

Impact Factor:

ISRA (India) = 3.117
ISI (Dubai, UAE) = 0.829
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
PIHHI (Russia) = 0.156
ESJI (KZ) = 8.716
SJIF (Morocco) = 5.667

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

SOI: [1.1/TAS](#) DOI: [10.15863/TAS](#)

International Scientific Journal Theoretical & Applied Science

p-ISSN: 2308-4944 (print) e-ISSN: 2409-0085 (online)

Year: 2019 Issue: 05 Volume: 73

Published: 30.05.2019 <http://T-Science.org>

QR – Issue



QR – Article



Nozima Xoshimovna Abdullayeva
senior teacher

Namangan Engineering – Construction Institute

Iloxomjon Aloxonovich Xolmirzayev

Namangan Engineering – Construction Institute

SECTION 5. Innovative technologies in science.

APPLICATION OF MODERN INFORMATION TECHNOLOGIES IN TEACHING STUDENTS OF TECHNICAL SPECIALIST

Abstract: In modern conditions, the main task of education is not only getting students a certain amount of knowledge, but also the formation of their skills and self-acquisition of knowledge. Experience has shown that students actively working with a computer, formed a higher level of self-education skills, skills to navigate the rapid flow of information, the ability to highlight the main thing to summarize, draw conclusions. In this article highlights of application of modern information technologies in teaching students of technical specialists.

Key words: modern education, ICT, pedagogical technology, students, technical specialists, effectiveness, development, training.

Language: English

Citation: Abdullayeva, N. X., & Xolmirzayev, I. A. (2019). Application of modern information technologies in teaching students of technical specialist. *ISJ Theoretical & Applied Science*, 05 (73), 649-652.

Soi: <http://s-o-i.org/1.1/TAS-05-73-102> **Doi:**  <https://dx.doi.org/10.15863/TAS.2019.05.73.102>

Introduction

The conditions of the modern world are now described as the conditions of an open information society. One of the global trends in the development of modern engineering education is the spread of electronic and multimedia teaching tools. With the use of the latest achievements of science and technology, the training of a technical specialist is one of the priority areas of higher professional technical education. At the moment, the use of modern information technologies is one of the most important and sustainable trends in the development of the world educational process[1]. The need to meet these needs in the conditions of steadily growing informatization of the educational process requires the University teacher knowledge and skills in the field of application of the latest pedagogical technologies, knowledge of advanced methods and means of modern science. Therefore, it is necessary to master modern information technologies as a promising and timely direction to improve the efficiency of the learning process in higher education. Information technology is a set of methods, production processes and software and hardware combined into a technological chain that provides the collection, processing, storage, transmission and display of information, allowing to organize on a systematic basis the optimal interaction

between the teacher and the student in order to achieve learning outcomes [2].

Materials and Methods

The main problems that arise in this case are: how to rework the training course for its computerization; how to build the learning process using a computer; what proportion of the training material and in what form to present and implement using a computer; how and by what means to monitor knowledge, assess the level of consolidation of skills and abilities; what information technology to use for the implementation of pedagogical and didactic tasks. To transfer the course to computer technology, the teacher must have an idea not only about the subject area, have the skills of systematization of knowledge, competently use teaching methods, be well informed about the possibilities of information technology, as well as know what means of computer support is achieved by a particular didactic technique. In addition, he must be informed about the technical means and software that will be available to him both when creating application software (SOFTWARE) and when supporting the educational process.

At the moment, several types of computer programs are used in training. These are, first of all, test-type control programs, training programs, control

Impact Factor:

ISRA (India)	= 3.117	SIS (USA)	= 0.912	ICV (Poland)	= 6.630
ISI (Dubai, UAE)	= 0.829	PIHHI (Russia)	= 0.156	PIF (India)	= 1.940
GIF (Australia)	= 0.564	ESJI (KZ)	= 8.716	IBI (India)	= 4.260
JIF	= 1.500	SJIF (Morocco)	= 5.667	OAJI (USA)	= 0.350

and training programs, multimedia encyclopedias, interactive multimedia textbooks. The application and use of educational presentations, video materials and electronic teaching of technical specialists is determined by the possibilities to present educational material with a high degree of clarity, especially when modeling the phenomena of physical processes in the dynamics; to increase the motivation of students in the application of educational presentations in which fundamental educational issues are accompanied by sound markers, which contributes to the strengthening of the emotional background of education; to expand the potential for individualization of education; to provide a wide area of contact with students; to provide a wide field for active independent activity of students.

Today it is possible to formulate some tasks that follow from the requirement of informatization of training. The first – mastering by the graduate of the University a complex of knowledge, skills and abilities, development of personal qualities that ensure the successful implementation of the tasks of professional activity and comfortable functioning in the information society, in which information becomes a decisive factor of high labor efficiency. The second is to increase the level of training of specialists by improving the teaching technologies used today in higher education, and the widespread introduction of electronic learning tools and technologies in the educational process [3-4]. The main objective of the use of modern information techniques is to expand the intellectual capabilities of man. Currently, the very concept of learning is changing: the assimilation of knowledge is inferior to the ability to use information, to receive it through various telecommunication systems. The use of these technologies in the modern educational process is quite a natural phenomenon.

