

Teaching didactic lessons based on problematic situations in drawing classes

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Abstract: In this article, in order to increase the activity of students in drawing classes, recommendations are given on drawing, reading, knowledge gained from drawing, testing skills, and the use of modern pedagogical technologies when applying didactic exercises in problem situations.

Keywords: Drawing, student, effective lesson, concept, necessity, standard, training, sequence, coherence, problem situation.

Introduction: Every profession has its own unique characteristics, and specific requirements are set for the subject of professional activity. The more complex the structure of professional activity is, the more important its goals and results are for society, and the more diverse the professional tasks are, the greater the demands on the professional. These requirements are not limited to knowledge, qualifications, skills, competencies, and competence but also extend to personal characteristics. Given the uniqueness, complexity, and multidimensionality of pedagogical activity, and most importantly, its significant social importance, that is, its orientation toward preparing the younger generation for life and professional activities, it is natural to ask what requirements teachers should meet today. In other words, it is important to answer the question of what personal and professional qualities future teachers of drawing, especially those studying in the "Fine Arts and Engineering Graphics" educational direction at higher education institutions, should possess. This question is one of the important pedagogical tasks.

In the process of training a drawing teacher, it is necessary to focus on diagnosing and developing these qualities. If lessons are taught with the use of various complex drawings through interesting games, interactive methods, pedagogical, and information technologies, the effectiveness of the education will increase, taking into account the students' adolescence.

When the teacher notices a decline in students' activity in accepting the lesson, it is recommended to conduct one of the innovative methods for 4-5 minutes, depending on the type of lesson.

If the teacher uses didactic exercise elements that align with the students' psychology, they can achieve the goal of each lesson. However, if the teacher neglects the exercises and conducts them slowly and without enthusiasm, the students' interest in didactic exercises will fade. In this case, the exercises will not be effective. The questions given in the exercise, as well as the answers, should be short and precise, as this will help. Because students who actively participate in didactic exercises grasp knowledge with excitement and enthusiasm. Such knowledge becomes solid and is retained in the student's memory for many years, and when needed, the student will recall it.

Problems can arise in every lesson, topic, student, and even for every teacher. However, during the lesson, to ensure that the topic is thoroughly covered and to engage students' attention, creating a problematic situation can yield positive results. To resolve the created problem and attract the students' attention, the question-answer method can be used effectively.

The technologies for creating problematic situations in teaching are fundamental concepts in the realm of problem-based learning, and the main terms are "Problem" and "Problematic Task." The student must play a leading role in solving the problem that arises in

a problematic situation and must stand at a much higher level than the others. The students are required to be guided properly in solving the task.

What is a problematic situation? The core essence of a problematic situation in teaching is the emergence of difficulty. This difficulty can be overcome by the student through active thinking. A problematic situation must be meaningful to the student. Its emergence may be related to the student's prior experience and interest. Ultimately, in a general problematic situation, the student must trust their own power in solving personal problems.

A general problematic situation can be broken down into a series of smaller problems that are interconnected and related.

Types of problematic situations frequently encountered in the educational process:

1. A problematic situation arises when there is a discrepancy between the system of knowledge the students have acquired and the new knowledge.
2. A problematic situation emerges when the students have to choose the most accurate and unique solution in addressing an issue within their knowledge system.
3. When students are trying to apply the knowledge they have gained in new situations, and they are searching for new ways to approach it, a problematic situation arises.
4. A problematic situation arises when, in solving theoretical problems, a method that cannot be applied practically or is unsuitable for the goal is chosen, and when a practical solution is implemented without the necessary theoretical foundation.
5. A problematic situation in solving technical problems can arise when the visual representation of a schematic diagram and the constructive design of the technical device do not match.

