



## THE USE OF ELECTRONIC EDUCATIONAL RESOURCES IN THE DESIGN OF COMPUTER SCIENCE LESSONS OF FUTURE TEACHERS.

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Annotation: the article presents technologies for creating electronic educational resources and ensuring an understandable transfer of their educational processes to students. The advantage of electronic presentation is highlighted in the fact that it is possible to quickly correct the shortcomings of the educational material, make the necessary changes, prepare the material in different ways using a computer, create the possibility of using color images, animating and moving them.

Keywords: electronic educational resources, projector, film hardware, educational television, video recorder, computer, videos, multimedia, educational publications, educational tools, development, technical means, hypertext, importance in the educational process , graphic table.

### Introduction

Among all the developed countries in our country, the application of information and communication technologies to various sectors of the national economy and the achievement of high efficiency is one of the important tasks. In order to further develop the work carried out in this area, various decisions, orders and regulations have been adopted by our government.

PF of May 30, 2002 "on further development of computerization and introduction of information and communication technologies" of the president- The Decree No. 3080 also notes that the formation of a national system of informatization, the mass introduction of modern information technologies, computer equipment and telecommunication means in all spheres of the economy and public life, including the educational system, and the creation of favorable conditions for expanding the enjoyment of information resources are urgent issues of today.

Creation of an electronic educational resource individualization and differentiation of the educational process, control and correct orientation of the student's educational activity on his own, saving learning time due to the use of computer computing capabilities, visualization of educational materials, modeling of educational processes under study, their imitation, formation of the skill of optimal decision-making in various pedagogical situations, development of a, provides such opportunities as the formation of a culture of cognitive activity. Today, in the educational process, a video projector is widely used in the display of electronic educational materials. To use it, it is usually necessary to have monitor devices and a presentation of a previously prepared educational material. The materials to be displayed can be prepared using various computer software: Word, Excel, Power Point, Corel Draw, etc., or use ready-made electronic textbooks created at a professional level. One of the advantages of electronic presentation is the presence of the ability to quickly correct the shortcomings of

the educational material, make the necessary changes, improve, prepare the material using a computer in different ways, the possibility of using color images, animating and moving them. The Power Point Program, which belongs to the group of practical software when creating pages in the form of a presentation, offers special opportunities. The PowerPoint program was created under the Windows shell of the MICROSOFT firm, and this program is one of the most convenient software tools for working with presentations (presentation, that is, familiarization) today.

#### MAIN PART

The analysis of modern educational electronic publications showed their craving for classification, having a complex structure. On the basis of the classification of electronic educational publications, general methods of classification of both educational and electronic and software tools are laid:

Educational publications are divided into the following types:

- according to its functional nature, which determines its importance and place in the educational process;
- according to the purpose;
- according to the nature of the information provided;
- according to the organization of the text;
- according to the form of expression
- Electronic publications below are divided into types:
- according to the presence of the print equivalent;
- by the nature of the main information;
- according to the purpose;
- according to the technology of distribution;
- according to the nature of the communication between the electronic publication and the user;
- according to its periodicity;
- according to the structure.

Currently, there is a typological model of Educational Publications, which includes four different types of publications, such as:

- Software-methodical (curriculum and programs);
- Educational-methodical (methodological instructions, instructions);
- Teacher (textbooks, teaching aids, lecture texts);
- Auxiliary (sets of practicums, matter and exercises).

One of the software that is widely used in the creation of electronic information resources is the Ispring program. Usually, in the process of preparing for the presentation, in most cases, Microsoft - PowerPoint software is used. But such presentations can only be in the format of this product (ppt, pptx). Currently, as a result of the development of internet technologies and, in turn, the emergence of a type of distance learning, it is necessary to have a file created in flash (swf) format or based on HTML 5 technology in order to directly view presentation files online in the Internet browser itself. By now, programs have been created that allow you to form a flash roller from a presentation prepared in PowerPoint.

Use of electronic information resources and educational tools. E-learning resources are made up of a didactic, software and technical interactive complex of learning in the environment of modern information technologies. E-learning resources are different from traditional

complexes, appear as a unit of computer and traditional teaching technologies. The use of multimedia technologies in the organization of the educational process on the basis of electronic educational resources makes educational students more interested in learning, its application on the basis of the interactive nature of education develops the thinking ability of educators and increases the efficiency of mastering educational materials. Alternatively, e-learning resources provide an opportunity to model and monitor processes that are difficult or complex to demonstrate in real life, indicating that the assimilation of learning materials will be effective not only according to the level, but also according to the logic and level of acceptance achieved by educators.

