



TEACHER COMPETENCE IN PROMOTING CRITICAL AND CREATIVE THINKING IN THE CLASSROOM

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ABSTRACT

Critical and creative thinking are recognized as the most important competencies of the 21st century, necessary for students to solve complex problems, generate innovative ideas and make informed decisions. Consequently, modern education systems increasingly emphasize the role of teachers in developing these skills in the classroom. This study examines the key competencies that teachers must possess in order to effectively develop critical and creative thinking among students in general education institutions. Based on theoretical foundations and empirical research, the study examines pedagogical knowledge, learning strategies, classroom management, assessment literacy and reflexive practice of teachers as the main factors determining their competence. To determine key behavioral indicators of competence, a mixed methodological approach was applied, including a systematic review of literature, teacher surveys, and classroom observations. The results show that teachers who demonstrate strong question-asking skills, direct survey-based learning, integrate problem assignments, encourage open answers, and create psychologically safe learning spaces are significantly more effective at developing students' higher-order thinking skills. The study also highlights key issues such as limited professional growth opportunities, the rigidity of the curriculum, teacher beliefs, and evaluation pressures that hinder the development of critical and creative thinking. The discussion highlights the need for competency-based teacher training, continuous professional development, and support for school culture. The article concludes that a teacher's competence is multifaceted and directly affects the

extent to which classroom instruction stimulates analytical thinking and creativity. Practical recommendations for policy makers, educators, and school administrators are provided.

Introduction. In the 21st century, rapid technological progress, globalization, and socio-economic transformations have changed the demands placed on education systems. Modern society requires people who are able to think critically, analyze information from different perspectives, generate original ideas and adapt to rapidly changing circumstances. Accordingly, the development of critical and creative thinking has become one of the central goals of modern education. Schools are expected to not only transfer knowledge, but also equip students with higher-order cognitive skills that will enable them to solve complex real-world problems and contribute to the development of an innovation-driven economy.

In this context, the role of teachers has undergone significant changes. Teachers are no longer seen simply as knowledge carriers; rather, they are teaching assistants, creative task developers, mentors, and decision makers who create an environment in which students can ask questions, discover new things, and experiment. Teacher competence, defined as a set of knowledge, skills, attitudes, and values, plays a crucial role in shaping the quality of classroom instruction and the degree of development of students' critical and creative abilities. Research shows that even well-designed curricula or reforms cannot lead to meaningful results without competent teachers who are able to implement them effectively.

The development of higher-order thinking requires teachers to use specific pedagogical practices such as survey-based learning, problem-solving tasks, reflective questioning, open-ended assignments, and collaborative learning structures. It also requires creating a classroom environment in which students feel safe, can express their ideas, make mistakes, take intellectual risks, and explore different perspectives. Thus, teachers' beliefs, attitudes towards student independence, and willingness to innovate become the most important aspects of competence.

Despite its importance, many education systems struggle to prepare teachers for this task. Limited professional development, traditional lecture-oriented teaching models, outdated assessment systems, and high exam requirements often prevent teachers from implementing innovative pedagogical approaches. These issues emphasize the importance of studying teacher competence as a multi-level structure that influences the development of critical and creative thinking. This article attempts to address this gap by systematically examining the components of teacher competence, identifying effective classroom strategies, analyzing barriers, and offering evidence-based recommendations.

Literature Review. In recent decades, research on teacher competence has expanded significantly. Early concepts focused on subject knowledge and general teaching skills. However, with the increasing focus on learning objectives in the 21st century, teacher competence is now understood as a holistic concept encompassing cognitive, emotional, and behavioral aspects. According to Shulman's "Knowledge of Pedagogical Content" (PCK) model, effective teaching requires the integration of subject knowledge, student knowledge, and knowledge of learning strategies. This model provides a framework for understanding how

teachers influence the development of complex cognitive skills such as critical and creative thinking.

