

THE DIFFERENCES BETWEEN CREATIVE THINKING AND CREATIVE COGNITION IN ESL EDUCATION: A PEDAGOGICAL PERSPECTIVE

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Abstract: *In modern education, particularly within English as a Second Language (ESL) instruction, the development of higher-order thinking skills has become a priority. Among these, creative thinking and creative cognition are often used interchangeably, although they represent distinct yet interconnected processes. This study explores the conceptual and practical differences between creative thinking and creative cognition and examines how their integration enhances students' language learning outcomes. Using a mixed-method research design, including pre- and post-tests, classroom observations, and task-based assessments, the study reveals that targeted pedagogical strategies significantly improve both creative expression and deeper cognitive processing. The findings indicate that while creative thinking supports idea generation, creative cognition ensures the structured, meaningful, and contextually appropriate application of those ideas. The study contributes to ESL pedagogy by clarifying these concepts and proposing an integrated instructional model.*

Keywords: *creative thinking, creative cognition, ESL learners, higher-order thinking, language learning, cognitive development*

INTRODUCTION

In the context of globalization and rapid digital transformation, education systems are increasingly required to equip learners with not only subject knowledge but also essential 21st-century skills. Among these, higher-order thinking skills—particularly creativity—have become a central focus of modern pedagogy. Within this framework, the concepts of *creative thinking* and *creative cognition* play a crucial role in shaping learners' intellectual, linguistic, and problem-solving abilities. However, despite their frequent interchangeable use in educational discourse, these two constructs represent distinct yet interrelated cognitive processes that require clear differentiation.

Creative thinking is generally understood as the ability to generate original, flexible, and innovative ideas. It involves divergent thinking processes such as brainstorming, imagination, and idea fluency. Learners who demonstrate strong creative thinking skills are capable of producing multiple solutions to a problem and approaching tasks from unique perspectives. In contrast, creative cognition refers to the deeper mental processes that enable individuals to organize, evaluate, and apply these ideas in a meaningful and contextually appropriate manner. It involves analytical thinking, reflection, and metacognitive regulation, transforming raw ideas into structured and purposeful outcomes. This distinction highlights

that creativity is not only about idea generation but also about the effective utilization and refinement of those ideas.[1]

In the field of English as a Second Language (ESL) education, this differentiation becomes particularly significant. Language learning is a complex cognitive activity that goes beyond the memorization of vocabulary and grammatical structures. It requires learners to interpret meanings, construct coherent arguments, and engage in authentic communication. Therefore, students must not only think creatively but also organize their thoughts logically and express them effectively in a foreign language. Creative thinking supports learners in generating ideas for speaking and writing tasks, while creative cognition ensures that these ideas are communicated clearly, accurately, and appropriately within linguistic and cultural contexts.[2]

Furthermore, the theoretical foundations of this study are rooted in constructivist and socio-cultural learning theories, which emphasize the active role of learners in knowledge construction. According to Lev Vygotsky, cognitive development occurs through social interaction and the internalization of knowledge, suggesting that learners develop higher-order thinking skills when engaged in meaningful and collaborative activities. Similarly, Robert J. Sternberg’s theory of creativity highlights the importance of integrating analytical, creative, and practical thinking skills, reinforcing the idea that creativity must be both generated and applied effectively.

Despite the recognized importance of these skills, traditional ESL classrooms in many contexts, including Uzbekistan, still rely heavily on teacher-centered approaches such as rote memorization and grammar-translation methods. These approaches often limit students’ opportunities to engage in independent thinking, problem-solving, and creative expression. As a result, learners may develop basic language proficiency but struggle to use the language in flexible, meaningful, and innovative ways.

In response to these challenges, modern pedagogical approaches advocate for the integration of student-centered and interactive teaching methods that simultaneously develop creative thinking and creative cognition. Strategies such as open-ended questioning, problem-based tasks, collaborative learning, and digital tools create opportunities for learners to generate ideas, analyze information, and apply knowledge in real-life contexts. Such approaches not only enhance language acquisition but also foster intellectual autonomy and lifelong learning skills.[3]

METHODS

Research Design

This study employed a mixed-method research design combining quantitative and qualitative approaches. The aim was to examine how teaching strategies targeting creative thinking and creative cognition influence ESL learners’ performance.

