AMERICAN JOURNALS
Open Access, Peer Reviewed Journals

American Journal of Pedagogical and Educational Research
ISSN (E): 2832-9791| Volume 12, | May, 2023

MODERN IN TEACHING THE SCIENCES OF ENGINEERING GRAPHICS METHODOLOGY OF USING GRAPHIC PROGRAMS

Yo'ldshev Bilol Iqboljon O'g'li
Tashkent State Named After Islam Karimov Technical
University, Kokan Branch, Assistant Teachers
email: Bilolxonyuldashev462@Gmail.com

A B S T R A C T

In this article, the science of engineering graphics of computer graphics role in education and training of modern automated design programs the improved method is reflected.

K E Y W O R D S

CAD, natural processing, artificial processing, computer graphics, engineering graphics.

INTRODUCTION

The place of "Computer graphics" taught in HEIs today and importance, material and spiritual needs in our social life satisfaction and all industry specialists in their work activities it can be seen as the breadth of automation possibilities. that is why and, at the same time, our Republic divides computer graphics into different fields in HEIs learning, methodological bases of using its capabilities in a number of fields creation, effective use of computer technologies and entering our lives upcoming new fields (specialist artist, special effector, vector art master,

Qualified as a CAD-master, modeler, animator, texturist, visualizer, etc.).

The issue of providing specialists "Computer graphics" as a subject in HEIs led to an increase in the need for training. Today in HEIs

In teaching the subject of "Computer graphics", students are targeted towards the subject forming actions and thereby achieving a result in assimilation, practical application of the necessary pedagogical and psychological tools and their scientific justification is important.

It is known that before coming to OTM, students study "Computer graphics". if they have the necessary basic knowledge and skills, their graphics features of spatial imagination and drawing reading skills necessary in science is formed. And this is related courses from the secondary special vocational education system indicates the appropriateness of the beginning. This is a number of researchers due to his scientific research, his practical application will give great results to the educational process scientific results are being achieved. by K.A.Grebennikov in the specialty "Design", from computer graphics in the teaching of general vocational subjects in the vocational education system the problem of developing pedagogical and technological bases of use studied.

In this research work, the pedagogical use of computer graphics in the professional training of specialists - designers in the secondary special vocational education system model is created and the importance of computer graphics is revealed in it.

E.M. Profession in scientific research work carried out by Tretyakova the content of "Computer graphics" for the construction specialty in colleges design and implementation technology has been developed. In it "Computer graphics" special course was designed and a model program was developed according to it knowledge of the use of computer technologies of the students trained on the basis of it is scientifically based and proven in experience that it is possible to improve their skills.

Also, in the scientific research conducted by D.C. Saidahmedova, profession is a profession "Technical drawing" subject of computer technology in colleges using its capabilities, the theoretical basis of teaching was developed. Dissertation learning process of students through the use of didactic games activation methodology, creation of its pedagogical conditions and "Technical a lesson using computer graphics in the teaching of "drawing". scientifically justified the possibility of increasing efficiency. Author, occupation - interactive methods, didactic games and computer for students of technical colleges multimedia electronic "Technical drawing" based on technologies developed a study guide and taught it in the traditional way harmonized and improved the teaching methodology, including that of students to develop spatial imagination, to read drawings correctly and quickly, as well as to form such qualities as observation, resourcefulness and intelligence in them designed tasks, intellectual game programs used on a computer style ("Crossword", "Rebus", "Charkhpalak" and "Labyrinth").

As a result of research conducted by L.V. Pavlova in the field of technology students' knowledge of engineering graphics and computer graphics from interesting issues in the formation and computer in the teaching of graphic subjects the use of graphics and the AutoCAD graphic program of students

It is scientifically based that it is possible to develop creative activity.

M.V. According to Matveeva: students are ready graphic, animated and video the illustrative function of computer graphics during the acquisition of educational materials is done. They acquire knowledge by creating a mathematical model of the object being studied if mastered, the cognitive function of computer graphics is fulfilled. Computer Illustrative and cognitive functions of graphics are conditionally different.

Indian scientist J. Rush in his research works "Computer graphics" The main goal of teaching science is to design production issues on a computer should be aimed at developing creative activity among students showed.

Computer graphics - graphics on a computer or using a computer is a generated graphic. Computer graphics is a drawing and modeling tool is used as If computer graphics is understood as a picture on the monitor, then it can be said that computer graphics appeared at the same time as the computer. Sometimes, the time when computer games appeared - the year when computer graphics were realized connect with In other words, computer graphics is new information.

It is considered one of the rapidly developing directions of technology constitutes the content of the automatic design system. "Modern automatic the design system not only converts the drawing into an "electronic drawing", but also a computer technique of its database width and geometric modeling of objects It is distinguished by the possibility of using effective methods.