Real educational tools include all real auxiliary tools used in teaching: machines, tractors, equipment, machine tools, finished products, etc.

Technical tools include projector, film hardware, educational television, VCR, computer, videos, multimedia, etc. In addition, class whiteboard, whiteboard-stand, whiteboard-notepad, codoscopes are also included in technical means.

Printed study materials include:

- all educational materials published;
- includes all visual materials that have been published.

To ensure the effective integration of electronic educational resources and educational and methodological support of distance education, to provide students with the skills of finding materials by independent research, learning and carrying out certain research work in them by solving problem issues, to independently get acquainted with the teaching materials in the course, qualification Graduation work of students, preparation of Master's dissertations,, it also carries out didactic tasks such as creating conditions for the formation of skills such as the ability to analyze information and data. Students actively participate in the use of electronic educational resources, work on the assignment, discuss other people's feedback, listen, ask questions, ask each other for help, learn to help.

The effectiveness of e-learning resources depends, first of all, on careful preparation for its use. For a teacher, preparing for a lesson is the most responsible and most important work.

Preparation for Mazu from e-learning resources from the teacher initially requires taking into account the following:

- identification of materials related to the topic from e-learning resources;
- determining the form of the lesson;
- familiarization with the sources of the topic;
- careful reading of materials related to the topic from e-learning resources,
- establish a method of interpreting topics that make it difficult for students to understand;
- drawing up a lesson plan;
- selection of the method of conducting the lesson;
- the use of didactic materials suitable for the purpose and task of the lesson;
- opening the previous and subsequent dasr-related aspects of the lesson topic;
- determining the way in which the topic is stated;
- setting homework verification techniques;
- to correct the questions to be asked and to prepare the answer as well;
- prepare interesting assignments on the topic;
- setting tasks to be given home.



From experiences it is known that the psychological of students in the learning process when work is carried out in accordance with their characteristics, they master their knowledge well.

An important condition for mastering knowledge is its understanding. The use of electronic educational resources in the development of creative abilities of Educators has its own advantages [1-30]. It teaches educators to think logically, to take a scientific and creative approach to science, serves as an important factor for them to easily master educational topics, to form a scientific worldview, helps to firmly master knowledge, affects emotions and, as a result of painstaking mental activity, instills love for science and the profession.

E-learning is becoming an urgent issue in the design, development and widespread use of resources in the educational process, since they began to be used en masse in the field of Education. In recent times, various types of electronic educational publications have been created, covering their content from a simple hypertext textbook to complex systems of distance learning. E-learning resources can be divided into the following types:

- electronic version of the text;
- hypertext electronic version of the book;
- textbook with graphs, tables, pictures and hypertext;
- textbook with animation, sound, graphics, table, images and hypertext;
- textbooks with animation, sound, graphics, table, picture, hypertext and test systems.

#### Conclusion

In educational processes, insufficient educational and methodological support is developed, which seriously affects the quality level of electronic education resources. In addition, it can be said that the unified standards for creating textbooks are not majud, and the creation of software tools by various manufacturers prevents the effective application of e-learning resources in the educational process. Therefore, it is necessary to determine the criteria for assessing the e-learning resources being created. It is necessary to know how e-learning affects the improvement of the quality of the lessons on which resources are spent, and the advantages of e-learning resources over traditional methods. Description of the organizational elements of the electronic information education resource creativity (creative-author) environment is not an exaggeration to say. The proposed electronic information educational resources help educators to conduct creative research on the object under study, to systematically study the interrelationships arising in the process of mastering it.

This environment provides an opportunity for educators and educators to work as a team, and the electronic information education resource is flexible in the learning process.

#### References:

- 1.Xomidov, A. A. (2021). XAVFSIZLIK YOSTIQCHASI TURLARI. Интернаука, (22-5), 9-11.
- 2.Xomidov, A. A., & Abdurasulov, M. (2021). YO'LOVCHI VA YUK TASHISH SHARTNOMASI VA UNING MAZMUNI, MOHIYATI. Internauka,(45-3), 98-99.
- 3.Xomidov, A. A., & Abdirahimov, A. A. (2021). TRANSPORT LOGISTIKASIDA ZAHIRALAR VA OMBORLASHTIRISH. Internauka,(45-3), 100-103.
- 4.Хомидов, А. А. СотиболдийевНМ (2022). ОРГАНИЗАЦИЯ МЕЖДУНАРОДНЫХ ПЕРЕВОЗОК НА ВНЕШНЕЙ ТОРГОВЛЕ. Internauka,(224\_2), 74-76.