Multimedia creates positive moments that contribute to the perception and memorization of the material with the inclusion of intuitive reactions of the student: summing up or assignment can be preceded in each lecture of the course by any sound or melody that adjusts the student to a certain type of work. This is provided in advance during the course preparation process and does not require the teacher's attention. A powerful learning tool - interactive multimedia textbooks that make our learning process more effective, individualized, reduce the time of learning and in General more "productive". The material in this textbook is given taking into account the peculiarities of human reproduction and memory[5]. Simultaneous presentation of information in auditory and visual forms, using all the wealth of means represented by the computer, makes it easier to memorize the material by the student. Interactivity, that is, the ability for the student to control the speed and detail of training, and the presence of control blocks, allows you to check how the student has learned the information and, if

necessary - to work on the errors and on the basis of the above allows you to use this tutorial for self-study.

The necessary elements of this tutorial are:

Sound. The speech of the speaker, the music, the sounds that accompany the animation on the screen.

High-quality graphics drawn by a professional artist or photos. Possible animation inserts, movies, "live circuit" and so on. Single design, selected by the designer taking into account the chosen theme.

Dynamic deployment of the frame. Static frame worse to remember than the frame, developing in the course of clarification. There is a pause for self-study. The student decides when to move to the next frame by pressing the "next" button. The ability to repeat the explanations of the current frame and "rewind" back a few frames.

Control block. Can occur after every topic or distributed across the subject in blocks of two or three questions. Failure to pass the control can lead either to a score or return to the frame containing the correct answer.

Glossary. A student can have access to the words of the terms on the job. As far as "multimedia" is one or the other program that is so completely and efficiently it uses the features of media technologies - solve critics and users. The use of multimedia technologies at any stage of the educational process, such as the explanation of new material, independent work of students and knowledge control, can significantly improve the quality of the final result[6]. Consider the advantages of modern technology in the educational process, the example of an electronic textbook, which allows you to see:

1. illustration of dynamic processes and phenomena hidden in the conditions of the usual educational process;

2. the development and diversity of all models in the photo, as well as their detailed specifications in the form of tables;

3. quickly find outdated material or inaccuracies and make appropriate changes

The introduction of educational presentations and videos contributes to the emergence of new educational methods and forms of training based on electronic means of processing and transmission of information. But, despite the variety of technical means and technologies used in the educational process, it should be noted that the quality of training depends primarily on the perfection of the educational material, its presentation and organization of the educational process. For example, when developing a model of educational presentations, it is necessary to follow a number of principles:

- slide film should set the rhythm of the passage of the material and have special audiovisual means of controlling the perception of the material;
- the dynamics of the presentation of the text is set by the teacher (this happens either in advance when developing a slide film or during the demonstration);

Impact Factor:

ISRA (India)	= 3.117	SIS (USA)	= 0.912	ICV (Poland)	= 6.630
ISI (Dubai, UAE)	= 0.829	PIHHI (Russia)	= 0.156	PIF (India)	= 1.940
GIF (Australia)	= 0.564	ESJI (KZ)	= 8.716	IBI (India)	= 4.260
JIF	= 1.500	SJIF (Morocco)	= 5.667	OAJI (USA)	= 0.350

- slide film offers the student its logic of studying the material;
- cross-references are allowed[7]. Therefore, in the traditional scheme of training, there are many problems associated with the ever-increasing flow of new information, the complexity of knowledge, the lack of illustrative material. In these circumstances, the emphasis on intensive independent work does not yield positive results for the same reasons. The emergence of multimedia tools and technologies can solve these problems. The introduction of electronic teaching in the educational process not only frees the teacher from the routine work in the organization of the educational process, it makes it possible to create a rich reference and illustrative material presented in a variety of forms: text, graphics, animation, sound and video elements. In the absence of technical capabilities of visual presentation of materials, the simplest means of visual impact on students are posters, less material models and very rarely special film and video films. In comparative analysis, the shortcomings of these tools are obvious, and the possibilities of multimedia training presentations are objectively wider.

The main way to increase the amount of perceived information is to increase visibility. The increasing density of the information flow forces the maximum use of all channels of perception of students. Therefore, the greatest attention should be paid to the visual component of the theoretical course, as opposed to the auditory component (the voice of the lecturer), which may have a secondary value. Educational video presentations allow to present digestible as possible and in detail, dividing it into portions, having optimal information and presentation, and to combine the specified split with the structuring. In addition, electronic video presentations allow you to use features that are not available to conventional posters – animation of individual elements, the use of video sequences. The range of materials that can be used as initial components in the development of multimedia visual is extremely wide – ranging from illustrations in textbooks and available conventional posters, and to self-received photo and video materials. The use of modern technical means of training involves the simultaneous use of both means of visualization of the problem content, i.e. the establishment of direct educational communication teacher-student, and means of programmed learning and control, feedback control communication student-teacher.

