Methodology of Organizing Individual Work of Students from Drawing Geometry within the Credit System at the Pedagogical Higher Education

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ABSTRACT

In the article, Drawing provides scientific information about the creative thinking and organization of individual work of students during the teaching of geometry sciences in higher education institutions, as well as the development of computer technologies and technological computer games with the help of tools and methods of intensive development and updating the world views in the field of intellectual IT.

Keywords: Drawing geometry and individual work, engineering graphics, creative thinking, intellectual computer games, virtual detail models

Introduction

In the framework of the reform of the educational system in Uzbekistan, in the framework of the development of the higher education system until 2030, in the concept of the development of the higher education system until 2030, the acceleration of the processes of learning and implementation of advanced foreign experiences in improving the quality of education and improving the teaching methods, training of competitive personnel and their appropriate contribution to the development of the economy, as a result of the reforms in the education system, higher great attention is paid to the inclusion of the educational institution in the list of higher educational institutions in the first 1000 of the ranking of internationally recognized organizations. In 2017-2021, the strategy of actions for the further development of our country is mainly focused on the development of the social sphere.

Decree No. PF-5847 dated October 8, 2019 on the approval of the concept of development of the higher education system of the Republic of Uzbekistan until 2030 was signed by the head of our state. In this important programmatic document, the issue of gradually transferring the educational process to the credit module system in higher education institutions was set as a task.

The credit-module system is considered the most advanced form of modern education.

Literature Analysis

Problems of improving graphic education in our republic from the educational method, development of students' creative thinking R. Khorunov, I. Rakhmonov, A. Kholmirzaev, Sh. Murodov, D. Kuchkarova, E. Roziev, A. Khamrakulov, S. Saydaliev, I. P. Istomina, A. V. Piliper , Yu.A. Bolkova, A.I. Khubiev, L.N. Anisimov, P.A. Organized by Ostrojkov, J.J. Dzhanabaev, Charles A, Rankovskiy, Minaruth Galey, Neda Bokan, Marko Ljucovic, Srdjan Vukmirovic and others

As a result of teaching drawing and geometry in higher education institutions, the foundation is created for the development of

students' independent work and graphic competence, as well as the acquisition of graphic knowledge related to the field.

According to the credit-module system, training sessions are based on individualized teaching technologies and independent study of the student. In the credit-module system, two types of independent student work are distinguished:

- in the auditorium - this is independent work performed directly under the guidance of the teacher;

- outside the classroom - independent works given by the teacher, but performed by the student without his participation

The content of students' independent work in the classroom and outside the classroom is determined based on the recommended educational tasks specified in the working program of the academic subject..

Using the possibilities of multimedia computer technologies to develop the creative thinking of students in the teaching of drawing geometry, creating multimedia electronic lesson developments aimed at developing creative thinking, video lessons for practical and practical lessons, and creating differentiated multiple-choice tests to analyze the development of students' creative thinking, using the possibilities of computer graphics for students It is necessary to develop and create differentiated graphic tasks, intellectual computer games, and virtual detailed models aimed at developing visual perception.

Depending on the type of lesson, the science teacher allocates time for using multimedia computer technologies and computer graphics. As a result, it is advisable to use a multimedia electronic textbook or computer graphics in the necessary part of the class time so that the students can understand the information given on the subject, and think creatively about the drawing details and assignments. The information given here is of great importance in the ability of students to think creatively about the information they are learning through animation, video fragment, visual, illustrative, etc. The student learns the knowledge he receives only when he imagines the appearance, situation, condition, shape, and size of the drawings.

Choosing the most optimal forms of independent education in the field of mathematics, geometry and informatics, using adequate methods of their use, will lead to the formation of students' knowledge, skills and qualifications, and their effective performance of independent, creative tasks in the process of practical activity.

a) forms of independent education organized in the auditorium:

Form 1a-listening to a lecture and recording what was said in a notebook;

Form 2a-doing practical and laboratory work;

Form 3a-learning to design and implement the educational process based on pedagogical and information technologies.

b) forms of independent education organized outside the auditorium:

Working with form 1b-educational literature;

Form 2b-preparation for control work;

Form 3b-preparation of a lecture;

Form 4b-distance education technology

Results

The content of independent learning forms organized outside the auditorium

Figure 1b. Work with educational literature. Working with educational literature outside the classroom is one of the main forms of independent learning.

Figure 2b. Preparation for control work. The process of preparing for exams and control work is also one of the main forms of independent learning. In order for students to be positively evaluated, they must prepare perfectly for the supervision work based on their wishes.

Figure 3b. Preparing a lecture. Different forms and methods of teaching are used in the teaching process in higher education institutions. The main form of education is lecture. Preparing a lecture is a very complicated and labor-intensive task. Future mathematics and informatics bachelor teachers will have to prepare lectures in geometry, in the process of pedagogical practice. Both

during the lecture and in various practical exercises, the main focus is on developing students' independent thinking, increasing their knowledge and skills.

Figure 4b. Distance learning technology.

Multimedia e-textbook fully provides visualization of the subject, Drawing is the main factor for the development of independent activity and creative thinking of students in the teaching of geometry. That is, students' creative thinking is developed on the basis of demonstrative, visual, illustrative, conceptual materials.

Conclusion

In short, the credit-module system of education includes the control of all forms of education (auditory and auditorium), and it is important in increasing the effectiveness of education because it is considered a unit of measure that shows the achieved result, not the number of hours spent in the educational process.

The feasibility and effectiveness of the credit-module system can be seen in the fact that it is widespread in the educational system of many countries of the world, because the development of educational programs provides students with the opportunity to independently acquire knowledge and increase the level of creative activity in their independent work, which means that the quality of education increases completely..

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