

DEVELOPMENT OF ARTISTIC AND CREATIVE ABILITIES OF FUTURE TEACHERS OF FINE ARTS THROUGH COMPUTER GRAPHICS

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ANNOTATION:

The article discusses the issues of improving the system of art education with the help of computer systems and their software. The authors recommend techniques for using computer graphics in the process of art education. These methods open up ample opportunities for future teachers of visual arts for creative expression in the creation of graphic animated works and in the preparation of sketches in the classical styles of visual and decorative arts.

Keywords: future teacher of fine arts, computer graphics, art education, computer systems, design.

INTRODUCTION:

At the moment, there is a rapid informatization process underway, which is characterized, first and foremost, by the widespread adoption of modern information and communication technology across a wide range of human endeavors. Informatization of the society, on the one hand, means that the information created, on the other hand, becomes the property of all mankind, if it is possible to satisfy the individual's need for information.

The informatization of modern society led to a change in the nature of professional activity on the basis of the introduction of information and communication technologies

into it. In this regard, the approach to the training of specialists in different areas of professional activity has changed [1]. It should be noted that in the following period, with the introduction of information and communication technologies into the sphere of artistic activity, as well as the emergence of new types of artistic arts, such as interior design, web-design, there were some changes in the current structure of the professional activity of the future teacher of Fine Arts. These changes will bring about some new requirements in the higher education system.

In this regard, the president's decrees "on measures to radically improve the conditions for the development of information technologies in the Republic" dated June 30, 2017, No PF-5099, dated October 8, 2019, "on approval of the concept of development of the Republic of Uzbekistan's higher education system until 2030" dated October 8, 2019.

In particular, the Resolution of the President of the Republic of Uzbekistan Sh.M.Mirziyoev dated August 16, 2017 "On additional measures for the development and further improvement of the Academy of Arts of Uzbekistan" PQ-3219 was another important document in this direction.

The resolution envisages the effective use of creative potential of specialists in the field of fine and applied arts and design, creation of necessary conditions for them, high expression of national and universal traditions

in works of art, raising the artistic level of exhibitions in our country. important tasks have been identified, such as improving the education system specializing in the field of design in the light of today's requirements [1].

At this time, the results of the analysis of the state of Art Education indicate that the work in the system is not at the required level. On the one hand, the fact that the programs of training specialists in pedagogical higher educational institutions and in the system of secondary vocational education are oriented to the superior features of practical activity. On the other hand, the emergence of new industries, such as information technology, design, which are increasingly actively entering the field of art education, requires a revision of the training of a future teacher of Fine Arts, which not only knows the fundamental basics and methodology of teaching fine arts [5], but also has a strong knowledge, skills and competences about specialized computer systems. Therefore, innovative ways to effectively address these issues are important now. The search for new conceptual approaches to the use of information and communication technologies in art education, the creation of new technologies, methods, forms, tools and ways of teaching subjects that meet modern requirements is urgent.

In this context, the system of higher education faces the urgent task of training highly qualified specialists in the field of "Fine Arts and Engineering Graphics". In terms of professional activity, computer technology opens up completely new development potential. Many forms of visual activities rely heavily on computer graphics.

Education, publishing systems, tools for creating virtual reality effects, multimedia publications, three-dimensional (3D) graphics and animation, and computer games have all benefited from new technologies. Currently,

computer graphics helps to form a modern information environment using special tools. It is important that professionals in the field of artistic activity (teacher of fine arts, painter-designer, monumental artist, graphic artist, etc.) have knowledge, skills and qualifications in computer graphics. In particular, computer graphics can be recognized as an active means of developing the necessary personal qualities in the process of artistic and creative activity, such as perception of the depth of space, the ability to think figuratively (abstract-logical), color perception, sense of volume.

However, computer graphics analysis requires the ability to use pictographic symbols and sign systems in modern information structures.

MAIN PART:

An analysis of the local and foreign literature by researchers shows that a number of objective (lack of necessary equipment and qualified personnel) and subjective (skeptical attitude of some experts who follow traditional methods) computer graphics have not yet found a worthy place in the training process. To date, there is very little specialized research on the theory and methodology of teaching computer graphics. Of particular importance are the works of N.P.Petrova, E.V.Ledygin and L.Ya.Nodelman on this topic. A number of scientific and methodological researches of TA Boronenko, TV Dobudko, MP Lanchik, NN Pugach, LV Smolina, TA Yakovleva devoted to methods, techniques and means of teaching information technologies They are mainly devoted to the problems of the "computer science" course in secondary schools [4]. Thus, the significance of the selected problem, as well as the need to study computer graphics, especially in present settings by art education specializations, and the lack of proper science-based theory and technique for teaching this

subject. Furthermore, the research's relevance and importance, particularly in the field of computer graphics, allows for a successful solution to the challenge of organizing adequate resources. Development of teaching methods for future teachers of fine arts on the artistic profiles of computer graphics, which will increase the quality and effectiveness of lessons aimed at developing creative abilities in the modern requirements of a certified specialist by society. This defines the problem and purpose of this study.