Therefore, for the effective study of the course of technical specialists should be used specialized lecture halls, equipped with complexes of information and controlling technical means of training. With such a comprehensive application and use of these tools, an important point is the development of various multimedia teaching materials and complexes on all topics of the course, in order to help students

understand the essence of the problem and find ways to solve it, and not only be a means of information transfer. Previously, it was difficult for teachers to find an individual approach to each student[8].

Conclusion

Now, with the use of computer networks and online tools, teachers were able to present new information in such a way as to meet the individual needs of each student. In the library of the educational institution should be placed full-text educational and multimedia manuals, developed in the form of courses in the specialists, including various presentations, interactive electronic textbooks, which is a system-organized set of information educational resources aimed at meeting the educational needs of students. Students during self-study should have access to these educational resources, the development of which will contribute to the active involvement of students in the educational process. There is a new situation when the student chooses the most ergonomic for him personally characteristics of the studied material. He has the ability to independently recreate any text obtained from the database of electronic educational video materials, illustrating it, selecting the necessary arguments, building them into a certain logic of evidence, reflecting his own point of view, the image of his thought. The introduction of such information technologies in the educational process should be well-grounded and not everywhere a substitute, but a complementary factor in the system of modern education. However, the use of these systems in the training of future specialists can improve the quality of education, develop the creative abilities of students, as well as teach them to think independently and work with educational material, which contributes to their further continuous improvement throughout life.

Practice shows that the use of a computer has many advantages over traditional methods of training. The use of information technology in the history lesson allows you to:

- activate the cognitive activity of students;
- provide a high degree of differentiation of training (almost individualization);
- increase the amount of work performed in the classroom;
- improve knowledge control;
- develop skills of genuine research activities;
- provide access to various reference systems, electronic libraries, other information resources;
- changes for the better relationship with students far from history, especially with enthusiastic;
- changes, especially in the five-seventh graders, attitude to the computer, as an expensive fascinating toy. Children begin to perceive it as a universal tool for work in any field of human activity. Thus, the use of information technology helps the teacher to increase the motivation of teaching children to the subject and leads to a number of positive consequences. Information technology, together with

Impact Factor:

ISRA (India) = 3.117	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 0.829	PIHII (Russia) = 0.156	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 8.716	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 5.667	OAJI (USA) = 0.350

properly selected learning technologies, create the necessary level of quality, variability, differentiation and individualization of training and education. Each of the teachers should use what we have at our

disposal, engage in creative search for the optimal use of information technology, thereby introducing our children to the modern world.

References:

1. (2013). V zakone respubliki Uzbekistan ob obrazovanii. *Vedomosti Oliy Mazhlisa Respubliki Uzbekistan*, 1997, № 9, p.225; 2013, № 41, p.543.
2. Prikhodko, V., & Soloviev, A. (2008). Training of teachers of technical specialists in accordance with international requirements. *Higher education in Russia*, №10, pp.43-49.
3. (2006). Pedagogical technologies of distance learning. In Polat (Eds.). Moscow, "Academy".
4. Zakharova, I. G. (2003). Information technologies in education: Studies. benefits for students. higher. PED. studies' institutions'. (p.192). Moscow: Publishing center "Academy".
5. Aripov, K. K., Abdullaev, A. M., Alimova, N. B., Bustanov, K. K., Ob'edkov, E., & Toshmatov, S. (2011). Elektronika. Tashkent: Izd. «Fan va texnologiya».
6. Muslimova, N. A., et al. (2015). «Innovatsion ta'lim texnologiyalari» *ʻyqʻuv-metodik kʻyʻllanma*. Tashkent: Nizomiy nomidagi TDPU.
7. Ruzieva, D., Usmonboeva, M., & Xolikova, Z. (2015). «Interfaol metodlar: moʻxʻiyati va kullanishi» *ukuv-metodik kullanma*. Taskent: Nizomiy nomidagi TDPU.
8. Arsen'eva, E. S., Kogosova, Y. P., Metsler, A. A., & Tomilina, M. E. (2016). «Opyt primeneniya interaktivnykh form obucheniya v protsesse prepodavaniya tekhnicheskikh distsiplin» *Kontsept*, № 02-ART16037.
9. Guzeev, V. V., Dakhin, A. N., Kul'beda, N. V., & Novozhilova, N. V. (2004). «Obrazovatel'naya tekhnologiya XXI veka deyatel'nost' tsennosti uspekh». (p.96). Moscow: Tsentr «Pedagogicheskiy poisk».
10. Jurayeva, G. X. (2016). Innovative teaching methods in the teaching of radio engineering disciplines. *Molodoy uchenyy*, № 20, pp.151–153.
11. Farkhodzhonova, N. F. (2016). *Problemy primeneniya innovatsionnykh tekhnologiy v obrazovatel'nom protsesse na mezhdunarodnom urovne*. Innovatsionnye tendentsii, sotsial'no-ekonomicheskie i pravovye problemy vzaimodeystviya v mezhdunarodnom prostranstve. pp.58-61.
12. Farhodjonovna, F. N. (2017). Spiritual education of young in the context of globalization. *Mir nauki i obrazovaniya*, №. 1 (9).