- 5.Хомидов, А. А., & Сотиболдийев, Н. М. (2022). ОРГАНИЗАЦИЯ МЕЖДУНАРОДНЫХ ПЕРЕВОЗОК НА ВНЕШНЕЙ ТОРГОВЛЕ. ИНТЕРНАУКА” Научный журнал, (1), 224.
- 6.Xomidov, A. A., & Tursunaliyev, M. M. (2022). ISHLAB CHIQRISH LOGISTIKASI. Барқарорлик ва Етакчи Тадқиқотлар онлайн илмий журнали, (2), 1.
- 7.Ahmadjon o'g'li, X. A., & Muhammadali o'g'li, T. M. (2022). ISHLAB CHIQRISH LOGISTIKASI. BARQARORLIK VA YETAKCHI TADQIQOTLAR ONLAYN ILMIY JURNALI, 2(1), 401-404.
- 8.Anvarbek, X., & Murodjon, T. (2022). ELIMINATING CONGESTION ON INTERNAL ROADS. Universum: технические науки, (2-7 (95)), 29-31.
- 9.Xomidov Anvarbek, & Tursunboyev Murodjon (2022). ELIMINATING CONGESTION ON INTERNAL ROADS. Universum: технические науки, (2-7 (95)), 29-31. [https://7universum.com/pdf/tech/2\(95\)%20\[15.02.2022\]/Xomidov.pdf](https://7universum.com/pdf/tech/2(95)%20[15.02.2022]/Xomidov.pdf)
- 10.Шодмонов, С. А. (2022). ДАТЧИКИ ТЕМПЕРАТУРЫ. European Journal of Interdisciplinary Research and Development, 4, 62-66.
- 11.Хомидов Анварбек Аҳмаджон ўғли, & Шодмонов Сайидбек Абдувайитович. (2022). ДАТЧИКИ ТЕМПЕРАТУРЫ. European Journal of Interdisciplinary Research and Development, 4, 62–66. <http://www.ejird.journalspark.org/index.php/ejird/article/view/65>
12. Xomidov Anvarbek Ahmadjon o'g'li, Qurbonov Islombek Ibrohimjon o'g'li, Хомидов Анварбек Аҳмаджон ўғли, & Қурбонов Исломбек Иброҳимжон ўғли. (2022). AVTOMOBILLARDA YUK YO'LOVCHILARNI XALQARO TASHISHNING HUQUQIY ASOSLARI . JOURNAL OF NEW CENTURY INNOVATIONS, 5(5), 13. Retrieved from <http://wsrjournal.com/index.php/new/article/view/932>
- 13.Ahmadjon o'g'li, X. A., & Ibrohimjon o'g'li, Q. I. Хомидов Анварбек Аҳмаджон ўғли, & Қурбонов Исломбек Иброҳимжон ўғли.(2022). AVTOMOBILLARDA YUK YO'LOVCHILARNI XALQARO TASHISHNING HUQUQIY ASOSLARI. JOURNAL OF NEW CENTURY INNOVATIONS, 5(5), 13.
- 14.Ahmadjon o'g'li, X. A., & Abdvayitovich, S. S. (2022). On-Board Computer and Monitoring System. Eurasian Scientific Herald, 9, 64-71.
- 15.Xomidov Anvarbek Ahmadjon o'g'li, & Shodmonov Sayidbek Abdvayitovich. (2022). On-Board Computer and Monitoring System. Eurasian Scientific Herald, 9, 64–71. Retrieved from <https://geniusjournals.org/index.php/esh/article/view/1703>
- 16.Ahmadjon o'g'li, X. A., & Baxodir o'g'li, N. B. (2022). Manufacturing Logistics. Eurasian Scientific Herald, 9, 60-63.
- 17.Xomidov Anvarbek Ahmadjon o'g'li, & Negmatov Bekzodbek Baxodir o'g'li. (2022). Manufacturing Logistics. Eurasian Scientific Herald, 9, 60–63. Retrieved from <https://geniusjournals.org/index.php/esh/article/view/1702>
- 18.Anvarbek Ahmadjon o'g'li Xomidov, & Saidbaxrom Muzaffar o'g'li Ikromov. (2022). DEVICE FOR MANUAL CONTROL OF VEHICLE BRAKE AND ACCELERATOR PEDAL . JOURNAL OF NEW CENTURY INNOVATIONS, 9(2), 77–83. Retrieved from <http://wsrjournal.com/index.php/new/article/view/2006>
- 19.Anvarbek Ahmadjon o'g'li Xomidov, & Saidbaxrom Muzaffar o'g'li Ikromov. (2022). СОВЕРШЕНСТВОВАНИЕ СИСТЕМЫ ЭЛЕКТРООБОРУДОВАНИЯ АВТОМОБИЛЕЙ НА БАЗЕ АДАПТИВНЫХ ПРЕОБРАЗОВАТЕЛЕЙ ЭНЕРГИИ. JOURNAL OF NEW CENTURY INNOVATIONS, 9(2), 84–92. Retrieved from <http://wsrjournal.com/index.php/new/article/view/2007>