The course "Computer Graphics" teaches future teachers of fine arts not only the basic principles of creating images, but also how to use computer technology in the artistic design and modeling of objects and objects. The study of the course should be continuous, integral. It is important to acquaint students with all types of graphics, as well as a number of graphics editors that can be used depending on the purpose of working with images and the scope of the work. These graphics editors include:

- Adobe Photoshop is a multifunction raster graphics editor designed to work with artistic photos and video files, which is used for image editing, collage and photomontage elements. The graphic editor is also used for commercial purposes in such directions as Television, Film, Advertising, games. In the graphic editor it is possible not only to correct images, but also to change shapes, save animations, make fertile use of layers and effects. These functions allow you to easily change images, duplicate copies and apply various filters.

- Corel Draw - is a vector graphics editor. With this graphic editor, it is possible to create logos, promotional products, visiting papers and other various graphic views, as well as to work on the design of structures, photos, text, images, to present artistic compositions, to

perfectly perform the steps associated with the creation of geometrical forms, that is, forms on the plane and in space.

- 3D Studio Max is a three-dimensional (3D) graphics editor. The knowledge gained from this graphic editor can be used to model objects, as well as create three-dimensional animations and layouts of various rooms [3]. The ability to use these graphic editors allows the future teacher of fine arts to develop creative thinking, creative exploration. The computer cannot replace the graphic work done manually, but it does ensure its successful completion, formatting, and mastery of new possibilities.

The course "Computer Graphics" includes lectures and practical classes. Logically, the course materials are divided into four main sections: introduction to computer graphics, image construction and editing algorithms, methods and algorithms of three-dimensional (3D) graphics, image compression algorithms.

The introductory part of the course contains information about the main types of images. There are two types of computer graphics: dot (raster); can be presented in the form of an object (vector). In raster graphics, the principles of color formation and basic color models are studied. It also describes the basic principles of computer graphics hardware device.

Raster graphics are the most realistic way to show the objects of the surrounding world. Only quality raster images can reflect the whole variety of processes and events that the human eye perceives. So, if an image on a computer starts its way from an electronic digital camera or a scanned color photo, the raster shape is the most convenient way to achieve optimal image quality. Vector graphics are based on the methods used by programmers to create

images consisting of a simple dot, a straight line, and areas painted in one color. However, with the development of computer design technology, the visual capabilities of vector graphics have expanded. Nowadays, the best examples of vector graphics are almost as realistic as photographic images, surpassing raster graphics in terms of their potential.

The Computer Graphics course also provides an overview of algorithms for constructing and modifying two (2D) and three-dimensional (3D) images. The mathematical principles of picture production and change, as well as different techniques of processing diverse images, are covered in detail. Three-dimensional surface models are presented, and several ways to displaying three-dimensional images are discussed in depth.

You will discover the most commonly used file formats for storing images and text at the end of this course.

It is no exaggeration to say that the course is a component of improving the system of professional training of future teachers of fine arts. The development and implementation of course content is related to changes in the content of the computer system, its software, in particular, the objectives of the implementation of the didactic capabilities of computer graphics. The content of the course is aimed at the formation of specific skills - a virtual, multidimensional perception of the real objects of art education [2]. Taking into account the didactic potential and specific features of the course "Computer Graphics", the general objectives of higher education are based on the acquisition of objects of art education through computer programs, in particular, the knowledge of artists, teachers, designers is described as follows:

- Computer skills for collecting, storing and processing (editing) graphic data;

- Ability to design professional activities based on a systematic approach to the introduction of information and communication technologies in education;
- Have the skills to use computer systems in the design of practical methods and techniques of constructive modeling;
- Methodological and psychological training to change the type and nature of professional activity and work on interdisciplinary projects.

Practical classes play an important role in strengthening students' theoretical knowledge of "Computer Graphics".

Instrumental-algorithmic pedagogical technologies of using computer graphics include: the purpose and content of the course of computer graphics; technological and pedagogical approaches in designing a course of computer graphics in design education; methods and organizational forms of teaching; technological maps; Professors and teachers will benefit from this methodical guidebook. General requirements (ergonomics, professional and technical qualities of programs, accessibility for this category of students, etc.) and special criteria for the artistic and technical capabilities of graphics programs must be considered when choosing a computer graphics program for a specific course.

"Computer Graph" is a course I teach. Training of specialists is carried out in such a way that the student can not only form new ideas and approaches in the field of design, but also bring these ideas to the final result. In this regard, it can be recognized that this training course is a logical continuation of the theoretical and practical course of general sciences related to the future specialization of students.

Thus, Computer Graphics provides ample opportunities for creating illustrations, presentations, as well as for manifesting itself

creatively in the preparation of sketches in the classical styles of fine and practical decorative art.

CONCLUSION:

In conclusion, the direction of information and communication technologies in the development of society is a necessary condition for the creation of flexible methods of teaching in the process of integration. This will enable future art teachers to gain knowledge, skills and competencies in computer graphics.

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