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Institutions of Higher Education in the Process of Digital Education

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Abstract: Today, there is a growing interest in the use of interactive methods, innovative technologies, pedagogical and digital technologies in the educational process. The importance of using electronic textbooks, animations and video tools using modern pedagogical technologies to enrich the imagination in the study of computer science is highlighted.

Keywords: Information and communication technologies, interactive methods, modern didactic games, audio recording, multimedia electronic complex.

Currently, the teachers of educational institutions of the continuous education system, including those of higher education institutions, face new tasks, that is, the task of improving the quality of mastering the taught subject. In this regard, different methods are used in the teaching of computer science. One of them is the use of modern information technologies. In the next decade, the use of interactive methods in the teaching of computer science was carried out in several main directions. These include the assessment of knowledge with the help of a computer, the development and development of various types of educational programs, the development of computer games related to knowledge, etc.

The convenience of computer interactive methods in teaching computer science is the modeling of some learning situations. The purpose of using modeling programs is to ensure that materials that are difficult to visualize and visualize when using other teaching methods are understandable. With the help of modeling, information can be presented to students in the form of computer multimedia in graphic mode. Therefore, they tend to study computer science in depth and show a significant degree of independence in the educational process.

In order to get an answer to the question of what and how to teach in informatics, first of all, it is necessary to clearly define the tasks of teaching informatics at the current stage of the development of this science. These tasks are common to all general sciences. At the same time, it is necessary to analyze the specific aspects of these tasks in the teaching of informatics based on the concept of teaching informatics in the continuous education system and state educational standards.

In determining the content of computer science education, it is necessary to start from the idea that computer science is a science and, on the other hand, an educational subject. Informatics science and educational subject differ from each other primarily in terms of content and depth. After solving the issue of the size of the educational material included in the computer science subject, it is necessary to determine in what sequence it is appropriate to deliver this educational material to the students. One of the features of the computer science teaching methodology is to determine the methods and ways of acquiring the content of computer science and the scientific research methods specific to it, as well as the methods and ways of acquiring practical knowledge and skills. These include methods of studying educational material and forms of organizing educational activities based on modern pedagogical and psychological research.

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"Informatics" can be considered as a branch of pedagogy and computer science, engaged in research and development of educational methodical, software, organizational and technical support for teaching the educational subject.

In our republic, the necessary conditions are being created for the young generation to acquire skills such as planning their activities, being able to find the information necessary to solve a given problem, being able to build a mathematical model of an example or problem being solved, and being able to effectively use new technologies. The form and style of teaching should be aimed at developing the thinking and creative abilities of young students. The difficult part of the matter is that, on the one hand, it is to develop the student's thinking and creative abilities, and on the other hand, to give them knowledge about the world of modern computers in an interesting and harmonious way. It is known that demonstration is important in the teaching of informatics and natural sciences in general secondary schools. Especially in chemistry, although it is more dangerous to actually perform the explosion process (as a result of the introduction into the reaction), it is safe and convenient to show it through multimedia. Also, showing other chemical processes and the process of solving many physical problems expands the students' imagination. In physical problems, it is possible to demonstrate the phenomenon of the photoeffect, the boiling process of water, and many similar phenomena through programming. There are many textual problems in mathematics. Concepts presented in the text are shown in two images through animations. The givens are expressed, a mathematical model is created by setting the condition. These processes are automatically displayed on the screen. Movements appear in connection with the setting of the problem presented in the text. On the basis of the constructed mathematical model, an unknown number is determined, its solution (and actions accordingly) is shown and a solution is found.

If computer science is taught with the help of digital technologies, the following will be achieved:

using the possibilities of the electronic textbook, the opportunity to fully explain the subject to students increases;

their knowledge, skills and qualifications increase;

moving images and animations play an important role in expanding students' imaginations;

more time is devoted to practical work, i.e. solving examples and problems, providing real life examples, conducting question-and-answer sessions among students;

creative thinking ability of students is formed;

students get a positive lesson from the lesson, their interest in the lesson increases;

gives students opportunities to develop imagination, logical thinking, learn computer terms and practical methods of programming.

