

METHODOLOGY OF TEACHING DRAWING WITH OTHER SUBJECTS BASED ON AN INTEGRATIVE APPROACH

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Abstract

This article describes the methodology of teaching drawing with other subjects based on an integrative approach.

Keywords: Drawing, graphics, science, integration, creative, drawings, visual arts, physics, chemistry, modeling.

Introduction

Today, the head of our state, President Shavkat Mirziyoyev, is paying a lot of attention to the field of education, and at the same time, several reforms are being made. The President noted: "In the upper classes, children become individuals and form a team. At the same time, they should not be separated from their learning environment. This can have a negative impact on the morale, attendance, and ultimately the education of young people. That is why it is necessary to ensure the smoothness of the educational process, to improve educational programs."

It is known that the free market economy, which is rapidly developing, makes great demands on us pedagogues. To what extent can schools, vocational colleges and graduates of higher education acquire modern professions and meet its requirements? - question is one of the most urgent questions of our day. Today, it is one of our most important tasks to produce qualified personnel as soon as possible. In our modern life, the profession of "Freelancer", which is one of the modern professions, should be used in textbooks. Freelancer - when translated into Uzbek, "freelancer" means the profession of the future, a hired worker who remotely performs services from one or more customers. By teaching 3D graphics programs in schools, i.e. AutoCAD, Blender, 3D max, Illustrator and other such subjects, it is reflected that it is an initial and important step to becoming a freelancer, one of the modern professions.

The reforms implemented in the education system today, the establishment of a democratic state with developed new ideas, and in accordance with the requirements of its development, to increase the quality of education and education of young people, to attract them to education. the task of organizing modern and interesting lessons is being set by introducing modern forms and methods.



In today's most developed countries, the problem of unemployment is solved through the freelance profession, and in addition, a huge amount of foreign currency is brought into the country. A lot of attention is paid to the development of this industry in our country. Currently, the amount of income earned by freelancers in my country through foreign platforms is 9 mln. is a dollar. If we pay attention to the coverage of 38% of school graduates with higher education, we should give the remaining 62% of our youth an understanding of the freelance profession at school.

If we pay attention to the statistical data, they show that we need to attract many young people to the freelance profession. It is necessary to adapt the science of drawing to the needs of the times, further develop it and make maximum use of its possibilities. If we pay attention to the picture below, if we pay attention to the statistics on the online platform upwork.com, we can see that the science of drawing has a special place in the field of freelancing. Modernization of 8th-9th grade drawing textbook in the school over the years is the change of 2 topics in the last 10 years and those topics could not arouse interest in drawing among students, and at the same time, we still require drawings in paper form. does not meet the requirements of the times. Nowadays, any construction or engineering firm requires drawing in some graphics program. Therefore, school curricula and textbooks do not match the skills of today's real and modern life.

Integration is derived from the Latin word, which means to bring together and restore previously divided elements of the educational system into a single whole based on interdependence and complementarity. By integration, we can understand not only many humanitarian sciences, that is, philosophy, sociology, psychology, pedagogy and other similar sciences, but all sciences.

In their research, researchers have considered the problems of integration in pedagogy in different aspects. For example, V. V. Kreavsky and N. F. Talyzina in their scientific research considered the integration of different disciplines in pedagogy. V.S. Lednov revealed the possibilities of integration in various aspects of education. In the works of I.P. Rechenko, the problems of integration in the educational influence on the child are revealed. The issues of integration in the organization of the educational process were studied in the works of A. Pulbere, O. Gukalenko, S. Ustemenko. In the pedagogical process, the process of integration is distinguished as one of the most important aspects of the process of child development, which is related to the integration of previously existing parts into a whole. The principle of integration implies the interaction between almost all elements of the educational process, components of the educational system, as well as the interdependence of the system. Because it serves as a basis for planning the process, determining the content of education, developing its forms, methods and goals.

The integrative approach implies the implementation of the principle of integration in any components of the pedagogical process. This ensures the integrity and systematicity of the general structures of the pedagogical process.

It should be noted that integration processes are nothing but the process of changing the quality of the system components or the entire system.



