

PROJECT-BASED EDUCATIONAL TECHNOLOGY IN TEACHING PERSPECTIVE DRAWING

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Abstract

The article provides information on developing methods for using the theoretical laws of fine arts in creating artistic compositions. It discusses the formation of students' ability to observe and depict the form of objects from a distance, as well as the history, theory, methodology, and stages of development of fine arts education.

Keywords: Fine art, painting, composition, artistic creativity, visual perception, imagination, form, rhythm.

Introduction

Teaching fine arts begins with developing the ability to observe objects in spatial dimensions. The main objective of this process is to ensure that objects are depicted accurately. In realistic visual art, forms and objects surrounding a person are portrayed as they exist in nature and as they are perceived by the human eye. To achieve this, students must master certain aspects of visual perception and understand the rules and techniques of depicting forms in three-dimensional space on a flat surface such as paper. As in all forms and genres of fine arts, the process of teaching drawing is carried out from simple to complex tasks. If a student fails to fully understand earlier exercises, it becomes difficult for them to grasp more complex tasks later. Our perception of objects changes depending on conditions such as distance, size, atmospheric conditions, and seasonal changes. The apparent change in the shape of objects follows specific laws of perspective. The concept of perspective shortening of distant objects can be traced back to ancient manuscripts. One of the earliest contributors to the theory of perspective was the Italian artist **Piero della Francesca**, who lived in the mid-15th century. **Leonardo da Vinci** also discussed the laws of linear and spatial perspective in his work *Treatise on Painting*. The theoretical development of perspective is also associated with the German artist and theorist **Albrecht Dürer**. Later, Russian artists such as **A. P. Losenko** further studied the theoretical aspects of perspective.

Perspective and Visual Perception

When the distance between the viewer and an object increases, not only the width and height of the object change, but also its depth. As objects move farther away from the observer, their height and volume also decrease due to perspective changes. Consequently, distant objects appear less distinct compared to nearby ones. When objects move extremely far away, they appear smaller and eventually seem to merge into a single line on the horizon. As objects diminish in size, the distance between them also appears to decrease. Distant objects appear closer to each other, and the empty space between them seems to disappear. When the distance increases further, objects appear to converge at a single point.

Educational Context

Large-scale reforms in Uzbekistan are creating opportunities for young people to communicate with their peers worldwide in science, culture, and other fields. These reforms enable them to demonstrate their intellectual potential on a global scale. For this reason, pedagogical scholars in the country pay particular attention to improving the professional training of future teachers and systematically developing their pedagogical skills. The main goal is to ensure that Uzbekistan prepares competitive specialists in science and intellectual development. The Strategy for Further Development of the Republic of Uzbekistan (2017–2021) emphasizes the importance of continuously improving the professional competence and skills of pedagogical staff within the higher education system.

Developing Perspective Drawing Skills

One of the main tasks in teaching drawing is developing the ability to see and depict objects from a distance using perspective. Seeing and depicting objects from a distance means perceiving them in full three-dimensional form—height, width, and depth. The primary objective of educational exercises is to accurately represent the proportions of objects observed from nature. This can be achieved by developing visual estimation skills and mastering the rules of perspective. Training students to estimate proportions visually plays a significant role in this process. Constant attention to accuracy helps future specialists develop responsibility and careful observation. It also enhances their ability to analyze nature and remember visual images. Visual memory is one of the most valuable qualities of an artist. It allows the artist to retain accurate impressions of form, proportion, and structure, enabling them to draw from memory and imagination. This ability greatly facilitates the creation of independent compositions and sketches.

Practical Training Methods

Regular exercises in drawing from nature improve visual memory. Such exercises are particularly beneficial for beginner artists. They help strengthen the understanding of

form, structure, proportion, and plastic characteristics of objects. Short sketches and quick drawings are widely used to achieve this goal. During such exercises, the most important features of the object are memorized, while secondary details are temporarily ignored. The main aim is to capture the general form of the object. Over time, students begin to remember more details, including secondary elements. Quick sketches and studies develop the ability to observe objects realistically and perceive them as a whole. Often, beginner artists focus too much on individual details rather than the overall form. Effective drawing requires following the principle of **“from general to specific and from specific back to general.”** This approach allows the artist to maintain control over the entire drawing while working on individual elements.

Techniques of Drawing

Determining the proportions and linear-constructive structure of forms through shading requires working on the entire drawing simultaneously. This principle is applied in tasks ranging from simple still-life compositions to complex human figures. The success of drawing also depends on how the student sits at the easel and holds the pencil. The pencil should be held from the opposite end of the sharpened tip. This allows the pencil to move freely at different angles across the paper. To maintain stability while drawing, the artist lightly rests the little finger against the easel. Shading techniques are used to create tonal variations. Parallel strokes drawn at equal intervals help achieve the desired tone. On spherical surfaces, tonal transitions from dark to light are created by adjusting the spacing between strokes and the pressure applied to the pencil.

Perspective Observation

The full volume of an object cannot be observed from a single viewpoint. Only by examining the object from different sides can its true form be understood. The ability to imagine objects in spatial form allows them to be depicted realistically. Contours and boundaries of objects, along with light and shadow effects, help us understand the external structure of forms. These features form the basis of the laws of realistic drawing. Our perception of an object’s shape depends not only on perspective but also on our prior knowledge of its structure. For example, although parallel lines appear to converge in the distance, we know that they do not actually intersect. In other words, we may see one thing but perceive it differently based on our knowledge.

Horizon Line and Spatial Orientation

Before drawing from nature, it is important to determine the position of the object relative to the horizon line. The horizon line corresponds to the observer’s eye level. Therefore, when the artist’s position changes, the location of the horizon line also changes. Objects above the horizon line reveal their lower parts, while objects below

the horizon line reveal their upper parts. When drawing outdoors, it is essential to correctly determine the angle of horizontal lines moving toward the horizon and accurately represent them in the drawing.

Conclusion

In conclusion, to learn how to depict volumetric objects on paper, it is necessary to first study the perspective structure of simple geometric forms. Even the most complex objects are constructed from combinations of basic shapes. Understanding perspective using simple geometric forms makes it easier to depict complex objects. Mastering the rules of perspective drawing enables artists to draw any object in nature without difficulty. To develop the ability to represent three-dimensional objects on paper, it is important to practice drawing objects positioned at different distances from the horizon line and from various angles relative to the observer.

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