVANTAGES OF DJANGO FEMWORKER. International Multidisciplinary Journal for Research & Development, 10(12).
48. Jalolov, T. S. (2023). ARTIFICIAL INTELLIGENCE PYTHON (PYTORCH). Oriental Journal of Academic and Multidisciplinary Research, 1(3), 123-126.