Integration in drawing subjects is the interdependence of various types of visual activities that allow to diversify the drawing process, arouse interest in lessons and improve children's work. Some options for integration in drawing: Combining different visual techniques. Using different visual materials allows you to create different expressive images, as well as develop technical skills. Combining drawing and non-traditional visual techniques. Drawing in non-traditional ways gives children many positive emotions, opens up the opportunity to use familiar things as artistic materials. Integration of drawing and modeling. Elements or details of plasticine help to create an expressive image, as well as draw the most important parts of the drawing.

Integrating drawing subjects with other subjects is one of the most effective teaching methods. The science of drawing provides not only technical skills, but also the development of knowledge in various fields. Here are some examples of how drawing can be integrated with other subjects:

We can know that the science of drawing is related to the sciences of mathematics and geometry because many aspects of drawing are closely related to mathematics and geometry. For example:

Drawing geometric shapes: In drawing, students use various geometric formulas and equations to correctly draw and visualize geometric shapes (Figure 1).

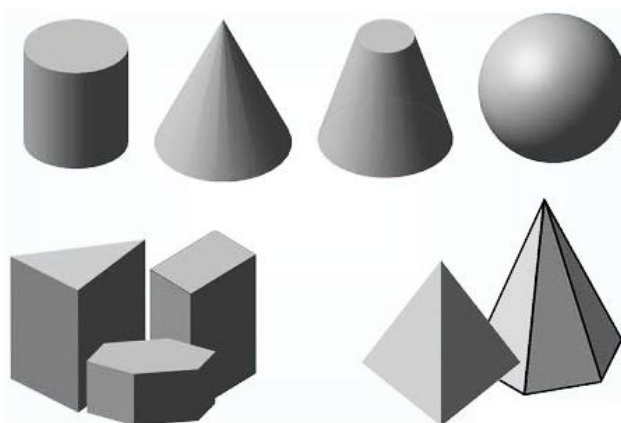


Figure 1

Measurements: Students improve their math skills by calculating scale and working correctly with measurements when creating drawings and visualizing correctly.

Views and Perspective: When drawing perspective and parallel and similar lines, students will need to know and practice basic geometry concepts such as parallelism and perpendicularity or curves.

Integration with physics

Technical drawings, which are part of the science of drafting, help teach physics concepts:

Drawing of mechanical systems: Fundamentals of physics, that is, physical formulas, are used to create drawings of mechanical devices and apparatus (for example, engines, machines).



Forces and materials: Through drawings, students can understand the stresses of materials and how they are affected (eg, forces and mechanical phenomena).

Statics and Dynamics: Basic laws of physics are also used in understanding and visualizing and modeling static and dynamic phenomena with the help of technical drawings.

Integrating drawing with physics is helpful in understanding technical drawings, designing devices, and creating mechanical systems. These subjects are also related to each other, and if we use each other in the process of organizing the lesson, we can increase students' interest in both drawing and physics.

Integration with visual arts

The science of drawing integrates with the sciences of art and design, because they all focus on the development of aesthetics and creative thinking, and good thinking and imagination have an important place in drawing. Knowledge of architecture and interior design (drawing of interior spaces) is studied in drawing. It is one of the main elements of design and art. The connection between drawing and art helps to develop aesthetics, worldview and visual concepts. Students learn art concepts such as creativity, composition, and color in drawing (Figure 2).



Figure 2

Today, drawing is integrated with many technologies, and is one of the developing disciplines, especially the process of creating drawings with the help of a computer is one of the most developing fields today.

CAD programs: Through Computer-Aided Design (CAD), students learn 3D modeling, design, and accurate measurement on the computer.

Graphic design and visualization: By using computer technology, the possibilities of creating and visualizing drawings are created in a more effective, convenient and easy way.



The integration of drawing with computer technology not only facilitates the process of drawing, but also helps students to learn modern technologies, as well as to increase students' interest in drawing and to organize interesting classes by involving the majority of students in drawing.

Integrating the subject of drawing with other subjects makes the learning process of students more effective and interesting and helps to increase their interest in the subject. It helps students develop modern, innovative knowledge and skills by teaching a wide range of knowledge, from mathematics to ecology. This provides an approach that includes not only technical, but also aesthetic, ecological, socio-humanitarian and cultural concepts. By integrating drawing with other subjects, students develop knowledge and skills in many areas. This not only strengthens interdisciplinary connections, but also increases students' general thinking skills and spatial imagination. Through integration, students can be provided with broader and deeper knowledge.

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