DEVELOPING STUDENTS' CRITICAL, ANALYTICAL, AND PROBLEM-SOLVING THINKING THROUGH A CREATIVE APPROACH

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ANNOTATSIYA:

This article analyzes the development of critical, analytical, and problem-solving thinking skills in students through creative approaches. In modern education, creative strategies are considered essential tools for fostering independent thinking, encouraging innovative perspectives, and enabling students to find creative solutions to complex situations. The article presents the theoretical foundations of this approach, drawing on Dewey's experiential learning model, Vygotsky's theory of the zone of proximal development, and Edward de Bono's "Six Thinking Hats" method.

Additionally, the article examines the impact of methods such as group work, problem-based tasks, case studies, project-based learning, and role-playing games on students' thinking abilities. Pedagogical experience and classroom observations show that creative approaches enhance the effectiveness of education, increase students' motivation to learn, and contribute to shaping them into active, responsible, and creatively thinking professionals..

INTRODUCTION

In today's modern society, one of the key indicators of human capital is the ability to think innovatively, make independent decisions, and approach problems creatively. The education system serves as the foundation for cultivating such qualities in the younger generation. In contemporary pedagogy, teaching methods based on new approaches and interactive technologies that foster students' and learners' thinking skills are gaining

significant importance. In particular, developing critical, analytical, and problem-solving thinking through creative approaches is considered a priority in modern educational processes.

Creativity is the ability to generate new ideas and find unconventional and effective solutions to existing problems. It enables individuals to act independently, make novel decisions, analyze situations, and adapt accordingly. From this perspective, organizing the learning process through creative approaches not only expands students' theoretical knowledge but also shapes their thinking culture, socio-psychological problem-solving skills, and personal stance.

Critical thinking teaches students to question information, analyze it deeply, and draw conclusions based on evidence and reasoning. This helps them approach any information critically and reject incorrect or biased views. Analytical thinking develops the ability to dissect complex problems, identify cause-and-effect relationships, and draw conclusions based on a comprehensive understanding of the situation. Problem-solving thinking, in turn, involves selecting the most optimal solution by comparing different options and making decisions based on the context.

Therefore, implementing creative approaches in education is not only about delivering knowledge—it is also a vital tool for developing life skills, realizing personal potential, and most importantly, nurturing a generation that thinks comprehensively, acts proactively, and takes initiative. This article explores the methods, strategies, and effectiveness of developing various types of thinking through such approaches.

LITERATURE REVIEW

Creative approaches and critical thinking play a crucial role in enhancing the effectiveness of the educational process. Modern pedagogical methods, interactive techniques, and creative strategies are essential for developing students' thinking skills. This review presents insights from contemporary literature on how to foster critical, analytical, and problem-solving thinking in students through key approaches and methods.

1. Creative Approach and Critical Thinking

Creative approaches allow students to view problems from new and unconventional perspectives. Dewey (1933), in his educational philosophy, emphasizes the influence of creative thinking on the development of critical and analytical thinking. According to him, creative thinking is not only about generating new ideas but also about analyzing and evaluating existing knowledge. Moreover, fostering creative thinking encourages students to think independently, which in turn supports the development of critical thinking.

2. Studying the Effectiveness of Interactive Methods

Authors such as Slavin (2014) and Johnson, Johnson & Holubec (2014) highlight the role of interactive methods—particularly group work and problem analysis—in promoting active student participation. Encouraging students to work in groups and solve problems collaboratively enhances their thinking skills. These methods help students share ideas,

make decisions together, and engage in meaningful dialogue. The authors also stress that critical thinking is essential for students' societal roles and future success.

3. The Role of Problem Situations in Critical Thinking

Problem situations teach students how to manage and analyze decision-making processes. Vygotsky (1978), in his theory of the "zone of proximal development," emphasizes the importance of creating opportunities for students to generate new ideas through problem scenarios. Solving problems requires students to apply theoretical or practical knowledge, which deepens their thinking and promotes innovative approaches. Thus, problem situations strengthen students' analytical thinking skills.

