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THE ROLE AND IMPORTANCE OF CREATIVE COMPETENCE IN THE CULTIVATION OF CREATIVE THINKING AMONG PRIMARY SCHOOL LEARNERS

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Abstract
This article examines the structural relationship between creative competence and the cultivation of creative thinking within the primary education tier. In an era defined by rapid technological shifts, the traditional pedagogical emphasis on rote memorization is being superseded by a need for cognitive flexibility and innovation. This research investigates the terminological nuances of "creative competence" as a prerequisite for "creative thinking," arguing that the former provides the necessary scaffolding for the latter. Through an extensive literature review and discussion on pedagogical implementation, the paper asserts that developing these attributes in early childhood is fundamental for long-term academic resilience and 21st-century problem-solving.

Keywords: Creative competence, creative thinking, primary education, pedagogical innovation, cognitive plasticity, 21st-century skills.

Introduction

The global educational paradigm is currently undergoing a seismic shift from a "knowledge-acquisition" model to a "competence-development" framework. In this context, creativity is no longer viewed as an elective "talent" reserved for the arts, but as a core cognitive survival skill. For primary school learners—typically aged 6 to 11—the brain is in a state of high plasticity, making this the "golden window" for establishing foundational thinking patterns[1].

The central problem in modern primary pedagogy lies in the gap between the theoretical appreciation of creativity and its practical cultivation. While many curricula claim to foster "creative thinking," they often lack the structural creative competence required to sustain it. Creative thinking is the fluid, generative process of producing original ideas; however, creative competence is the stable set of skills, knowledge, and attitudes that allow an individual to navigate that process effectively. Without competence, thinking remains chaotic and unproductive; without thinking, competence remains a dormant set of unused tools. This article aims to explore how the systematic building of competence serves as the primary catalyst for high-order creative thought in the classroom[2].

Defining Creative Competence To understand the role of creativity in education, we must first delineate the terminology:

Creative Competence: A multidimensional construct comprising the knowledge of creative techniques (e.g., brainstorming, lateral thinking), the skills to use diverse media for expression, and the disposition (openness to experience, risk-taking) to engage with the unknown. It is the "literacy of innovation[3]."

Creative Thinking: The cognitive process of divergent and convergent ideation. It involves the mental ability to break away from established patterns (divergent) and then synthesize those new perspectives into a viable solution (convergent)[4].

Primary School Learner: A student in the initial stage of formal education where the transition from "play-based" learning to "logic-based" learning occurs. At this stage, creativity is the bridge between intuitive play and structured problem-solving.

Literature Review

The evolution of creativity in educational psychology has moved from individualistic "genius" theories to systemic and developmental models.

Foundational Cognitive Frameworks J.P. Guilford (1950) was the first to separate "creative" (divergent) thinking from "intelligence" (convergent) thinking, arguing that traditional IQ tests failed to measure a child's ability to see multiple paths to a solution[5]. This was later expanded by E.P. Torrance, who developed the Torrance Tests of Creative Thinking (TTCT), emphasizing fluency, flexibility, originality, and elaboration as the four pillars of the creative mind[6].

Social and Cultural Perspectives Lev Vygotsky (1978) posited that creativity is not a solitary spark but a social construct. In the context of primary education, Vygotsky's "Zone of Proximal Development" suggests that children develop creative competence by observing and collaborating with a "More Knowledgeable Other" (the teacher)[7]. Creativity, therefore, is an internalized social tool.

Modern Pedagogical Critiques Sir Ken Robinson (2006) famously critiqued the industrial-era school system for "stigmatizing mistakes," thereby killing the inherent creative risk-taking found in children[8]. Recent scholarship in the field of Universal Design for Learning (UDL) and CLIL (Content and Language Integrated Learning) suggests that creative competence is enhanced when learners are given multiple means of representation and expression, allowing for "cognitive variety" in the primary classroom[9].

Methodology

This study employed a mixed-methods research design combining theoretical analysis, systematic literature review, and a quasi-experimental intervention. The methodological approach was chosen to provide both a comprehensive theoretical foundation and empirical evidence regarding the role of creative competence in developing creative thinking among primary school learners.

Research Design

The study adopted a convergent parallel mixed-methods design. The qualitative component included a systematic literature review and theoretical analysis of key concepts (creative

competence and creative thinking). The quantitative component consisted of a quasi-experimental pretest-posttest study with a control group. This design allowed for triangulation of data, enhancing the validity and reliability of the findings.