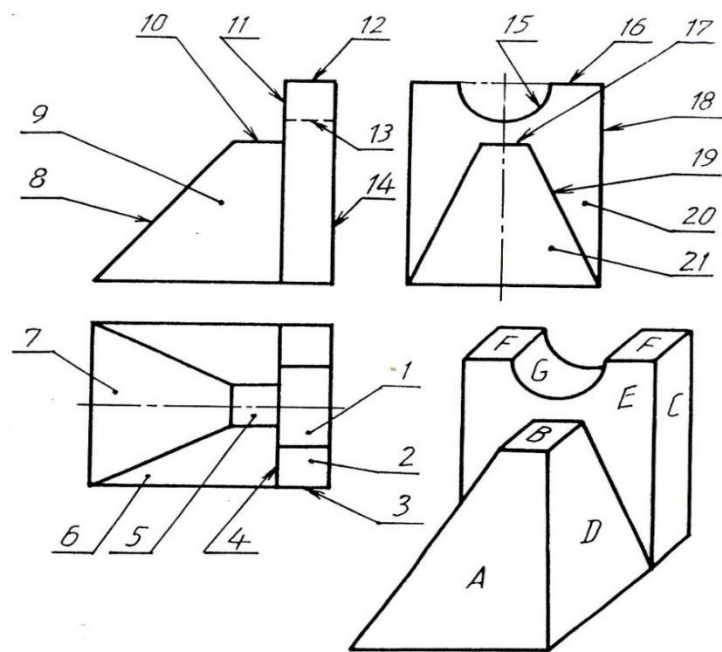
The alternative approach to problem-based teaching is heuristic learning: The role of the teacher in a problem situation is a characteristic of problem-based teaching, and the issues related to it involve introducing new insights into the students' activities. These involve helping students to prepare the material, ensuring they have a thorough understanding of the situation, knowing how to create and resolve a problem situation at any given time, and providing the students with the necessary information on the topic.

In drawing lessons, it is crucial to use didactic games related to problematic situations in order to increase student engagement. Below is an example of a game that corresponds to axonometric projection:

In axonometric projection, the surfaces of the model are labeled with the letters A, B, C, D, E, F, and G. In the three views of these surfaces, they are marked with numbers 1, 2, 3, ... 21. The correspondence between these surfaces should be written in Table 1, and the didactic exercise should be carried out (as shown in Figure 1).

Before conducting this exercise, it is necessary to think about how to create a problematic situation and how to avoid it. When carefully studying the drawing, for instance, surface A is marked with numbers 7, 8, and 21 in views H, V, and W. Why is a single surface represented by different numbers? In the top and front views, the surface marked by 1 and 13 cannot be read.

However, it can be read through the front and side views. Thus, to create a problematic situation, one must block the view. Why is surface A depicted as a straight-line segment in the front view? These types of questions can help generate problematic situation. To avoid this, it is necessary to either not encounter a problematic situation or prevent it from arising.



1st Diagram

Exercise Description: Teaching students to compare and correctly interpret drawings.

Objective: Improving students' competence through reading drawings.

Equipment: Posters with the exercise conditions depicted, large enough for all students to see clearly. A table for writing the answers (Table 1).

Table 1
Surface Views

Surface	Views		
	Head (V)	From above (H)	From the side (W)
A	8	7	21
B			
C			
D			
E			
F			
G			

Exercise Details: The teacher invites one student to the board, where a table is either posted by the teacher or pre-written on the board. The student is asked to write the numbers corresponding to the views V, H, W of surface A in the table. For example, the student writes

A-8-7-21 in the given view format.

The exercise continues in this manner. Based on the results of the exercise, the teacher will encourage active participants who correctly identify and write the answers and explain how to correct common errors.

In drawing lessons, when didactic games are used to create problem-solving situations, the following positive outcomes occur in the classroom:

- The connection between memory and attention increases;
- The student's interest in learning materials and drawings grows;
- Communication between the student and the teacher accelerates;
- The student's spatial imagination of objects develops;
- Collaboration in the learning process arises;
- The teacher is able to assess the student's knowledge level;
- Encourages independent learning.

Typically, students in traditional lessons may lack deep understanding of the knowledge they acquire, and they may struggle to apply it in specific situations.

This didactic exercise represents a part of the proposed innovative pedagogical technologies. In a classroom aligned with such opportunities, the student learns not only the subject but also approaches related knowledge and events in a more individualized way.

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