The use of modern and information technologies in the education system, the formation and development of independent thinking and knowledge acquisition skills of our children is one of the urgent tasks facing the representatives of the education sector. Among all educational subjects, modern didactic games have a great role in the thorough and effective mastering of computer science. Pupils' understanding of the content of the given topics, assimilation of concepts and information reflected in it is carried out with the help of teaching methods. In order for all of this to be at the level of demand, the use of modern didactic-game technologies in computer science education today has a good effect.

The goal is to find ways to interest our youth in learning. Young people are eager for new technology. Our task is to provide them with innovative technologies. Teachers pay attention to these issues and promote new didactic games and new innovative teaching methods and methods in the teaching of computer science. An example of this is the created multimedia electronic complex, demonstration methods.

References

1. Abdullayeva Sh.A. Pedagogik diagnostika va korreksiya. Darslik. T.: Universitet, 2022 y.-b. 121.
2. Yo'ldoshev J.G', Usmonov C.A, "Pedagogik texnologiya asoslari" Toshkent-2000
3. Mamatova Z.X. "Raqamli texnologiyalar asrida informatika fanini o'qitishda axborot kommunikatsion texnologiyalardan foydalanish", "Tillarni o'qitishda raqamli texnologiyalarni qo'llash zamonaviy ta'lim muhitini tashkil etish vositasi sifatida: muammolar va echimlar" mavzusida Xalqaro ilmiy-amaliy konferensiya materiallari to'plami. 10-11 iyun 2022 yil. Toshkent.
4. Usmonov M. T. Electronic Digital Signature. International Journal of Academic Pedagogical Research (IJAPR) ISSN: 2643-9123 Vol. 5 Issue 1, January - 2021, Pages: 30-34.
5. Usmonov M. T. "Equal" And "Small" Relations. Add. Laws Of Addition. International Journal of Academic Information Systems Research (IJAISR) ISSN: 2643-9026 Vol. 5 Issue 1, January - 2021, Pages: 27-29.
6. Usmonov M. T. Establish Network Protection. International Journal of Academic Engineering Research (IJAER) ISSN: 2643-9085 Vol. 5 Issue 1, January - 2021, Pages: 14-21.
7. Usmonov M. T. Fundamentals of Symmetric Cryptosystem. International Journal of Academic and Applied Research (IJAAR) ISSN: 2643-9603 Vol. 5 Issue 1, January - 2021, Pages: 36-40.
8. Usmonov M. T. General Concepts of Mathematics. International Journal of Academic Information Systems Research (IJAISR) ISSN: 2643-9026 Vol. 5 Issue 1, January - 2021, Pages: 14-16.
9. Usmonov M. T. Identification and Authentication. International Journal of Academic Pedagogical Research (IJAPR) ISSN: 2643-9123 Vol. 5 Issue 1, January - 2021, Pages: 39-47.
10. Usmonov M. T. Information Protection and Its Types. International Journal of Academic and Applied Research (IJAAR) ISSN: 2643-9603 Vol. 5 Issue 1, January - 2021, Pages: 1-4.
11. Usmonov M. T. Information Protection in Wireless Communication Systems. International Journal of Academic Pedagogical Research (IJAPR) ISSN: 2643-9123 Vol. 5 Issue 1, January - 2021, Pages: 61-64.
12. Usmonov M. T. Information protection supply. International Journal of Academic and Applied Research (IJAAR) ISSN: 2643-9603 Vol. 5 Issue 1, January - 2021, Pages: 12-15.
13. Usmonov M. T. Information Security Policy. International Journal of Academic Pedagogical Research (IJAPR) ISSN: 2643-9123 Vol. 5 Issue 1, January - 2021, Pages: 70-73.
14. Usmonov M. T. Information War. International Journal of Academic and Applied Research (IJAAR) ISSN: 2643-9603 Vol. 5 Issue 1, January - 2021, Pages: 79-82.
15. Usmonov M. T. International and National Legal Base in the Field Of Information Security. International Journal of Academic Pedagogical Research (IJAPR) ISSN: 2643-9123 Vol. 5 Issue 1, January - 2021, Pages: 7-14.
16. Usmonov M. T. Legal Legislative Basis for Detection of Information Crime. International Journal of Academic Engineering Research (IJAER) ISSN: 2643-9085 Vol. 5 Issue 1, January - 2021, Pages: 80-87.
17. Usmonov M. T. Mathematical Proofs. Incomplete Induction, Deduction, Analogy. The Concept Of Algorithm And Its Properties. International Journal of Academic Multidisciplinary Research (IJAMR) ISSN: 2643-9670 Vol. 5 Issue 1, January - 2021, Pages: 26-29.
18. Usmonov M. T. Means of Information Protection. International Journal of Academic and Applied Research (IJAAR) ISSN: 2643-9603 Vol. 5 Issue 1, January - 2021, Pages: 27-30.
19. Usmonov M. T. Organization of E-Mail Protection. International Journal of Academic Engineering Research (IJAER) ISSN: 2643-9085 Vol. 5 Issue 1, January - 2021, Pages: 36-40.

