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THE METHODOLOGICAL SYSTEM FOR THE FORMATION OF GEOMETRIC GRAPHIC ABILITIES OF STUDENTS OF TECHNICAL HIGHER EDUCATIONAL INSTITUTIONS.

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Abstract:

This article discusses the methodological system for the formation of geometric graphic abilities of students of technical higher educational institutions, the fact that graphics are of leading importance in the work of operators of complex systems that represent information in graphic forms.

Keywords: Spatial imagination, drawing, graphics, plane, perpendicular, Projection, model, AutoCAD.

The fact that, thanks to the progress of technology and information technology, the possibilities of achieving effective assimilation in a short time of complex processes taking place in the teaching of engineering graphics are great, therefore it is advisable to use them in higher educational institutions.

As the head of state noted, one of the main tasks facing higher educational institutions is the preparation and cultivation of mature modern bachelors and Masters with in-depth theoretical knowledge, thorough practical skills in their areas of Education. One of the conditions for the successful acquisition of knowledge on modern technical technology is the ability of students to read and perform graphic literacy, skills, that is, drawings. In this regard, the basis of drawing requires the perfect mastery of the science of geometry.

Drawing is necessary for the development of knowledge and skills, as well as for the development of spatial imagination, which allows you to draw up and read drawings on the subject of geometry and engineering graphics. It is based on the knowledge of the method of drawing and reading drawings, the method of making images, solving 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 to the eye the shape, size, proportion, color, surface texture of certain parts and certain qualities of various objects, including a building, and structure.

The activities of an engineer constructor in any area of Mechanical Engineering and construction (aircraft, cars, bridges, roads, residential and industrial buildings,) cannot be imagined without computer graphics, including graphics. In the work of operators of complex systems that represent information in graphic forms, graphics are of leading importance. In this case, the operator communicates not directly with the object being managed, but with its graphic model and acts in the process of receiving and processing information as if it were a deputy object. Image types are synemonic schemes. technological scheme and is implemented in the form of drawings, graphics cards, television screens.

Skill is the ability of a person to carry out a certain activity or action based on his previous experiences. Skills are a component of an activity related to practical activity, the ability to apply knowledge in practice. Skills are ways to successfully perform an action in proportion to the purpose and conditions of the activity. It is always based on knowledge, is the basis of Skill (Qualification). The skill is divided into practical (physical) and mental in content, the form is divided into simple and complex types. Practical skills will be aimed at carrying out labor activity, mental skills will be aimed at obtaining knowledge, mastering it. Skills should not be confused with knowledge, because knowledge is expressed in judgments (reflections)in which reality is correctly reflected. Skills, on the other hand, are more embodied in mental and physical actions.

Qualification — 1) in psychology-a certain profession, a skill acquired as a result of good mastery of work. Usually, in the process of some work, actions are carried out in a way that is not understood or understood. Due to the fact that the mind is less and less involved in the performance of the movement, the work enthusiasm goes to voluntary execution, the attention to certain small parts is reduced. Due to the voluntary execution of the partial zeal of the movement, some qualitative changes occur in its structure. Emotional control of movement, methods of controlling it from the Center change. Attention will be free from the perception of modes of movement, and it will focus on the state and product of movement. Thanks to this, the task will go smoothly, without excessive effort, quickly and qualitatively.

Currently, interest in the application of interactive methods, innovative technologies,

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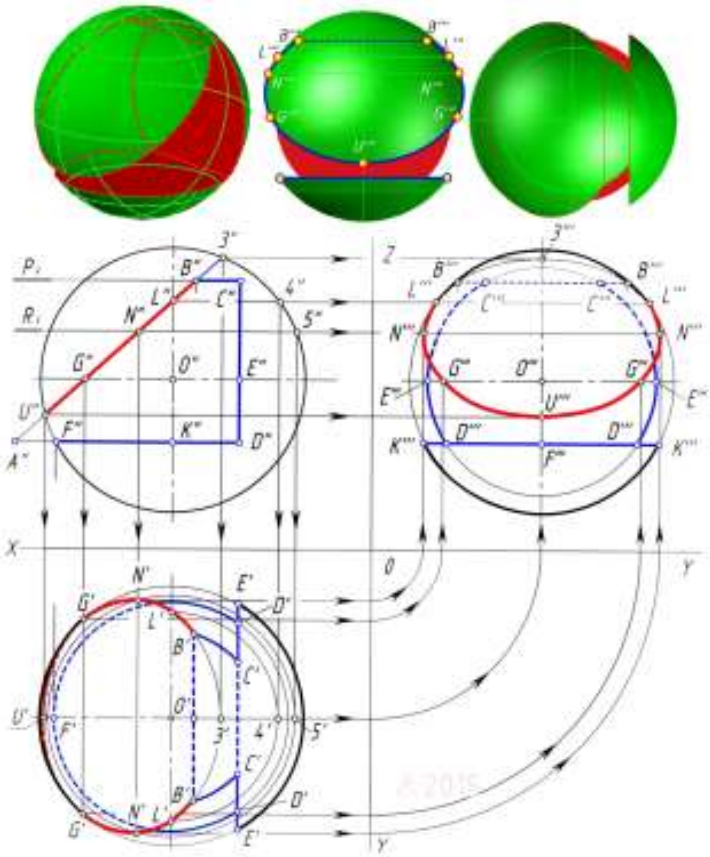
pedagogical and information technologies in the educational process is growing in the educational process. In this, mainly if so far students have been taught to acquire ready-made knowledge, modern technologies teach them to search for the knowledge they are acquiring on their own, to study and analyze it independently, and to draw conclusions as far as possible. The teacher in this process creates the conditions for the development, formation, acquisition and upbringing of the individual, and at the same time performs the function of management, orientation, in the process of such education the student becomes the main figure.