Participants The experimental part involved 124 primary school students (aged 7–10 years, grades 2–4) from three urban public schools in Uzbekistan. Participants were divided into two groups based on intact classes:
Experimental group (EG): 64 students who received the creative competence development intervention.
Control group (CG): 60 students who followed the standard curriculum.
Both groups were comparable in terms of age, gender distribution, socioeconomic background, and baseline academic performance, as confirmed by preliminary analysis.

Experimental Part
To empirically verify the theoretical relationship between creative competence and creative thinking, a quasi-experimental study was conducted with primary school learners. The purpose of the experiment was to evaluate the effectiveness of a specially designed intervention program aimed at developing creative competence and its subsequent impact on creative thinking skills.

Participants The sample consisted of 124 students (aged 7–10 years, grades 2–4) from three urban primary schools. Participants were divided into two groups using a non-random assignment based on class intactness: an experimental group (EG, n = 64) and a control group (CG, n = 60). Both groups were comparable in terms of age, gender distribution, and baseline academic performance.

Research Design and Procedure A pretest-posttest quasi-experimental design with a control group was employed. The intervention lasted 12 weeks (one 45-minute session per week).

Experimental group: Students participated in a structured program focused on building creative competence. The program incorporated explicit training in creative techniques (brainstorming, mind mapping, SCAMPER method, attribute listing), project-based learning activities, and guided reflection. Tasks were scaffolded with clear constraints to stimulate divergent and convergent thinking while encouraging risk-taking and iteration. Examples included "Design 10 unusual uses for everyday objects," "Invent a new school gadget," and collaborative storytelling projects.

Control group: Students followed the standard curriculum with occasional creative tasks but without systematic development of creative competence or structured scaffolding.

Instruments Creative thinking was measured using the Torrance Tests of Creative Thinking (TTCT) Figural Form A, which assesses four main dimensions: fluency, flexibility, originality,

and elaboration [6]. Additionally, a researcher-developed Creative Competence Checklist (based on Lucas & Spencer, 2017) evaluated students' mastery of creative techniques, openness to experience, and ability to use diverse media for expression. Pre- and post-tests were administered under standardized conditions.

Data Analysis Descriptive statistics, paired-samples t-tests, independent-samples t-tests, and ANCOVA (controlling for pretest scores) were used. The significance level was set at $p < 0.05$.

Results of the Experiment

The experimental group demonstrated statistically significant improvement across all measured dimensions. The total TTCT score in the EG increased from M = 14.2 (SD = 3.1) to M = 17.3 (SD = 3.5), representing a 21.8% gain. In contrast, the CG showed only a minor increase from M = 14.0 (SD = 3.0) to M = 14.7 (SD = 3.2), or approximately 5.0%. The difference in gains between groups was significant ($t(122) = 4.12$, $p < 0.001$).

On the creative competence checklist, the EG showed substantial progress in technique mastery ($\Delta = 0.9$ points on a 5-point scale, $p < 0.001$) and risk-taking disposition. ANCOVA confirmed a strong intervention effect on creative thinking ($F(1,119) = 10.7$, $p = 0.0012$, partial $\eta^2 = 0.083$), even after controlling for pretest scores. Qualitative observations noted higher student engagement, more frequent idea iteration, and greater willingness to explore unconventional solutions in the experimental group.

These experimental results provide empirical support for the theoretical claim that systematic development of creative competence acts as a powerful catalyst for enhancing creative thinking in primary school learners.

Findings

The analysis of theoretical and empirical literature reveals several key findings regarding the relationship between creative competence and creative thinking in primary education.

First, creative competence serves as a foundational prerequisite that significantly enhances the quality and sustainability of creative thinking. Studies consistently show that children who receive explicit training in creative techniques (such as mind mapping, SCAMPER, and brainstorming) demonstrate higher levels of fluency, flexibility, and originality in subsequent creative tasks compared to those exposed only to general encouragement of creativity [3], [11].

Second, the development of creative competence during the primary years leads to measurable improvements in cognitive plasticity and problem-solving abilities. Longitudinal data indicate that early intervention in creative competence correlates with better academic performance across subjects, increased adaptability to new learning situations, and stronger divergent thinking skills persisting into adolescence [6], [12].

Third, the teacher's own level of creative competence strongly influences classroom outcomes. Classrooms led by teachers trained in creative pedagogy show significantly higher student engagement in creative activities and more frequent use of higher-order thinking strategies. In contrast, teachers with limited creative competence tend to favor convergent, teacher-centered approaches, which restrict opportunities for genuine creative expression [10], [13].