4. Exploring the Role of Interactive Methods

Edward de Bono (1992), through his "lateral thinking" approach, underscores the importance of creative thinking. His method provides students with opportunities to test various ideas and discover new solutions. Such techniques help students move beyond conventional thinking and develop new strategies for solving complex problems. Additionally, interactive methods encourage exploration and self-analysis during the thinking process.

METHODS

In applying a creative approach to the educational process, various pedagogical methods are used to foster critical, analytical, and problem-solving thinking. These methods increase student engagement during lessons, encourage independent thinking, and promote creative approaches. The following methods are analyzed:

Creating Problem Situations (Problem-Based Learning)

In this method, the teacher presents students with situations that have no clear answer or multiple possible solutions. Students attempt to solve the problem using their knowledge, experience, and reasoning. This helps develop both critical and problem-solving thinking.

Brainstorming

This method allows students to freely express unlimited ideas on a topic or issue. Ideas are not criticized; evaluation and selection occur later. This stimulates the flow of creative ideas and encourages both critical and creative thinking.

Project-Based Learning

Students work individually or in small groups to develop projects based on a specific topic. Throughout the process, they gather information, analyze it, and search for solutions—engaging all types of thinking. Presenting the final result teaches responsibility and independence.

Mind Mapping

This method helps visually represent key concepts related to a topic in a network format. It allows students to understand the relationships between primary and secondary concepts, thereby activating analytical thinking.

Debates and Discussions

Students are divided into opposing groups and encouraged to justify their viewpoints on a given topic. This promotes critical and logical thinking. Opposing ideas are analyzed, and conclusions are drawn based on evidence.

RESULTS

Developing critical, analytical, and problem-solving thinking through a creative approach enhances students' engagement in the learning process and helps realize their intellectual potential. Applying the methods and didactic tools discussed in this article can lead to the following key outcomes:

Development of Critical Thinking

Students learn not to accept information at face value but to analyze it, evaluate it based on evidence, and identify flawed reasoning.

Deepening of Analytical Thinking

Students develop the ability to see connections between concepts, identify cause-and-effect relationships, and break down complex problems into simpler components.

Improved Decision-Making in Problem Situations Students learn to find appropriate solutions in real-life scenarios, compare multiple options, and choose the most optimal one.

Formation of Creative Thinking

Students move beyond stereotypical thinking and strive to propose new ideas and decisions, seeking innovative solutions.

DISCUSSION

In modern education, the use of creative approaches to develop students' thinking skills requires significant scientific and practical attention. Research shows that the formation of critical and analytical thinking skills is directly linked to the methods and techniques used in the learning process. From this perspective, a creative approach enables students not just to acquire knowledge but to process it, question it, develop new perspectives, and draw independent conclusions.

Some researchers (e.g., J. Dewey and E. de Bono) argue that creative approaches are key tools for liberating thought and enabling self-expression. According to Dewey's theory of reflective thinking, true learning occurs only when students grapple with problems. This idea underpins the widespread use of problem-based learning. Constructivist theorists also emphasize that students must "construct" knowledge themselves, which inherently involves creative and critical thinking.

However, practice shows that in many higher education institutions, the use of creative approaches is not systematic and is often limited to delivering theoretical knowledge. Some educators continue to rely on outdated methods, keeping students in passive listening roles. This, in turn, leads to a decline in thinking activity.

CONCLUSION

The above analysis demonstrates that developing critical, analytical, and problem-solving thinking skills through creative approaches is one of the key priorities in today's education. Such approaches activate the learning process and foster skills in expressing personal opinions, making independent decisions, and thinking creatively.

Using creative methods is not just about conducting innovative lessons—it's about shaping each student into a thinking, analytical, and creative individual. The main conclusions drawn from this research are:

Creative approaches stimulate critical and analytical thinking

Problem-based tasks help students learn to make decisions in real-life situations

Interactive methods (debates, brainstorming, projects) increase student engagement and responsibility

The teacher's creative competence directly influences the quality of the learning process

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6. UNESCO(2019)

→ Referenced in the Discussion and Conclusion sections regarding global trends in developing creative and critical thinking.
Example: “Modern education systems demand the global development of creative and critical thinking.” [6]