In conclusion, the practice of using AutoCAD in the process of teaching drawing geometry of the formation of geometric graphic abilities showed the feasibility of using graphic software as part of elementary graphic training in technical universities. At the same time, it should be noted that the use of drawing graphic drawings to solve educational problems at the initial stage of higher education contributes to the formation of stable skills in the use of modern Information Technology in solving production problems and creates conditions for training a modern IT specialist for various fields.

The main goal of the introduction of a system of continuing education in our republic is to form in the younger generation such abilities as high professional culture, creative and socio – political activity, free thinking. First of all, it is required to increase the activity of students. That is why it is advisable to widely and appropriately use interactive methods of education in the cultivation of independent, creative, critical thoughts of students. At the same time, in the formation of students ' knowledge and skills in labor education, systematicity in the organization of lessons and extracurricular activities, a clear goal orientation, control over the results of teaching work and the introduction of new methods of assessment remain insufficient. Therefore, the use of active methods of education and upbringing in improving educational methodological work in secondary schools, the search for ways to rationally benefit from optimal forms of teaching and conducting test and control work is becoming an urgent issue.

As you know, teaching methods are composed of the teacher's activities with students towards achieving certain goals and serve to reveal issues about who needs how to teach what. Therefore, the activation of cognitive activities of students and the corresponding selection of the forms and methods used for their independent, creative thinking will pay off in the future in the training of personnel.

Any learning process aims to absorb some information that eventually translates into skill, skill, or knowledge. Introduction is the most complex concept and shows the joint application of knowledge and skills to perform a specific task. Majlor's skills are also acquired over time and mean the use of theoretical knowledge with skills produced in practice. Thus, if you develop a certain movement to some level of skill, the movement can be performed mechanically, and at the same time acquire new knowledge and turn into skills.

How are these four concepts related to each other: knowledge, skills, and habits? So, in practice, the skills of sharp (compiled) began to turn into skills. In some sense, knowledge is also a skill, as well as skills. Only these skills and abilities touch the verbal and generally mental activity of a person. Knowledge, skills and abilities are all manifestations of purposeful activity, purposeful actions, constructive understanding of reality.

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REFERENCES

1. O‘zbekiston Respublikasi Prezidentining “O‘zbekiston Respublikasini yanada rivojlantirish bo‘yicha Harakatlar strategiyasi to‘g‘risida”gi PF - 4947 Farmoni. -Toshkent, 2017-yil 7-fevral.
2. Talim fidoiylari Respublika ilmiy-metodik jurnali. Guvohnoma 3-son 1-jild 2021 357-359 betlar
3. O‘zbekiston Respublikasi Prezidentining “O‘zbekistonning yangi taraqqiyot davrida ta’lim-tarbiya va ilm-fan sohalarini rivojlantirish chora-tadbirlari to‘g‘risida”gi PF-6108 Farmoni. -T., 2020-yil 6-noyabr.
4. Azizxo‘jayeva N.N. Pedagogik texnologiya va pedagogik mahorat: O‘quv qo‘llanma. -T.: TDPU, 2003. – 174 b.
5. Babanskiy Y.K. Hozirgi zamon umumiy ta’lim maktabida o‘qitish metodlari. -T.: “O‘qituvchi”, 1990. – 232 b.
6. Балл Г.А. Теория учебных задач: Психолого-педагогический аспект. -М.: “Педагогика”, 1990. - 184с.
7. Юрин В.Н. Компьютерные технологии в учебном процессе инженерного образования // информационные технологии. 1999.-№ 3 - С. 45.
8. Ziyomuhammedov B. Ilg’or pedagogik texnologiya: nazariya va amaliyot. -T.: “Abu Ali ibn Sino” nomidagi tibbiyot nashriyoti, 2001. – 78 b.
9. Yo‘ldoshev J.G’., Usmonov S.A. Pedagogik texnologiya asoslari. -T.: “O‘qituvchi”, 2004. – 236 b.
10. Golish L.V. Ta’limning faol usullari: mazmuni, tanlash va amalga oshirish. Metodik qo‘llanma. - T.: O‘MKHTRI, 2001. – 128 b.
11. Чекмарев А.А. Начертательная геометрия и черчение: Учеб. для студ. высш. учеб. заведений. - 2-е изд., перераб. и доп. - М.: Гуманит. изд. центр “ВЛАДОС”, 2003. - 472 с.
12. Shomirzayev M.X. Texnologiya fanini o‘qitishda innovatsion pedagogik texnologiyalar. Darslik. – T.: “Tafakkur”, 2021. -226 b.
13. Sami o'g'li S. S. NOANIQLIK SHAROITIDA EHTIMOLIY XAVF-XATARLARNI BAHOLASH MODELLARI VA BOSQICHLARI. – 2022.
14. Х.Рихсибоева, У.Отабеков, A.Valiyevlarning “Развитие пространственного мышления учеников при обучении черчения” (-М.: “Молодой учёный”. Международный научный журнал. 2017 г. №13, часть VI. г. Казан, ООО «Издательство Молодой учёный». 527-533 стр