Working with information in graphic programs is a human's vision, hearing and perception will be focused on organs, that is, it is wider than image and sound to provide information is used. The main goal is to convert information into images and sounds.

Although there are many computer graphics programs available today, they are one they differ from each other depending on the areas of mutual application. Experts in every field choose a graphic program that is convenient for their activities. Programs opportunities are also focused on a certain field. Therefore, the graphic program when choosing, first of all, it is necessary to take into account its capabilities. In most cases to learn other programs or subjects before using a graphics program the need is felt.

To develop spatial imagination in the student's mind, first of all, to science to have formed an interest in it and to acquire knowledge based on this interest and them it is observed that knowledge is accumulated and turned into skills and qualifications. A student in the mind of the given problem, relying on acquired knowledge, skills and qualifications analyzes and draws conclusions.

Computer each of the graphic objects that are integrated into the spatial image in the graphics component is connected both technically and graphically, and this situation is spatial expands imagination, the correct execution of actions and the correct conclusion release, in other words, provides technical and graphic connection. For example, if we imagine the concept of "conic sections" spatially, then First, one by one analysis of the situations of cone, plane, and intersection of cone and plane and we need to synthesize. This, in turn, leads to the expansion of human consciousness and gradually to create an opportunity to develop a real spatial graphic imagination of a slow person will bring. Student's creative activity during the teaching of graphic subjects creative graphic thinking combined with spatial graphic imagination in development the problem of development is urgent.

Natural assimilation is caused by a person's character or genetics may be infected. Students who are naturally proficient in problem solving in the process (for example, when making a detailed drawing in the third view and a clear image) they can spatially imagine what its solution will be. Such students the teacher quickly understands the topic and solves graphic tasks during the lesson they are satisfied with providing one sample. But also in all students the process of natural assimilation mentioned above is not observed. They act themselves even if they do, they may not be able to imagine the solution to the problem. That's why at such a time, it is appropriate to use the process of artificial assimilation is considered.

Artificial mastery - in this case, students study the subject in accordance with various laws and regulations by using the capabilities of various software tools they manage to solve. Creative activities of students in artificial learning expands and gradually professional knowledge and skills turn into qualifications. As a result, A student who learns science artificially has stronger knowledge than a student who can learn it naturally level is observed. From the student in both learning processes first of all, it is necessary to conduct independent creative activity in science.

Natural assimilation. A student who has the opportunity has a faster ability to learn science develops. In artificial assimilation, it is slow at first, as the level of knowledge increases skill acquisition accelerates. Modern AutoCAD (Auto Computer – Aided.

Design - computer-aided automatic design) system interface of the computer taking into account the capabilities of the most modern tools and technologies.

Since it was created, it is a high level of drawings and schemes, design issues guarantees quality performance. 3D in teaching computer graphics a lesson on the use of different methods of modeling (three-dimensional design). In the process, not only develop students' interest in science, but also graphic provides the opportunity to use almost all the capabilities of the systems.

References

1. Tashimov, N. (2019). Ways of Development of Cognitive and Graphic Activity of Students. International Journal of Progressive Sciences and Technologies, 17(1), 212-214.

2 Xalimov, M., & Farxodova, Z. (2021). DEVELOPING STUDENTS'CREATIVE ABILITIES BY MAKING PROBLEM SOLUTION SITUATION IN DRAWING SUBJECT. Збірник наукових праць

3.Muslimov Narzulla Alikhanovich, Urazova Marina Batyrovna, Muslimov Sherzod Narzulla ugli. (2020). DEVELOPMENT OF DESIGN TECHNOLOGY FOR FUTURE VOCATIONAL EDUCATION TEACHERS, MODEL OF TRAINING AND BASIC INDICATORS OF DISSERTATION

4. Shoxboz, D. (2019). THE ESSENCE OF TEACHING ENGINEERING COMPUTER GRAPHICS AS A GENERAL TECHNICAL DISCIPLINE. European Journal of Research and Reflection in Educational Sciences Vol, 7(12).

5. Elmurzayevich, Mamarajabov O. "Cloud Technology to Ensure the Protection of Fundamental Methods and Use of Information." International Journal on Integrated Education, vol. 3, no. 10, 2020, pp. 313-315, doi:

Adhamjon, Akbarov, and Nurmatov Sardor. "METHODOLOGY OF GRAPHIC COMPETENCE DEVELOPMENT OF FUTURE ENGINEERS BASED ON AN INNOVATIVE APPROACH." *American Journal of Technology and Applied Sciences* 7 (2022): 10-12.