

An analysis of the technique of six thinking hats as a new teaching method; a meta-synthesis study

Elham Ramshini¹, Marziyeh Dehghani²

1. Master student in Curriculum, Faculty of Psychology and Educational Science, University of Tehran, Tehran, Iran

2. Associate prof of the Faculty of Psychology and Educational Science, University of Tehran, Tehran, Iran

Abstract

Objective: The need to implement innovative, problem-solving, and thinking-based teaching methods in the country's educational system led to a study aimed at exploring Edward de Bono's Six Thinking Hats method as a creative teaching approach and its role in improving education and teaching.

Method: This study utilized the meta-synthesis method and the seven-step process of Sandelowski and Barroso (2006), evaluating 114 articles and sources related to the research topic. During the meta-synthesis and data analysis stages, 37 articles and sources met the acceptance criteria, and the data were analyzed using a researcher-made checklist. To assess the reliability of the findings, the researcher's self-review, peer review, and expert surveys were utilized.

Findings: According to the findings, the use of the Six Thinking Hats method as an innovative teaching approach affects three main themes: thinking (creative thinking, critical thinking, parallel thinking, and organizing thoughts), learning (deep learning, cognitive skills, and academic progress), and emotional skills (participation and interaction, motivation, self-efficacy, and conversation skills).

Conclusion: Therefore, the proposed model helps planners and teachers in improving the quality of teaching, enhancing the teaching-learning environment, and fostering thoughtful learners.

Keywords: Innovative teaching method, Six Thinking Hats method, Edward de Bono, meta-synthesis

Introduction

In today's world, education and learning are considered some of the most important pillars of societal development. Traditional teaching methods primarily focus on the direct transfer of knowledge from teacher to student, with little attention to creative and critical thinking skills. This has led to a decrease in students' ability to analyze issues, solve problems, and understand complex concepts. With advances in educational sciences, the need for innovative teaching methods based on thinking and problem-solving is increasingly felt. One such method is Edward de Bono's Six Thinking Hats, which allows learners to examine topics from various angles and strengthen their critical, creative, and analytical thinking (de Bono, 2010; PAKITSOS, 2017). This research was driven by the fact that many current educational methods still emphasize traditional approaches, leading to passive and non-interactive learning. In contrast, methods like the Six Thinking Hats method, which focus on deep understanding of concepts, reasoning skills, and critical thinking, can enhance the quality of education. In many educational systems, especially in developing countries, students are often exposed to one-way education where the learner's role is passive. These outdated methods not only reduce learning motivation but also limit students' critical thinking and creativity (Aziz, 2016; Jorboroum, 2017). The Six Thinking Hats method is based on the principle that thinking can be divided into six different types, each represented by a specific

color hat. This method helps students change their perspective when facing problems, enabling them to examine the learning process from various dimensions and offer more diverse solutions. This type of active learning ensures that learners develop better skills in analysis, reasoning, and decision-making. Additionally, various studies have shown that using this method in educational settings increases student participation, strengthens self-efficacy, and boosts motivation for learning (Abadi, 2017). The methodology of this study utilizes the meta-synthesis approach, following the seven-step process of Sandelowski and Barroso (2006). In this study, 114 articles and related scholarly sources were evaluated, and 37 articles were selected based on the acceptance criteria. Data analysis was carried out using a researcher-made checklist, and to increase the reliability of the findings, self-review, peer review, and expert surveys were used. The criteria for selecting studies included direct relevance to the topic, publication between 2000 and 2022, and the scientific quality of the articles. The collected data were categorized and analyzed into three themes: thinking, learning, and emotional skills. To achieve more accurate results, this study employed a qualitative content analysis approach. The process of coding the selected articles was done through open, axial, and selective coding to extract and classify the common features of these sources. Additionally, to improve the validity and reliability of the research, a data triangulation strategy was used, which involved comparing findings from different sources and conducting a comparative analysis within the theoretical framework of the study. Furthermore, the findings were analyzed using the MAXQDA software, which helped in identifying the main and sub-themes related to the Six Thinking Hats method. This mixed-method approach ensured greater accuracy in the reviews and increased the generalizability of the results.

Findings

The results of the study showed that the use of the Six Thinking Hats method in teaching can have a positive impact on three main areas:

1. **Thinking:** Including the enhancement of creative thinking, critical thinking, parallel thinking, and the organization of thoughts.
2. **Learning:** Improvement of deep learning, increased cognitive skills, and enhancement of academic progress.
3. **Emotional skills:** Increased student participation and interaction, motivation for learning, strengthened self-efficacy, and development of conversation skills.

Furthermore, this study revealed that using the Six Thinking Hats method improves classroom interactions, deepens the understanding of educational concepts, and empowers students in solving complex problems. The results also indicated that this method enables students to adopt more diverse perspectives on various issues and enhances their cognitive flexibility. Additionally, it was observed that applying this method in classroom settings leads to a reduction in learning anxiety and boosts students' confidence. On the other hand, this method plays a significant role in developing social skills and group interaction, guiding students towards structured and organized thinking. The results also showed that this method increases students' ability to generate creative ideas and make more informed decisions. Using this approach, students were able to propose more diverse solutions to educational and social problems. Finally, the research confirmed that the Six

Thinking Hats method not only influences the cognitive aspects of learning but also has a significant impact on the development of students' emotional and social skills, preparing them better for facing real-world challenges.

Conclusion

The findings of this study revealed that the Six Thinking Hats method can be used as an innovative teaching approach and has a significant impact on the development of students' cognitive, emotional, and social skills. This method helps students actively engage in the learning process, strengthen their critical and creative thinking, and gain a deeper understanding of concepts. The use of this method has not only increased student participation and improved group interactions but has also enhanced decision-making skills, self-confidence, and problem-solving abilities. The study showed that learners, by utilizing this method, have developed better analytical skills, enhanced cognitive flexibility, and have been able to consider various perspectives in solving problems. Moreover, the results indicated that this method leads to a reduction in learning anxiety and an increase in motivation among students. On the other hand, improving social skills, increasing self-efficacy, and enhancing communication skills are additional benefits of applying this method in educational settings. Through the Six Thinking Hats method, students have been able to engage in more structured and organized thinking, which has significantly impacted their academic success and personal growth. Based on the findings of this study, it is recommended that educational planners, teachers, and policymakers incorporate the Six Thinking Hats method into their teaching strategies and create a platform for interactive and creative thinking-based learning. Additionally, conducting future studies to investigate the long-term effects of this method on academic performance and students' personality development could help in better understanding and optimizing it within educational systems.

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Conflict of Interest

No conflict of interest has been reported in this study.