Scholars such as Brookfield, Paul & Elder, and Facione argue that critical thinking consists of interpretation, analysis, inference, evaluation, explanation, and self-regulation. Creative thinking, on the other hand, involves fluency, flexibility, originality, and elaboration. Research shows that teaching methods have a significant impact on students' mastery of these skills. For example, survey-based learning, problem-based learning, and project-based learning have been recognized as effective approaches because they position students as active knowledge creators.

Other literature highlights the role of teachers' beliefs and attitudes. Teachers who value student independence and view learning as a constructive process are more likely to adopt strategies that promote higher-order thinking. Conversely, teachers who adhere to traditional beliefs based on knowledge transfer often prefer mechanical memorization, thereby hindering the development of critical and creative skills. Several studies have shown that teachers' self-efficacy plays an important role in determining their learning behavior; those with high self-efficacy tend to take pedagogical risks and adopt innovative methods.

The research also highlights environmental factors. Classroom culture — in particular, psychological safety, peer cooperation, and mutual respect — has a strong influence on students' willingness to express ideas and engage in critical discourse. Assessment practice also influences classroom behavior.: When memory is at the forefront of assessment, teachers do not want to allocate time for open assignments.

The literature on the professional development of teachers suggests that continuous learning based on practice is essential. Seminars, peer-to-peer observations, reflection journals, and mentoring programs enable teachers to refine survey methods, master new learning strategies, and integrate creativity-enhancing activities. However, many systems lack stable professional development structures, which leads to a gap between theory and practice.

In the literature, teacher competence is defined as the most important factor determining the critical and creative thinking of students. This highlights the need for research that links specific teacher behavior to student performance in a real classroom setting.

Research Methodology. This study used mixed methods combining qualitative and quantitative approaches to explore the competencies that teachers use to develop critical and creative thinking. The point of using mixed methods was to identify both measurable patterns and deep insights.

Participants and sample: 60 teachers from primary and secondary schools participated in the study. A targeted sampling strategy was used to select teachers who have at least three years of teaching experience and are familiar with competence-based teaching practices.

Data collection tools. Three main data collection tools were used:

Teacher Survey: a structured questionnaire containing points on the Likert scale that assess teachers' self-esteem, their learning strategies, beliefs, and professional development experience.

Classroom Observations: Using a checklist of observations adapted from higher-order thinking concepts, the study evaluated teacher interviewing methods, task development, student engagement, collaborative learning, and creative task assistance.

Semi-structured interviews: Fifteen teachers were interviewed to examine their perceptions, concerns, and reflections on the development of higher-order thinking.

Data analysis. The quantitative survey data was analyzed using descriptive and logical statistics to identify patterns in teacher behavior. Qualitative data obtained during interviews and observations were thematically encoded to identify recurring practices and problems. Triangulation of multiple data sources has ensured reliability and reliability.

Ethical considerations. The participants were informed about the purpose of the study and received written consent. Confidentiality and anonymity were strictly enforced.

This methodology allowed for a thorough study of teachers' competence and a comprehensive understanding of the factors influencing the development of students' critical and creative thinking.

Results. The results reveal significant variations in teacher competence, instructional implementation, and classroom conditions that influence students' critical and creative thinking.

Quantitative Findings. Survey results indicated that 78% of teachers consider critical thinking promotion a key responsibility, while 69% believe creative thinking is essential for student success. However, only 46% felt confident designing tasks that stimulate both skill sets. Teachers scored highest in general pedagogical knowledge and lowest in assessment literacy related to higher-order thinking.

Observation Findings. Observations showed that:

- a) Only 40% of teachers consistently used open-ended questions.
- b) Inquiry-based tasks appeared in 35% of lessons.
- c) Collaborative learning structures were observed in 50% of classrooms.
- d) Opportunities for creative production (e.g., designing solutions, generating ideas) appeared in only 28% of lessons.

Teachers who demonstrated strong competence frequently used probing questions, facilitated discussions, encouraged multiple viewpoints, and provided time for reflection. Lessons taught by less competent teachers relied heavily on lecturing and textbook-centered tasks.

Qualitative Findings.

- a) Interviews revealed several challenges:
- b) Lack of training on designing higher-order tasks
- c) Pressure to prepare students for standardized tests
- d) Limited classroom time and rigid curricula
- e) Lack of school-level support for innovative teaching
- f) Teachers expressed a desire for more professional development, collaborative planning sessions, and access to creativity-enhancing materials.

