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DEVELOPMENT OF STUDENT CREATIVITY IN THE PROCESS OF TEACHING ENGINEERING AND COMPUTER GRAPHICS SCIENCE

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Annotation. This article highlights the role of Engineering Computer Graphics in the development of creativity in students. The article covers the importance, purpose, content, advantages in teaching the development of creativity for students of higher educational institutions through the science of Engineering Computer Graphics.

Keywords: engineering computer graphics, creativity, learning activities, Computer Programs, Visual AIDS, multimedia devices.

The demand for the form and content of education is radically changing in the conditions of today's innovative pedagogical educational cluster, where fundamental reforms are being carried out in the field of education throughout the Republic. Also, the development of methods for the development of creative competence in the process of teaching innovative education is a requirement of the period. The peculiarity of growing students ' creative competence is that they, like other abilities, develop during the period of activity. So, in solving this problem, the main task of the teacher is the search for forms, paths and means of organizing the activities of the development of creative competence of students in the process of teaching the drawing geometry module.

In this article, we will focus on the importance of issues developing students ' creative competence in the teaching of "Engineering and computer graphics" at the faculties of Tashkent State transport University. It is known that the development of Student Creative competence cannot be achieved in one or more lessons. An absolutely independent, developing education, a special approach to this issue will be necessary. Otherwise, only the ability of students to memorize information will develop. Relying on world experience, we can agree that students ' creative competence is more developed by approaching through non-standard questions, specific issues. At the time of drawing up such questions and issues, it is necessary that professors take into account the individual-oriented education, that is, the induvidual characteristics of each student.

The conduct of the study organized the process in such a way that creative thinking, talented students, able to build three projections of a given point with any, coordinates, became interested in such issues. We offered such students to solve issues on the required condition of the detail projection given in the next projection drawing. At the same time, the need for acquaintance with the same topic through the literature was definitely emphasized.

Drawing is necessary for drawing up drawings on the subject of geometry and engineering graphics and gaining knowledge and skills that allow winter, as well as developing spatial imagination. The ability to compose and learn drawings is based on the knowledge of the method of making pendants,the solution of various positional and metric issues and a number of conditions adopted in drawing geometry and construction drawing.

Spatial imagination refers to the property of a person to mentally bring the shape, dimensions, proportions, color, surface invoice and qualities of various objects, including buildings, structures and structures. The projection method DSB is the so-called image making method drawing general

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for geometry and engineering graphics. Drawing is studied in geomegria if the theoretical basis of this method is studied, then its practical application in engineering graphics is studied. In the course" drawing geometry and engineering graphics", the rules for making drawings and their implementation, which are used in drawing geometry, are adopted. The qualifications from building drawing were applied in engineering graphics and drawing geometry.

Therefore, drawing geometry and engineering graphics are studied at the same time. The main style of work of a superficial student student is the independent study of the material using a textbook, teaching aids, as well as a CSR (the unified system of CSR documents state standards was introduced from January 1, 1971 and updated in 2006 is called Uzdts).

This research work allows the student to get acquainted with the issues of studied drawing geometry and projection drawing, such as the issuance and application of it to the production of a sequence of execution according to the standard requirement, and to find new issues for himself. This method, which was used to find orthogonal projections of a point given by its coordinates, has been stated in simple language in conjunction with a stay on a very wide range of subjects, and examples have also been solved. During the analysis of their solutions, the spatial position of any point is determined, and some given drawing is divided with a deeper knowledge of solving geometry problems faster. In addition, the student will be familiarized with the level of his knowledge as well as with his fellow students. A creative student receives answers to many of his questions by studying and using this news, his thinking skills, problem solving skills and qualifications increase.

To date, in all developed countries, Science and technology, means of production, as well as technological processes are almost completely computerized. Computer is also used in all production enterprises of the world, as well as in the educational system, on the basis of graphic programs with great potential for automating design work in the creation of new techniques and technologies. To train specialists in accordance with the requirements of the present time, the great importance on the computerization of educational subjects in all branches of the state, the system of continuing education, especially in schools, vocational schools, higher education institutions, was borne by the ministries of public and higher education and pedagogical scientists of higher educational institutions.

Modern-each of the information technologies depends on certain technical, software and other supplies. In the following work, the graphical capabilities of information technology can be assessed as the provision of introduction in all educational institutions, including for geometric patterns in folk applied art, for graphic works performed in engineering graphics. World experience involves teaching students and students to draw geometric pattern compositions and perform graphic tasks on a computer, after learning to a certain extent from folk applied art, as well as engineering graphics. It follows that in this work, on the basis of AutoCAD 2021, a graphics program from Autodesk, one of the most modern graphics programs aimed at students and students, a methodology for teaching graphic information to perform on a computer has been developed. In modern times, a number of programs of computer graphics have been developed in the performance of engineering drawings, and they have been introduced into production and educational practices. AutoCAD, INVENTOR-3D owned by AUTODESK USA, KOMPAC-3D owned by ACKOH of Russia are designed to perform automated design systems, mechanical engineering and construction drawings, and engineering calculations, the training of which is included in the curricula in most higher technical educational institutions in the CIS countries. Computer graphics is the technology of creating and processing graphic images using computers and editing them. In other words, creating graphic images

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from computing techniques, reflecting them through different tools (for example, on the monitor screen, in the form of hard copies, etc.k.) and is an area of use for the purpose of changing location, shape. Non-moving color images were followed by videos. Now, three-dimensional images are increasingly being used. In modern machine-building production, drawings of machine-building details are directly three-dimensional - Created in 3D applications, i.e. "Science and Education" of details Scientific Journal / Impact Factor 3.567 (SJIF) November 2022 / Volume 3 Issue 11 www.openscience.uz / ISSN 2181-0842 830 spatial drawings are created and a scale is selected according to the selected associative views, dimensions are laid and details are made and assembled on these, thereby ensuring the harmony of the operations of their preparation and assembly according to the work drawings of the details and obtaining possible errors, and with this, the continuity of production is ensured, and the main thing is an increase in labor efficiency.

Thus, in the development of the identification of creative talented students and their creative competence, the solution of issues on this topic, selected from the drawing geometry course, is of great importance. At the same time, the solution and analysis of these types of issues makes it possible to educate scientific creative thinking in students.

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