

Improving The Quality Of Education Through Multimedia Education

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Annotation. *The article presents the methods and necessary recommendations for determining the effectiveness of the use of modern multimedia computer technology in the teaching of "Descriptive Geometry and Engineering Graphics", their advantages over traditional teaching methods on the basis of comparative results.*

Keywords: multimedia, multimedia e-book, e-textbook

I. INTRODUCTION

Training of qualified specialists and raising the level of knowledge of the population will lay the foundation for the development of the country's economy. "Therefore, from the first steps on the path to independence, great attention is paid to the restoration and further development of our great country, the improvement of the nation's education system, strengthening its national base, bringing it up to world standards and skills." [1].

During the years of independence, the reform of education and its rise to the level of public policy indicates a growing interest in this area. In a historically short period of time, Uzbekistan has made great strides. Growth can be seen in all sectors of the economy. There have also been major changes in the education system. The Law of the Republic of Uzbekistan "On Education" "National Training Program" is a clear example of this. The system of continuing education has changed radically. The educational buildings of the educational institution have been reconstructed at the level of world standards and equipped with modern classrooms, laboratory equipment and computer equipment.

In such an environment, the ability to provide students with different abilities with the necessary information on the subject area taught in a simple, convenient and understandable way has expanded. The application of modern computer technology in the educational process is relevant in today's increasingly advanced age of technology. This places a great responsibility on the educator. Because it is impossible to take it to a new level without the application of modern computer technology in the educational process. The period also requires computerization of the process of teaching graphic geometry and engineering graphics in higher technical education. As you know, Drawing is the language of technique. Therefore, the teaching of this subject is very important in higher technical education.

II. METHODS

Today, the science of descriptive geometry and engineering graphics is organized using a variety of stands, models, posters, and partly computer tools. However, this does not give the expected result in the development of students' spatial imagination, creative and logical thinking skills. Computer programs on science have been created.

- In the electronic methodical manual of A.K.Khamrakulov on the subject "Descriptive geometry and engineering graphics" created a program-pedagogical tool only on basic issues;
- Ch.T.Shokirova's test assignments on the subject "Descriptive Geometry" developed only the 1st level;
- D.S. Saidakhmedova's multimedia e-textbook on "Technical Drawing" for CPCs, difficult topics were selected and animated;
- A. Kholmurzaev et al. The electronic textbook on the subject "Descriptive Geometry" provides good theoretical information. But there are uncertainties in the sequence of execution of the samples in the set of tasks.

The computer software listed above did not include complete information on the subject, ie the knowledge base.

In accordance with the requirements of the time, the creation of a new way of educating students, the creation and provision of aids to them in all areas of education has become a topical issue. Therefore, there is a need to introduce computer technology in all disciplines and, based on this, to bring students' mastery to higher points. The use of electronic textbooks in the teaching of graphic geometry and engineering graphics, and on this basis the development of students' creative thinking skills, spatial imagination is a major problem today.

Mastering the science of descriptive geometry and engineering graphics is one of the most complex sciences, and it is especially important to ensure a high level of demonstration in the teaching of science. The use of various posters, detailed models, visual aids, handouts and, most importantly, an electronic textbook will further enrich the content of the lesson. An electronic textbook based on modern computer capabilities can replace all didactic tools. Therefore, the quality of the course will undoubtedly increase if the educational process is organized using a high-level electronic textbook in the field of descriptive geometry and engineering graphics. As a result, students can achieve the transformation of knowledge into skill and skill into skill.

III. RESULTS

A number of scientific studies on the use of computer technology in the educational process have been conducted in Uzbekistan and abroad. D.S. Saidakhmedova, A.K.Khamraqulov, U.V.Yodgorov, Ch.T.Shokirova, S.V.Panyukova, N.N.Gomulina, A.V.Smirnov, O.J.Bobomurodov, Z.N.Matyakubova, VV Kondratova, AS Kameney, KT Olimov, NS Anisimova gave scientific recommendations on the use of information and computer technology in education in their research work.

New information technologies in education are the use of computer technology in education [3]. According to Smirnov, "... new information technologies - processing technology, transmission, computer imaging and dissemination of information, computing and software development" [4].

Today, there is an e-book, a study guide, a methodological guide, and so on. They are mainly in verbal form and serve as a source of information for users. There was a need to create a multimedia e-book on the science of graphic geometry and engineering graphics. At the same time, as a result of the study of theoretical information on the subject, the student sees a graphic drawing in the form of animation, students have a clear idea. Based on this, the graphic can achieve the correct execution of tasks based on this knowledge in the process of performing tasks. If you encounter a problem while completing a graphic task, you can use the solution examples on the topics in the task set section of the multimedia e-book. The advantage of this is that when faced with a problem in the execution sequence, it is possible to have a clear understanding by reversing.

IV. DISCUSSION

The e-textbook is a comprehensive study of the subject and is based on computer technology for distance learning and independent study, is designed for independent study and effective study of scientific materials, scientific information and is available at the following levels:

- educational and scientific materials only in verbal (text) form;
- teaching materials in verbal (text) and two-dimensional graphic form;
- multimedia elements, ie information in two-three-dimensional graphic form, audio, video, animation and partly in verbal (text) form;
- Tactile (perceptible) is characterized by the formation of an image of movement in relation to objects [5].

The e-textbook differs from other textbooks in the didactic cycle of the whole educational process: theoretical information, animation of problem-solving sequences, use in the educational process, control of the level of knowledge and the presence of information retrieval system.

The use of color computer animation, high-quality graphics, video fragments, schemes, formulas, the subjects of the studied subject can be embodied in a series of presentations or connected in the form of a branching dynamic chain, the ability to control the process of extracting and presenting information.

The use of computers as a didactic tool in the development of design and technological creativity of students gives effective results. This is because a modern computer tool is a convenient tool for the ability to apply theoretical knowledge in practice and to quickly and objectively determine the level of mastery of the acquired knowledge and skills [2].

V.CONCLUSION

As a result of the use of multimedia e-textbooks in the field of graphic geometry and engineering graphics in all types of education (lecture, practical, independent, distance), it is the best tool for students to acquire the necessary knowledge and skills in science. and as a result will be the basis for the development of their spatial imagination, creative and logical thinking skills. Provard effectively affects the process of training highly qualified engineers for our developing republic.

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