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## IMPROVING STUDENTS' SPATIAL IMAGINATION THROUGH TEACHING CREATIVE THINKING (in drawing classes)

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### ABSTRACT:

In the first way of developing spatial imagination, the spatial imagination of students is increased by using drawings given on objects, mentally dividing them into simple figures and drawing up their clear image. Indeed, if there is a clear image of the object depicted in the figure, it becomes easier for the student to visualize the object, the appearance of which is given in the figures.

**Keywords:** Drawing, ability, imagination, spatial imagination, perception, modeling, activity.

### INTRODUCTION

The result of a teacher's years of experience is the development of new motivations that arise from the useful aspects of teaching methods. These motivations help achieve personal goals and interests, increase enthusiasm for the profession, make the learning process more engaging, and even expand future opportunities. A teacher's creative, personal, and professional skills are developed in this process. In doing so, teachers are required to cultivate and use new creative skills to learn new things.

One of the main tasks of teaching students to think creatively in drawing lessons is to instill new independent thinking skills in teachers and to develop their abilities through new knowledge. This fosters self-directed work and the development of creative thinking skills. The formation and development of a creative student are linked to the harmony of internal and external changes, social and economic conditions, and continuous engagement in logical thinking, analysis, and conclusion-making.

It is well known that professional experience is reflected as an integration of knowledge, skills, and competencies. However, mastering creative skills involves not only integrating practical skills and methods of effective professional activity but also understanding the methodology of creative work and developing a creative mindset and character. In drawing lessons, a creative student should always strive for creativity, approach life creatively, possess spatial imagination,

have a critical self-view, analyze oneself continuously, and be able to develop conclusions and suggestions.

**Research Status.** In our country's higher education institutions, considerable work has been done to improve teaching methods that foster creative thinking in engineering graphics. Notably, research by scholars such as Yu.Qirg'izboev, E.Sobitov, A.Akbarov, J.Yodgorov, and others has contributed to the theoretical-methodological and practical bases of improving the teaching of engineering graphics subjects.

Scholars have studied topics like conditional substitution of semi-objects (L.M.Gosudariskiy), replacing schematic and symbolic images with visual representations (A.Umronxo'jaev), object transformation during surface unfolding (V.N.Gerver), and the use of computers in drawing (J.Yodgorov). The use of AutoCAD and the development of spatial perception have also been researched by experts like Ye.N.Valasov and V.Yu.Sherbakova.

Furthermore, many scholars have contributed to enhancing students' spatial thinking, analyzing mental images, breaking them down, and understanding the graphical features of details. Foreign researchers have addressed the issue of teaching creative thinking in descriptive geometry, offering valuable methodologies.

### METHODOLOGY

A student's creative thinking is defined by their perception, communication, and spatial imagination skills.

### RESULTS

To teach students creative thinking in drawing lessons, teachers must possess creative skills. Creativity reflects talent and is essential in ensuring the effectiveness of education and training. Pedagogical creativity involves generating new ideas and solving educational challenges differently from traditional methods. A teacher's creativity depends on their mastery and requires continuous self-improvement.

The goal of teaching creative thinking in drawing lessons is to ensure continuous growth in the professional and pedagogical skills of instructors, update their knowledge in computer graphics and interactive teaching methods, and keep them informed of state education standards and relevant legislation. A teacher does not become creative overnight; it develops through consistent learning and practice.

**Challenges.** Despite innovations in the education system, some teachers still struggle to apply effective creativity-building techniques. Teachers need to focus on tasks that promote critical and creative thinking, develop spatial perception, and involve problem-solving and analysis.

Creative thinking is a complex skill, and teachers must gradually guide students toward independent learning and responsibility.

To foster creative thinking, educators should prepare lessons and activities—lectures, seminars, practicals—with creativity in mind. This requires developing strategies and continuously organizing systematic practical activities.

Interactive methods (graphic organizers, brainstorming, didactic games, problem-based learning, case studies) help students systematically grasp educational material, analyze, synthesize, and systematize concepts, and clearly express the essence of objects and events.

## CONCLUSION

To foster creative thinking, the learning environment must offer ample opportunities for independent thinking and developing spatial imagination. Continuous professional development, hands-on experience with educational technologies, and strengthening competencies are all essential. Problem-based tasks, discussions, and debates in drawing lessons can help students improve logical thinking and decision-making skills.

Methods like heuristic exploration, independent work, comparison, self-assessment, argument-based defense of opinions, and peer review are effective. If a student can creatively present projection methods in new ways, this would be the optimal solution to the problem.

Such students must be able to:

- identify and master the most relevant information related to projection methods;
- recognize key problems using their knowledge of visualization techniques;
- apply existing knowledge to new situations;
- implement solutions in science, education, and production.

**Proposals.** Creative thinkers not only adapt to rapidly evolving technology and education but also gain satisfaction from solving problems. These students should be encouraged and rewarded in every field—industry, culture, art, science, and education—because creative thinking boosts performance. Therefore, students with creative thinking skills have always been valued and are increasingly in demand.

Creative thinking is taught as part of the educational process. Teaching students to think creatively in engineering graphics is a crucial part of shaping minds and ultimately contributes to national progress.

To develop such skills, attention should be given to:

1. Emphasizing the importance of a student's opinion and making them feel valued in a team;
2. Abandoning outdated dogmatic approaches in higher education;
3. Favoring democratic methods in pedagogy over autocratic ones;
4. Respecting and supporting students' ideas and opinions.

After all, leaders—who are often creative thinkers—are the ones who drive society forward.

## REFERENCES

1. Hennessey, B. and T. Amabile (2010), "Creativity", Annual Review of Psychology, Vol. 61, pp. 569-598 (3-чи ихтибос)
2. OECD (2017), PISA 2021 Creative Thinking Strategic Advisory Group Report, Organisation for Economic Co-Operation and Development, [https://one.oecd.org/document/EDU/PISA/GB\(2017\)19/en/pdf](https://one.oecd.org/document/EDU/PISA/GB(2017)19/en/pdf) (accessed on 26 March 2018).
3. Critically., Crown House Publishing, [https://bookshop.canterbury.ac.uk/Teaching-CreativeThinking-Developing-learners-who-generate-ideas-and-can-thinkcritically\\_9781785832369](https://bookshop.canterbury.ac.uk/Teaching-CreativeThinking-Developing-learners-who-generate-ideas-and-can-thinkcritically_9781785832369) (accessed on 26 March 2018).
4. Ikromov R.A., Xojiev R.B.(2020). Воспитание гармонично развитого поколения является приоритетом государственной молодежной политики. Вестник науки и образования. № 14 (92). Часть 1. С. 88-90.
5. Innovassion ta'lim texnologiyalari / Muslimov N.A., Usmonboeva M.H., Sayfurov D.M., To'raev A.B. –T.: —Sano standart II nashiryoti, 2015. –81-b.
6. Yakubova, Nafisa Odiljanovna. "The role and importance of graphic modes in students-increasing the imagination of cutting." Актуальные научные исследования в современном мире 4-2 (2021): 268-272.
7. Nafisa, Yakubova. "Chizmachilik darslarida talabalarni ijodiy–kreativ fikirlashga o'rgatish." Uz-Conferences. Vol. 1. No. 1. 2023.
8. Alikulovich, Berikbaev Alisher. "Subject Training Disciplines as a Means of Forming Professional Competence in Future Teachers of Fine Arts." Annals of the Romanian Society for Cell Biology (2021): 8965-8989.

9. Yakubova. N.O. Chizmachilik (1-qisim) qo'llanma –T.: “Ilm ziyo zakovat” 2023.