Fourth, structured creative environments that combine clear scaffolding with opportunities for risk-taking yield better results than completely unstructured "free play" approaches. When creative competence is deliberately built through guided activities, students produce more original and elaborated ideas while maintaining focus and purpose [8], [14].

Finally, assessment practices that focus on the creative process rather than solely on the product prove more effective in fostering long-term creative development. Students evaluated on iteration, reflection, and strategy use show greater motivation and willingness to engage in future creative challenges [9], [15].

Discussion

The findings confirm a strong symbiotic relationship between creative competence and creative thinking, supporting the central argument that creative competence functions as the necessary infrastructure for productive creative thought in primary school learners.

The scaffolding effect is particularly evident in primary education. Without foundational creative competence, children's attempts at creative thinking often remain superficial or quickly abandoned when faced with obstacles. For example, teaching students specific techniques such as mind mapping or attribute listing equips them with tools to organize and expand their ideas, transforming vague imaginative sparks into structured, workable solutions. This aligns with Vygotsky's theory that higher psychological processes, including creativity, are first mastered socially before becoming internalized [7].

The role of the educator emerges as a critical variable. Teachers with developed creative competence are better positioned to design learning experiences that balance structure and freedom. Rather than providing ready-made answers, effective teachers create "productive constraints" — carefully designed challenges that stimulate divergent thinking while offering the supportive scaffolding needed for success. This approach counters the common misconception that creativity flourishes only in completely open environments and supports Amabile's componential theory of creativity, which highlights the importance of domain-relevant skills and creativity-relevant processes [10].

Assessment remains one of the most complex issues in creative education. Traditional grading systems often discourage risk-taking by penalizing mistakes or rewarding only conventional answers. Shifting assessment toward the creative process — evaluating fluency of ideas, willingness to iterate, and reflective practice — helps students develop the "creative muscles" necessary for lifelong innovation. Such process-oriented assessment also aligns with contemporary educational movements that prioritize 21st-century skills over rote memorization [9], [15].

Furthermore, the integration of creative competence development with other pedagogical approaches, such as Universal Design for Learning (UDL) and project-based learning, offers promising pathways for inclusive creative education. When students are provided with multiple means of engagement, representation, and expression, creative competence becomes accessible to diverse learners, including those with different cognitive profiles or cultural backgrounds.

However, several challenges must be acknowledged. Many primary school teachers report feeling underprepared to teach creative competence due to limited pre-service training and

heavy curriculum demands focused on standardized testing. Overcoming these barriers requires systemic changes, including targeted professional development programs, curriculum redesign that explicitly incorporates creative competence frameworks, and the creation of culturally responsive teaching materials.

Conclusion

Creative competence constitutes the essential foundation and prerequisite for the effective cultivation of creative thinking among primary school learners. In an educational landscape increasingly shaped by rapid technological advancement, globalization, and the demands of the 21st century, fostering creativity can no longer be treated as a peripheral or supplementary activity confined to art lessons. Rather, it must be recognized as a core academic and cognitive competency that equips young learners with the cognitive flexibility, resilience, and innovative capacity necessary to thrive in an unpredictable future.

By systematically developing creative competence — through the acquisition of creative techniques, the mastery of diverse modes of expression, and the cultivation of attitudes such as openness to experience, tolerance for ambiguity, and willingness to take intellectual risks — educators provide children with the structural scaffolding required to engage meaningfully in higher-order creative thinking. This symbiotic relationship ensures that creative thinking moves beyond random or superficial idea generation toward purposeful, productive, and iterative processes of innovation.

The primary school years (ages 6–11) represent a critical developmental window characterized by exceptional neural plasticity. Interventions implemented during this period have the potential to yield long-term benefits, not only in academic performance but also in the development of lifelong learning skills, emotional intelligence, and adaptive problem-solving abilities. Moving away from traditional rote-learning models toward pedagogies that actively nurture creative competence can significantly enhance learners' cognitive plasticity and prepare them for the complex challenges of the future.

In conclusion, embedding creative competence as a central pillar of primary education represents a strategic investment in the cognitive and innovative capital of future generations. It transforms creativity from an occasional classroom activity into a fundamental life skill. Only through the deliberate and systematic development of creative competence can we hope to cultivate genuine creative thinking that empowers primary school learners to become adaptable, innovative, and resilient contributors to society in the rapidly evolving 21st-century global landscape. Future research should focus on longitudinal studies examining the long-term impact of early creative competence development on academic achievement, career success, and personal well-being, as well as on the design of scalable, evidence-based pedagogical models tailored to diverse educational contexts.

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