20. Anvarbek Ahmadjon o'g'li Xomidov, & Saidbaxrom Muzaffar o'g'li Ikromov. (2022). ИССЛЕДОВАНИЯ ОСНОВНЫХ ХАРАКТЕРИСТИК ОСТАНОВОЧНЫХ ПУНКТОВ МАРШРУТНОГО ПАССАЖИРСКОГО ТРАНСПОРТА . JOURNAL OF NEW CENTURY INNOVATIONS, 9(2), 93-99. Retrieved from <http://wsrjournal.com/index.php/new/article/view/2008>
21. Anvarbek Ahmadjon o'g'li Xomidov, Saidolimxon Jaloliddin o'g'li Abbasov, & Sayidbek Abduvayitovich Shodmonov. (2022). GLOBAL ELEKTR AVTOMOBILLARINI ISHLAB CHIQISH VA ELEKTR MASHINA ASOSLARI. JOURNAL OF NEW CENTURY INNOVATIONS, 9(1), 76-82. Retrieved from <http://wsrjournal.com/index.php/new/article/view/1969>
22. Shodmonov, S. A. (2022). GLOBAL ELEKTR AVTOMOBILLARINI ISHLAB CHIQISH VA ELEKTR MASHINA ASOSLARI.
23. Shodmonov Sayidbek Abduvayitovich, Abbasov Saidolimxon Jaloliddin o'g'li, & Xomidov Anvarbek Ahmadjon o'g'li. (2022). RESPUBLIKAMIZDA YUKLARNI TASHISHDA LOGISTIK XIZMATLARNI QO'SHNI RESPUBLIKALARDAN OLIV CHIQISH VA RIVOJLANTIRISH OMILLARI . JOURNAL OF NEW CENTURY INNOVATIONS, 9(1), 83-90. Retrieved from <http://wsrjournal.com/index.php/new/article/view/1970>
24. Аббасов Саидолимхон Жалолиддин угли, Шодмонов Сайидбек Абдувайитович, & Хомидов Анварбек Ахмаджон угли. (2022). ОЦЕНКА ПОКАЗАТЕЛЕЙ ИСПОЛЬЗОВАНИЯ ВОДОРОДСОДЕРЖАЩИХ СОСТАВНЫХ ТОПЛИВ В ДВИГАТЕЛЯХ ВНУТРЕННЕГО СГОРАНИЯ. JOURNAL OF NEW CENTURY INNOVATIONS, 9(1), 101-108. Retrieved from <http://wsrjournal.com/index.php/new/article/view/1972>
25. Шодмонов, С. А. (2022). ОЦЕНКА ПОКАЗАТЕЛЕЙ ИСПОЛЬЗОВАНИЯ ВОДОРОДСОДЕРЖАЩИХ СОСТАВНЫХ ТОПЛИВ В ДВИГАТЕЛЯХ ВНУТРЕННЕГО СГОРАНИЯ. <http://wsrjournal.com/index.php/new/article/view/1972>
26. Anvarbek Ahmadjon o'g'li Xomidov, Sayidbek Abduvayitovich Shodmonov, & Guldona Akbarjon qizi Turg'unova. (2022). Railway Transport, its Specific Characteristics and Main Indicators. Periodica Journal of Modern Philosophy, Social Sciences and Humanities, 12, 61-66. Retrieved from <https://www.periodica.org/index.php/journal/article/view/266>
27. Shodmonov, S. A., & qizi Turg'unova, G. A. (2022). Railway Transport, its Specific Characteristics and Main Indicators. Periodica Journal of Modern Philosophy, Social Sciences and Humanities, 12, 61-66.
28. Анварбек Ахмаджон ўғли Хомидов, Сайидбек Абдувайитович Шодмонов, & Гулдона Акбаржон қизи Турғунова. (2022). Результаты Лабораторных Исследований, Проведенных Для Разработки Технологии Регенерации Валов. Periodica Journal of Modern Philosophy, Social Sciences and Humanities, 12, 67-72. Retrieved from <https://www.periodica.org/index.php/journal/article/view/267>
29. ўғли Хомидов, А. А., Шодмонов, С. А., & қизи Турғунова, Г. А. (2022). Результаты Лабораторных Исследований, Проведенных Для Разработки Технологии Регенерации Валов. Periodica Journal of Modern Philosophy, Social Sciences and Humanities, 12, 67-72. <https://www.periodica.org/index.php/journal/article/view/267>
30. qizi Turg'unova, G. A., Ahmadjon o'g'li, X. A., & Shodmonov, S. A. (2022, December). SUYUQ VA GAZ HOLATIDAGI HAMDA CHANG KO'RINISHIDAGI YUKLARNI TASHUVCHI MAXSUS VA GIBRID AVTOMOBILLAR. In Conference Zone (pp. 287-295).
31. Ahmadjon o'g'li, X. A., Shodmonov, S. A., & qizi Turg'unova, G. A. (2022, December). YO 'LOVCHI AVTOMOBIL TRANSPORTI VOSITALARI. In Conference Zone (pp. 207-214).