Discussion. The results of the study show that the teacher's competence plays a direct and significant role in the formation of students' opportunities for the development of critical and creative thinking. Teachers with strong competencies in curriculum development, question-asking, and classroom management are better equipped to create a cognitively rich learning environment. This is consistent with earlier research suggesting that teachers' pedagogical beliefs, knowledge of content, and self-efficacy significantly influence student behavior during the learning process.

However, the results also reveal noticeable gaps. Many teachers have a positive attitude towards higher-order thinking, but are not confident in applying appropriate learning approaches. This gap between beliefs and practice is often attributed to systemic factors such as the rigor of the curriculum and an exam-based teaching culture. When teachers feel the need to cover an extensive curriculum or prepare students for standardized tests, they tend to prefer rote memorization over in-depth study.

The discussion also showed that teacher training programs should go beyond theoretical teaching and focus on practical skills development. Seminars should include modeling, micro-learning, reflective practice, and mentoring. In addition, school administrators play a crucial role in creating an enabling environment by setting aside time to work together, providing resources, and recognizing innovative teaching efforts.

Another significance of the results obtained relates to the culture of learning in the classroom. Psychological safety, in which students are not afraid to make mistakes or challenge ideas, is essential for the development of creativity and critical analysis. Teachers should adhere to strategies that promote mutual respect, encourage diversity of perspectives, and value originality.

Ultimately, the study shows that teachers' competence is multifaceted and requires constant development. Teacher training will lead to the creation of a more attractive learning environment, focused on students, which will contribute to the development of the necessary skills of the 21st century.

Conclusion. The results of this study highlight the central role of teacher competence in the effective development of critical and creative thinking in modern classroom environments. As higher-order cognitive skills are increasingly emphasized in twenty-first-century education, teachers' responsibility goes beyond providing content and aims to promote meaningful learning experiences that develop analytical thinking, problem solving, idea generation, and intellectual curiosity. The data presented in this study demonstrate that teacher competence is not a single feature, but rather a multidimensional construct that combines pedagogical knowledge, teaching experience, professional attitudes, reflective practices, and an understanding of how students learn in a cognitively complex environment.

The results show that teachers who successfully develop critical and creative thinking have several characteristics in common. They apply survey-based methods, develop challenging and open-ended learning assignments, use survey strategies that deepen student reasoning, and create a classroom environment where students feel psychologically safe to explore, discuss, and innovate. It is important to note that these teachers demonstrate a high degree of self-efficacy and adhere to progressive views on the learning process, viewing students as active creators of knowledge rather than passive recipients. This attitude allows them to consistently combine creativity and critical analysis in all lessons.

However, the study also highlights significant problems that hinder the widespread adoption of higher-order thinking in schools. Such problems include the rigidity of curricula, an exam-oriented teaching culture, insufficient professional development opportunities, lack of administrative support, and insufficient access to appropriate resources. Many teachers have theoretical knowledge about the development of critical and creative thinking, but have difficulty putting these ideas into practice due to systemic and institutional constraints. If these

barriers remain unresolved, the potential benefits of educational reforms that focus on 21st-century skills may not be fully realized.

Therefore, improving the competence of teachers should become a strategic national and institutional priority. Primary teacher education programs should include competence-based learning that includes micro-learning, model lessons, reflective practice, mentoring, and authentic assessment design. Continuous professional development should be sustainable, collaborative, and practice-oriented, with a focus on classroom research, peer observations, and educational communities. At the policy level, assessment systems should go beyond rote memorization and include research-oriented and creative tasks that meet modern learning goals.

In conclusion, the development of critical and creative thinking largely depends on well-trained, confident and innovative teachers. With the support of strong professional development structures and a flexible school environment, teachers can create a dynamic learning process that helps students become thoughtful, imaginative, and future-ready individuals. Ultimately, teacher competence is not just a factor influencing learning outcomes, it is the foundation upon which the success of modern education systems is based.

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