MULTIMEDIA TECHNOLOGIES IN TEACHING OF PHYSICS IN SECONDARY SCHOOL

Taylanov Nizom Abdurazzakovich[1], Dehkonova Okhista Kasimjonovna[2]
[1]*Jizzakh State Pedagogical University, Jizzakh,* [2]*Fergana State University, Fergana, Uzbekistan*
e-mail: taylanov@yandex.ru

Abstract. Multimedia is the ability to work with different forms of information on a computer: color graphics, dynamic effects in text and graphics, sound output and synthesized music, animation, as well as full-length video clips and videos. Multimedia is a modern computer information technology that allows you to combine text, sound, video, graphics and animation into a single computer system.

Key words: graphics capabilities,video technology,computer,video and audio, techniques and technologies, sound and images

Мультимедийные технологии в преподавании физики в школе

Аннотация. Мультимедиа — это возможность работы с различными формами информации на компьютере: цветная графика, динамические эффекты в тексте и графике, звуковой вывод и синтезированная музыка, анимация, а также полнометражные видеоклипы и видеоролики. Мультимедиа — это современная компьютерная информационная технология, позволяющая объединить текст, звук, видео, графику и анимацию в единую компьютерную систему.

Ключевые слова: графические возможности , видео технологии, компьютер, видео и аудио, техники и технологии, звук и изображения

O'rta ta'limda fizika o'qitishda multimedia texnologiyalari

Annotatsiya. Multimedia - bu kompyuterda axborotning turli shakllari: rangli grafikalar, matn va grafiklardagi dinamik effektlar, ovoz chiqarish va sintezlangan musiqa, animatsiya, shuningdek, to'liq metrajli videokliplar va videolar bilan ishlash qobiliyati. Multimedia - bu matn, ovoz, video, grafik va animatsiyani yagona kompyuter tizimida birlashtirish imkonini beruvchi zamonaviy kompyuter axborot texnologiyasi.

Kalit so'zlar: grafik imkoniyatlari , video texnologiya, kompyuter, video va audio, texnika va texnologiyalar, ovoz va tasvirlar

In the process of advanced training , a computer science teacher gives special courses on informatization and education management, and also masters innovative pedagogical and information and communication technologies, new software tools, creative activity in their use, creativity, studies the development of topics in the field of science on the use of innovative pedagogical technologies and interactive methods, as well as the wide promotion of their

innovative activities. When preparing a computer science teacher, the main attention should be directed to the formation of managerial activities. Management activity is one of the components of the didactic process: when modeling lessons and extracurricular activities, when designing a lesson, when designing a lesson, when designing technological maps, when analyzing a completed educational process, control and evaluation tools (testing, computer test, self-assessment, etc.) is reflected in the process of diagnosing the results of the course [1-3].

1. Modern information and communication technologies and opportunities for their use in the educational process

Today, with the rapid introduction of information and communication technologies (ICT) in the educational process, it remains one of the most favorable factors in increasing the effectiveness of education. Bringing the education system up to world standards is one of the important tasks of the modern education reforms. A characteristic feature of modern education in the world is the informatization of education and training taking into accounts the needs of the information society. Therefore, research on the effective use of computer technology, modern information and communication technologies in the education system of developed countries is ongoing. These facts show the importance of the role of computer science in the training system [4].

2. Multimedia technologies and their types. Multimedia technology (multi - multi, media - environment) allows you to use several ways of presenting information at the same time. These include text, graphics, animation, video and audio. The most important feature of multimedia technologies is interactivity, the ability to have a high level of interaction with the user, reader, working in the information environment.

Multimedia is the combination of several means of presenting information into one system. As a rule, multimedia is a combination of means of representing information in a computer system, such as text, sound, graphics, animation, video, and spatial modeling. The combination of such means provides a new qualitative level of obtaining information: a person is not only passively obsessed, but also actively participates.

Programs that work with multimedia applications are multimodal, that is, they attract the attention and attention of the audience, as they affect several senses at the same time. The content of the multimedia application is carefully thought out by the author when preparing the scenario and is specified when developing the technological scenario. If the traditional form of presentation of educational information - text and static graphics - has a long history, then the experience of using multimedia is measured in years.

3. Possibilities of using multimedia technologies. The model of coverage of educational materials at the initial stage of their design using multimedia technologies allows:

➢ *A clear definition of the content of the material* : the definition of lectures, practical, laboratory, self-study, control tasks;

➢ present content, slides, presentations created in various animation programs *in a visual , clear and transparent form;*

➢ Define *the content of the components of a multimedia application* : determine what content on the topic is presented in the form of animation, video, text, graphics, etc.

A beautifully designed multimedia application with animation elements, tables and

diagrams, accessible animation elements and sound accompaniment facilitates the perception of the material being studied, contributes to its understanding and memorization, increases the student's activity in studying subjects, provides a clearer and more complete understanding of the material being studied [5]. The set of tools that make up multimedia technology provides a new level of quality for extracting information learned by students, where the student is not only passively interested in it, but also actively participates in it.

Multimedia electronic educational resources are created on the basis of multimedia technologies, and researchers expressed their opinion on the effectiveness of their use [7].

CONCLUSION

Stimulants and e-textbooks are now widely used in education. Testing systems are used to check and evaluate students' practical and theoretical knowledge using special programs. Internet distance learning portal is a special Internet sites (online resources). The main task of these sites is to organize the educational process or to establish electronic online communication between student and teacher, to include in the site teaching materials for teachers, to provide students with this to work on data and to use other distance learning services. Multimedia tools are a set of hardware and software that allows a person to communicate with a computer using a variety of environments that are natural to him: sound, video, graphics, text, animation, and more.

REFERENCES

1. Ertmer, P. A. Teacher pedagogical beliefs: The final frontier on our quest for technology integration? Educational Technology Research and Development, (2005). 35,(4), 25.

2. Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. User Acceptance of Computer Technology: A Comparison of Two Theoretical Models. Management Science, 35, 982-1003.1989

3. Dehqonova, O., & Taylanov, N. (2022). Extracurricular activities and their types in high schools. Физико-технологического образование, (2).

4. Dehqonova, O., & Taylanov, N. (2022). The application of electronic multimedia resources for students in physics learning. Физико-технологического образование, (2).

5. Dehqonova, O., Qurbonov, M., & Taylanov, N. (2022). The mathematics concepts in physics training in secondary schools. Физико-технологического образование, (2).

6. Dehqonova, O., & Taylanov, N. (2022). Experimental methodology on the basics of multimedia in a school physics course. Физико-технологического образование, (2).

7. Dehqonova, O., & Taylanov, N. (2022). Innovations of computer science in the high educational system. Физико-технологического образование, (2).