

THE USE OF VISUAL WEAPONS IN THE ORGANIZATION OF PRACTICAL TRAINING IN ENGINEERING GRAPHICS IN HIGHER EDUCATIONAL INSTITUTIONS

Rasulova Aziza Komilovna

(Teacher of the Department "Engineering and computer graphics" at the Termez Institute of engineering and technology)

Turayev Khumoyiddin Abdugafforovich

(TerDU, dean of the Faculty of "national costume and arts" p.f.f.d. (PhD), dots. scientific leader)

Anatatsiya: *Ushbu maqola "Muhandislik va kompyutir grafikasi darslarini tashkil etishda plakatlarni va ko'rgazmali qurollardan foydalanish" va uning samaralari haqida bayon etilgan. Ko'rgazmali qo'llanmalar talabalarning chizmachilik kursini o'rganishlari va grafik topshiriqlarni bajarishlarida yordamlashish maqsadida tayyorlanadi. O'quv-ko'rgazmali qo'llanmalarni tekis (plakatlarni) va hajmli (modellar va detallar namunalari) qo'llanmalarga ajratish mumkin.*

Kalit so'zlar: *Oliy ta'lim, muhandis, Chizmachilik, fazoviy, didaktik vositalar, ko'rgazmali qo'llanmalar, Chizma, Shakllar, Dinamik plakat.*

Аннотация: *В этой статье описывается "Использование плакатов и наглядных пособий в организации уроков инженерии и компьютерной графики" и его эффективность. Наглядные пособия предназначены для того, чтобы помочь студентам в изучении курса рисования и выполнении графических заданий. Учебно-наглядные пособия можно разделить на плоские (плакаты) и объемные (модели и образцы деталей) пособия.*

Ключевые слова: *высшее образование, инженер, рисование, пространственное, дидактические средства, наглядные пособия, живопись, формы, динамический плакат.*

Anatatsiya: *This article describes "The use of posters and visual weapons in the organization of engineering and computer graphics classes" and its effects. Visual guides are prepared with the aim of helping students learn the drawing course and complete graphic assignments. Instructional-visual guides can be categorized into flat (posters) and volumetric (models and detail examples) guides.*

Key words: *Higher Education, Engineer, drawing, spatial, didactic tools, visual weapons, painting, shapes, dynamic poster.*

As you know, one of the main stages of the system of continuing education is the upbringing of the personality of a teacher who comprehensively develops personnel, adapts to the processes of renewal and development, has a high spiritual and pedagogical culture, creative and social activity, independent thinking. In socio-political life, it consists of educating the personality of a teacher who has the ability to think independently and can conduct innovative activities, feel his responsibility to society, the state and the family.

Drawing science develops students' ability to visualize and reflect. And the imagination can be trembling and spatial. To increase the spatial imagination of students, they are given traditional questions and drawing exercises. In order for the student to be able to accurately answer such questions and exercises, the modern pedagogue should be able to clearly explain the topic to the student using modern visual weapons in the course of the lesson. It is advisable to demand from the student first after teaching.

At this point, it is worth noting that one of the components of the methodological system is teaching tools. They include textbooks, didactic tools, visual aids. includes various technical means of training. To the means of training, as well as. computer, screen and Sound, Control and training programs are also included. In order to master it according to the peculiarity of drawing science, students require the need for the formation and development of the spatial imagination. Therefore, the sufficient availability of teaching tools from drawing in educational institutions, the appropriate use of them by a science teacher, and the presence of a specially equipped Cabinet at the required level will contribute to the effectiveness of Education. Educational literature in the acquisition of knowledge of requirements and the formation of graphic culture in them (such as textbooks, teaching aids, assignment sets and workbooks) and visual aids used in the educational process (stands. posters, etc.) are of particular importance.

Visual guides are prepared with the aim of helping students learn the drawing course and complete graphic assignments. Instructional-visual guides can be categorized into flat (posters) and volumetric (models and detail examples) guides.

Drawing teachers who approach their profession creatively can also use it in the course of the lesson by independently preparing original posters, without being limited to standard educational-visual manuals.

Such posters, which reveal the characteristic aspects of the topic under study, are especially of great help for readers on New, difficult-to-understand topics. According to the methods of Use and principles of structure, they can be divided into static and dynamic posters. Posters intended to reveal the intended subject through images and shapes executed in one plane are static, posters in which the components of the subject are moved in relation to one of the other in the context of the statement of the subject are called dynamic posters.

The constant placement of posters belonging to standards and the basics of drawing performance in the drawing cabinet or hallways causes them to be in the eyes of students and involuntarily remain in the memory of students. The use of "dynamic posters" when outlining new topics is especially good. « Dynamic poster " s typically consist of a set of posters revealing the order of the sequence of execution of a drawing. This allows the teacher to display and explain relatively large amounts of graphic information in students in a limited amount of time. The peculiarities and essence of various making in " dynamic " visual guides. there is a great opportunity to reveal the ways and sequences of reading images in drawings.

To make dynamic posters, the teacher is required to acquire more knowledge, a creative approach to revealing the topic, as well as the skills of finding an unconventional solution to the problem. The drawing cabinet should of course have thematic collections of details. Usually for general education schools, sets of details will consist of simple details made from simple geometric bodies, as well as ready-made-to-look details, the structure of which is somewhat more complex.

In general, the importance of diligently selected educational visual aids and didactic tools in the correct Organization of training is very great. The principle of exhibitionism of education in didactics is considered from the basic principles.

One of the most common types of visual aids is educational posters. Posters on the main themes of drawing have been out of print several times to date.

When studying the basics of projection drawing, it is good to use a spatial (three-sided) angle model to develop the spatial imagination of students in the initial lesson sessions.

When using educational-visual guides from drawing, the teacher should try to fulfill the following condition:

Visual applications:

- to help students understand the rule under study, the way of making, together with the help of a teacher;

- to promote the development of spatial representations necessary for the study of science;

- the development of skills to be able to analyze the significant properties of an object, which are necessary for the correct description of it;

- it is necessary to promote the development of skills to be able to visualize a real object according to an abstract image (drawing), which is necessary for reading and performing a drawing. In drawing lessons, all the principles of teaching come in contact. The principle of exhibitionism plays a special role in the teaching of drawing. The correct use of exhibitionism in drawing lessons leads to the formation of spatial impression in students, the development of logical thinking, the ability to generalize and put it into practice on the basis of what is considered and analyzed.

The use of various means of visual weapons activates students, concentrates and develops their attention, leads to a strong assimilation of educational materials and a decrease in the time spent on it.

Visual aids can be divided into several types. Environmental objects, tables, measuring instruments, didactic materials, etc.

The fact that students learn to prepare visual weapons for drawing science themselves has a positive effect on a solid study of Science, in which interest Awakens, allowing them to apply the knowledge gained in other disciplines (e.g., labor, geometry, etc).

Visual curricula can be divided into natural and pictorial types. Natural visual weapons include what we have in our environment. Pictorial guides include figures made of paper and cardboard, instructional films, diaphilms, etc. The use of visual weapons in classes in sufficient and necessary numbers is an important condition for efficiency. It will produce a negative result if used in places where visual weapons are not needed, taking students' mind to the other side of the set goal.

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