20. Usmonov M. T. Organizing Internet Protection. International Journal of Academic Engineering Research (IJAER) ISSN: 2643-9085 Vol. 5 Issue 1, January - 2021, Pages: 24-28.
21. Usmonov M. T. Origin and Equal Strength Relationships between Sentences. Necessary and Sufficient Conditions. Structure of Theorem and Their Types. International Journal of Engineering and Information Systems (IJEAIS) ISSN: 2643-640X Vol. 5 Issue 1, January - 2021, Pages: 45-47.
22. Usmonov M. T. PhysicalSecurity. International Journal of Academic and Applied Research (IJAAR) ISSN: 2643-9603 Vol. 5 Issue 1, January - 2021, Pages: 58-61.
23. Usmonov M. T. Practical Security Management. International Journal of Academic Engineering Research (IJAER) ISSN: 2643-9085 Vol. 5 Issue 1, January - 2021, Pages: 71-74.
24. Usmonov M. T. Problem Solving In Primary Schools. International Journal of Academic Information Systems Research (IJAISR) ISSN: 2643-9026 Vol. 5 Issue 1, January - 2021, Pages: 72-83.
25. Usmonov M. T. Reproduction. The Laws of Reproduction. International Journal of Engineering and Information Systems (IJEAIS) ISSN: 2643-640X Vol. 5 Issue 1, January - 2021, Pages: 36-40.
26. Usmonov M. T. Security Models. International Journal of Academic Pedagogical Research (IJAPR) ISSN: 2643-9123 Vol. 5 Issue 1, January - 2021, Pages: 18-23.
27. Usmonov M. T. Solving Problems In Arithmetic Methods. International Journal of Academic Information Systems Research (IJAISR) ISSN: 2643-9026 Vol. 5 Issue 1, January - 2021, Pages: 58-61.
28. Usmonov M. T. Stenographic Protection of Information. International Journal of Academic and Applied Research (IJAAR) ISSN: 2643-9603 Vol. 5 Issue 1, January - 2021, Pages: 31-35.
29. Usmonov M. T. Telecommunications and Network Security. International Journal of Academic Engineering Research (IJAER) ISSN: 2643-9085 Vol. 5 Issue 1, January - 2021, Pages: 57-61.
30. Usmonov M. T. The Concept of Compatibility, Actions on Compatibility. International Journal of Academic Multidisciplinary Research (IJAMR) ISSN: 2643-9670 Vol. 5 Issue 1, January - 2021, Pages: 10-13.
31. Usmonov M. T. The Concept Of National Security. International Journal of Academic and Applied Research (IJAAR) ISSN: 2643-9603 Vol. 5 Issue 1, January - 2021, Pages: 73-75.
32. Usmonov M. T. The Concept of Number. The Establishment of the Concept of Natural Number and Zero. International Journal of Academic Multidisciplinary Research (IJAMR) ISSN: 2643-9670 Vol. 5 Issue 1, January - 2021, Pages: 18-21.