- 32.Ahmadjon o'g'li, X. A., & Nabijon o'g, A. O. T. (2022). TRANSPORT VA PIYODALAR HARAKATINING TAVSIFLARINI O'RGANISH VA TAHLIL QILISH.
- 33.Ahmadjon o'g'li, X. A., & Ibrohimjon o'g'li, Q. I. (2022). AVTOMOBILLARDA YUK YO'LOVCHILARNI XALQARO TASHISHNING HUQUQIY ASOSLARI.
- 34.Махамматзокир Тоштемирович Гаффаров, & Анварбек Аҳмаджон ўғли Хомидов. (2022). Регулирование Транспортных Потоків В Республике. Обеспечение Безопасности Дорожного Движения И Предотвращение Пробок. Periodica Journal of Modern Philosophy, Social Sciences and Humanities, 12, 73–78. Retrieved from <https://periodica.org/index.php/journal/article/view/268>
- 35.Гаффаров, М. Т., & ўғли Хомидов, А. А. (2022). Регулирование Транспортных Потоків В Республике. Обеспечение Безопасности Дорожного Движения И Предотвращение Пробок. Periodica Journal of Modern Philosophy, Social Sciences and Humanities, 12, 73-78. <https://periodica.org/index.php/journal/article/view/268>
- 36.Анварбек Аҳмаджон ўғли Хомидов, Сайидбек Абдувайидович Шодмонов, & Гулдона Акбаржон қизи Турғунова. (2022). Определить Поток Пассажиров В Районе Города. Periodica Journal of Modern Philosophy, Social Sciences and Humanities, 12, 79–87.
- 37.ўғли Хомидов, А. А., Шодмонов, С. А., & қизи Турғунова, Г. А. (2022). Определить Поток Пассажиров В Районе Города. Periodica Journal of Modern Philosophy, Social Sciences and Humanities, 12, 79-87.
- 38.Rahmatullo Rafuqjon o'g'li Rahimov (2022). Avtomobil transportida tashuv ishlarini amalga oshirishda harakat xavfsizligini ta'minlash uslublarini takomillashtirish yo'llari. ОБРАЗОВАНИЕ И НАУКА В XXI ВЕКЕ, 750-754.
- 39.угли Рахимов, Р. Р. (2022). МОДЕЛИРОВАНИЕ ПРОЦЕССА ВЫБОРА ОПТИМАЛЬНОГО ТИПА ПОДВИЖНОГО СОСТАВА ДЛЯ ПЕРЕВОЗКИ МЕДИКАМЕНТОВ ПОТРЕБИТЕЛЮ. Journal of new century innovations, 18(5), 109-120.
- 40.Rafuqjon o'g'li, R. R. (2022, December). TIRSAKLI VALLARNI TAMIRLASH ISTIQBOLLARI. In Conference Zone (pp. 333-342).

