



Research Article

MAIN TASKS IN TEACHING COMPUTER GRAPHICS TO FUTURE TEACHERS

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ABSTRACT

This requires the training of the necessary professional skills in higher educational institutions as a factor of necessitative professional skills and skills. I got carried away with drawing. It was easy for me to get used to the exact measurement of details, accuracy, acquired skills that later, when I began to study the aircraft, were very useful to me.

KEYWORDS

Technique, cocktail, project, knowledge and skills.

INTRODUCTION

In particular, in the training of highly qualified competitive pedagogical engineers, engineering graphics belonging to the general technical field of

education has its place, importance and special features.



The diagram is the basis for forming an idea of the expected results of the labor process in modern production conditions. The drawing vividly reflects the design or construction of the product, which is the result of human creative thinking. According to the drawing, objects are made, structures are erected, and on the basis of the drawing, a system of labor-oriented labor movements of human creative thinking is planned.

THE MAIN RESULTS AND FINDINGS

The results of the creative work on the drawing are done and controlled. Aircraft designers express their design projects through drawings. In fact, Aviation Marshal I.N. Kojedub: "... I became interested in drawing. It was easy for me to get used to the exact measurement of details, accuracy, acquired skills that later, when I began to study the aircraft, were very useful to me" that is the meaning "... Men chizmachilik bilan qiziqdim. Uni oson tushunardim, detallarni aniq o'lchash, va tartibli ko'nikmaga ega bo'lib, keyinchalik samolyotni o'rganishimda o'qiganlarim menga ast qotdi" he wrote.

That is why drawing is called "technical language". It is an international language that is understandable to all educated peoples. For graduates of higher education institutions, the ability to use and effectively use the "technical language" is an integral and integral part of their professional training. They rely on graphic knowledge and skills gained directly from engineering graphics in carrying out their graduate qualifying work. For this reason, graphic education has both professional and general educational significance in higher education. It provides the formation of the necessary knowledge, skills and abilities for practical activities in the chosen profession in conjunction with the specialty disciplines.

For this reason, graphic training plays an important role in the professional activity of future pedagogical specialists, and the formation of graphic literacy in them is one of the urgent tasks. The following components of graphic education constitute the graphic literacy of junior professionals:

- Be able to use drawing tools and equipment correctly and effectively in the process of drawing, perform graphic work on the computer;
- Less time to read and execute the drawing accurately in the manufacture of products in accordance with the requirements of modern production;
- Low labor consumption in the execution of product drawings;
- It is primarily the form of detail, all its elements - the choice of the main view, the number of images, reflected in their rational placement;
- Be able to correctly, creatively and fully apply the standardization system in the drawing;
- Elements of construction and technology - constructive and technological, as well as reasonable and logical analysis of the shape of the detail on the sketch;
- Economical and reasonable choice of drawing format, convenient placement of images in the drawing.

In the current stage of development of science, engineering and technology, a high level of graphic training of young engineers is a guarantee of development.

This requires increased attention to the teaching of engineering graphics in higher education as a factor in shaping the necessary professional qualifications and skills as a subject.



In the system of higher education, a number of scientific researches are being carried out to improve the content of graphic education and increase the quality and effectiveness of teaching.

As mentioned above, the study of the current state of computer graphics training of future pedagogical specialists in the higher education system is carried out through the study of curricula, programs and existing scientific and methodological literature.

Today, many specialists (architects, designers, engineers, designers and practitioners) use the AutoCAD system in the field of design and construction.

Therefore, it is necessary to solve the following important tasks to improve graphic education in the higher education system at the level of modern requirements:

One of the important factors in the training of highly qualified, competitive professionals operating in a market economy with accelerated development of science and technology is to accelerate the imaginative graphic training of students studying in higher education. In modern production there are great demands on the drawing. Knowing all of these students and being able to understand the various definitions adopted in the execution of the drawing is an absolutely necessary condition for a wide range of professionals, from the worker to the engineer-designer. Engineers, of course, use drawings in their creative work, as well as develop drawings.

In modern higher education - the graphic training of an engineer - is one of the qualities of his professionalism, a certain level of graphic knowledge and skills, training combined with a broad spatial imagination and polytechnic thinking. In modern higher education,

computer graphics is the most important factor in professional training.

The main ideas for accelerating the graphic training of engineers in higher education can be considered as follows:

1. The acceleration of graphic education should be based on the principles embedded in a particular system.
2. Acceleration of graphic education is carried out on the basis of certain tools, which are important to identify and organize.
Graphic preparation acceleration tools can be divided into three types: tools used as modified forms of learning material; software; computer-related hardware (computer graphics).
3. Represented in various forms. Exploring the possibilities of accelerating their delivery to students is the basis for accelerating the process of graphic learning.

Graphics programs play an important role in accelerating the process of students' graphic preparation through computer graphics. Therefore, it is necessary to clarify the requirements for the use of such tools. The use of graphical software is based on the features of graphic representation, in particular, the creation of illustrations (vector-CorelDRAW!), Image editing (raster - Adobe PhotoShop) and software for creating two- and three-dimensional images (ArhiCAD, AutoCAD).

In accelerating the process of graphic training of higher education specialists, computer graphics is taught not as a training tool, but as a means of preparing future professionals for design activities in ALT (CAD) based on modern production requirements. In this case, the teacher's activity plays a leading role in the teaching of computer graphics (drawing on the computer). In this



case - interactive methods of teaching are used in teaching to make drawings on the computer. Interactivity is the result of interaction, that is, a conversation, interacting with someone (e.g., a computer) or someone (a teacher). It should be noted that interactive learning is a special form of organization of cognitive activities with a clear and planned purpose.

CONCLUSION

In developing the content and structure of graphic training of specialists in higher education, the following is observed: continuity and continuity in graphic preparation; the predominance of the theory of the object of graphic activity; unity of theory and practice; teaching methods for solving standard and non-standard creative graphic problems.

Thus, the problem of accelerating the graphic training of future engineers in higher education poses the task of solving the following problems:

1. Modernization of the structure and content of graphic training of future specialists in accordance with the requirements of the development of science and technology and modern production;
2. To study the pedagogical and psychological aspects of preparing future engineers for graphic activities.
 - Formation of knowledge and skills of future pelagic engineers in the use of computer graphics, taking into account the requirements of modern production of graphic culture;
 - Retraining of graphics teachers by organizing centralized training courses for teachers of higher educational institutions "Descriptive Geometry and Engineering Graphics" in order to equip them with knowledge and skills of machine (computer) graphics;

- To increase the teacher's special computer graphics literacy and to provide students with modern graphic training, to train competitive pedagogical engineers at the level of world standards.

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