

# IMPROVING THE PEDAGOGICAL TECHNOLOGY FOR DEVELOPING CREATIVE THINKING IN STUDENTS

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## **Abstract:**

The aim of this research is to improve the pedagogical technology for developing creative thinking in students and effectively use new methods in the educational process. The article analyses the importance of creative thinking in the educational process and the pedagogical technologies used for its development. Creative thinking helps to enhance students' creative potential, solve problems with new approaches, and promote independent thinking.

The research analyses the effectiveness of new pedagogical methods and innovative technologies, such as interactive teaching, problem-based learning, brainstorming, and collaborative learning. The results of experiments and practical work demonstrated the effectiveness of pedagogical technologies aimed at enhancing students' creative thinking abilities. A new pedagogical model was also developed, designed to foster creative thinking in students.

The results of the research are of significant importance for the improvement of pedagogical technologies in higher education institutions and their practical implementation. The conclusions and recommendations in the article will help to organize pedagogical activities more effectively for the development of creative thinking.

**Keywords:** Creative thinking, pedagogical technologies, interactive teaching, problem-based learning, brainstorming, collaborative learning, innovative methodologies, student, creative abilities, pedagogical methods, educational technologies, new pedagogical model, independent thinking, creative potential, higher education, pedagogical activity.

## Introduction

In today's world, enhancing the intellectual and creative potential of society and shaping new forms of thinking has become one of the important tasks. Innovations in the field of education are increasing the demand for the development of students' creative thinking abilities. Creative thinking is the ability to find new and original solutions to problems, and the pedagogical technology for its development plays a significant role in shaping students as versatile and competitive professionals. This article explores both practical and theoretical approaches to improving the pedagogical technology for developing creative thinking in students.

## 2. Literature review and methodology

The literature review is the theoretical basis of the research, covering existing studies, methodologies, scientific articles, books, and other sources related to improving the pedagogical technology for developing creative thinking. This process helps identify advanced practices on the research topic and apply pedagogical theoretical foundations.

The main literature on developing creative thinking is scientifically and practically significant. Scientific works in this field have been conducted in various countries. The scientific articles and books analyze various pedagogical methods, techniques, and innovative pedagogical technologies for developing students' creative thinking. For example, A.F. Karpov's book *Innovative Pedagogical Technologies* (2019) highlights new pedagogical concepts and their role in developing creative thinking. It provides practical guidelines on methods aimed at creative thinking, such as problem-based learning, collaborative learning, and the use of multimedia tools. Similarly, S.V. Voronkova's *Creative Thinking and Pedagogical Technologies* (2016) addresses the effectiveness of pedagogical methods for developing students' creative thinking. The book discusses methods like brainstorming, problem-based learning, and practice-based teaching, as well as their importance in the pedagogical process.

In each of the literature works, teaching methods, methodologies, and technologies used to develop creative thinking have been scientifically and practically tested, and their effectiveness has been evaluated. In modern pedagogy, new pedagogical technologies and methods have a significant impact on the development of students' creative thinking. Interactive methods,

innovative pedagogical technologies, multimedia tools, and online education programs can be effectively used in the educational process. Additionally, team-based and collaborative teaching methods are of great importance in developing creative thinking in students. The literature review reveals that the application of technologies, new approaches to problems, and effective methods for making creative decisions are key to fostering creative thinking.

Innovations in pedagogy and new pedagogical technologies play a crucial role in developing creative thinking in students. Methods such as problem-based learning, brainstorming, interactive teaching, and collaborative work contribute to expanding knowledge and solving problems through creative approaches. It is evident that these methods help students learn new perspectives, concepts, and ideas. Innovative pedagogical methods also enable students to work independently in their creative endeavors and generate new ideas.

### 3. Research Methodology

The methodology for improving the pedagogical technology for developing creative thinking in students includes the following key methods:

- **Literature Review:** Analyzing existing scientific and pedagogical literature and sources on the research topic to identify the main theoretical aspects.
- **Theorization:** Developing a theoretical basis for the pedagogical technology of creative thinking. New methods are developed based on pedagogical principles.

### 4. Practical Methods:

- **Experiment:** Implementing new pedagogical technologies, methods, and techniques to develop students' creative thinking. This method is used in the research to study students' creative abilities and assess effectiveness.
- **Observation:** Monitoring the students' working methods during the learning process, analyzing their thinking or creative abilities in practice.
- **Surveys and Interviews:** Conducting surveys and interviews to understand students' attitudes toward creative thinking and pedagogical methods.

To assess the effectiveness of each new method and technology, conclusions are drawn based on the results of surveys and analyses. Innovations and

recommendations are developed based on feedback and data from students. As a result of the research, new pedagogical models are created to enhance the development of creative thinking. These models include new methods, methodologies, and technologies to help foster creative thinking in students. Creative thinking is the ability to apply knowledge effectively in practice, generate new ideas, and find innovative solutions to problems. The development of creative thinking in students ensures their active and independent thinking, as well as assisting them in finding effective solutions to future problems. Therefore, one of the most important goals in pedagogy is the development of creative thinking.

## 5. Results and discussion

The results of the research are aimed at determining the effectiveness of modern pedagogical technologies for developing creative thinking in students. Based on the analyses and experiments conducted during the research, the following key results were achieved:

1. **The Impact of Pedagogical Technologies for Developing Creative Thinking:** The new pedagogical technologies aimed at developing creative thinking in students, including interactive teaching, problem-based teaching, brainstorming, and collaborative teaching, proved to be effective. These methods helped students enhance their creative thinking abilities and find new approaches to problems.
2. **Effectiveness Analysis:** The results of experiments and practical work showed that innovative pedagogical technologies play a crucial role in developing students' creative thinking. The implementation of new methodologies led to an increase in students' creative and independent thinking abilities.
3. **Pedagogical Technologies Developed:** As a result of the research, a new pedagogical model for developing creative thinking was developed. This model aims to enhance students' creative thinking and improve their ability to solve problems with new approaches.
4. **General Recommendations:** The implementation of new pedagogical methods and technologies, as well as innovative teaching methodologies, resulted in effective outcomes for developing creative thinking in students. These methods should be widely applied in higher education institutions.

The results of the research highlight the importance of modern pedagogical technologies in developing creative thinking in students. Creative thinking is an essential component of the educational process, contributing significantly to students' thinking and problem-solving abilities. The methods and pedagogical technologies used in this research are particularly important as they are aimed at shaping creative thinking in students.

However, the application of new pedagogical technologies in the teaching process may face some challenges. For example, it is essential for both educators and students to possess specific skills to work with innovative technologies. Additionally, the integrated or complex approach to combining different pedagogical technologies is crucial for effectively organizing the educational process.

Moreover, another important aspect of the conducted research is that when implementing new technologies, it is necessary to consider how they adapt to each specific situation and the importance of pedagogical collaboration. Ensuring that educators are ready to apply new methods and technologies, as well as helping students develop their creative abilities, is essential.

## **Conclusion**

The research results support the effective development of new pedagogical technologies and methods for developing creative thinking in students and their application in practice. Furthermore, improving the effectiveness of pedagogical technologies through innovative methods and approaches will strengthen students' creative potential.

Future research directions will focus on evaluating the effectiveness of new pedagogical technologies and exploring their application in broader educational fields through further studies and practical work.

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