Participants

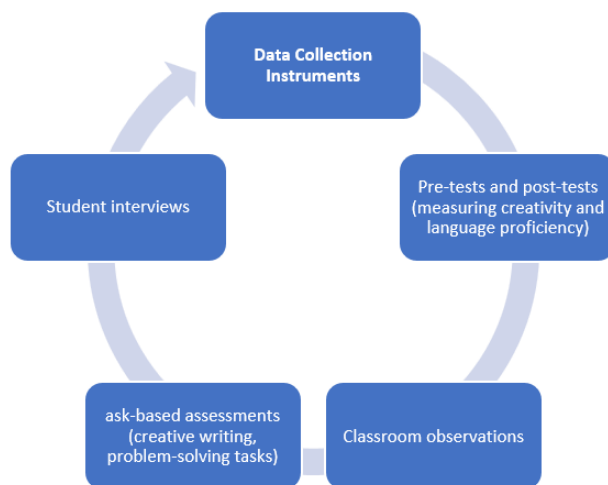
The participants included 60 primary school students (second grade) in Uzbekistan. They were divided into:

- ✚ Control group (30 students): traditional instruction

15-May, 2026-yil



Experimental group (30 students): instruction focused on creativity-based approaches



Procedure

The experimental group was exposed to instructional strategies that separately and jointly developed creative thinking and creative cognition:

Creative thinking activities: brainstorming, open-ended questions, storytelling

Creative cognition activities: problem-solving tasks, structured debates, case analysis
Integrated tasks combining both processes

RESULTS

Quantitative Results

The findings of the study indicate a clear and statistically meaningful improvement in the performance of students in the experimental group compared to those in the control group. The quantitative data obtained from the pre-test and post-test assessments demonstrate that the implementation of strategies targeting both creative thinking and creative cognition had a significant positive impact on learners' outcomes.

At the initial stage, the pre-test results showed relatively similar levels of performance between the two groups, with the control group scoring 57% and the experimental group 59%. This minimal difference suggests that both groups had comparable language proficiency and cognitive abilities prior to the intervention, ensuring the reliability of the experimental design.

Following the instructional intervention, the post-test results revealed a noticeable divergence in performance. The control group showed a moderate improvement, increasing from 57% to 67%, which reflects a 10% gain likely attributed to regular classroom instruction and natural learning progression. In contrast, the experimental group demonstrated a substantial improvement, rising from 59% to 86%, representing a 27% increase. This significant growth indicates the effectiveness of integrating creative thinking and creative cognition into ESL instruction.

15-May, 2026-yil

Furthermore, a comparative analysis of task completion rates showed that students in the experimental group were more consistent and accurate in completing assignments. Their ability to interpret tasks, organize ideas, and present coherent responses improved markedly over the course of the study. In particular, students exhibited greater flexibility in thinking, generating multiple responses to open-ended questions and demonstrating originality in their written and spoken outputs.

In addition to quantitative gains, qualitative observations revealed notable behavioral and cognitive changes among learners in the experimental group. Students became more active participants in classroom discussions, frequently initiating ideas and engaging in peer interaction. Their responses reflected deeper levels of reasoning, as they were able to justify their opinions, evaluate alternative perspectives, and apply learned concepts to new situations.

Another important finding was the improvement in linguistic performance. Students in the experimental group showed enhanced fluency, more accurate use of grammatical structures, and a broader range of vocabulary. Their written work became more structured and coherent, while their oral communication demonstrated increased confidence and clarity. This suggests that the integration of creative thinking and creative cognition not only supports cognitive development but also directly contributes to language acquisition.

Overall, the results confirm that a pedagogical approach that distinguishes and integrates creative thinking and creative cognition leads to more effective learning outcomes. The significant difference between the control and experimental groups highlights the value of adopting innovative, student-centered teaching methods in ESL classrooms. (Look at Table 1).

Table 1. Pre-test and Post-test Results Comparison

Group	Pre-test (%)	Post-test (%)	Improvement (%)
Control Group	57%	67%	+10%
Experimental Group	59%	86%	+27%

The 27% increase in the experimental group indicates that distinguishing and integrating creative thinking and creative cognition enhances both linguistic and cognitive outcomes. To be aware of qualitative findings, look at Table 2.

Table 2.

Qualitative Findings

1	Development of Creative Thinking:	Students showed improved ability to generate original ideas, especially in speaking and writing tasks. They demonstrated fluency and flexibility in expressing opinions.
2	Enhancement of Creative Cognition:	Students became better at organizing their thoughts, constructing logical arguments, and applying ideas to real-life contexts.
3	Balanced Cognitive Growth:	Unlike the control group, the experimental group displayed both idea generation and structured reasoning, indicating the successful integration of both constructs.

DISCUSSION

The findings confirm that creative thinking and creative cognition are complementary but distinct processes. Creative thinking enables learners to produce ideas, while creative cognition refines and structures those ideas into meaningful outputs.

From a pedagogical perspective:

Creative thinking aligns with divergent thinking processes.

Creative cognition aligns with convergent and analytical thinking. Azerbaijan

The integration of both supports deeper learning, consistent with constructivist theories, particularly those emphasizing cognitive development and social interaction.

Moreover, in ESL contexts, students must not only think creatively but also communicate effectively. Therefore, focusing solely on creativity without cognitive structuring may lead to superficial learning outcomes.

CONCLUSION

This study has demonstrated that distinguishing between creative thinking and creative cognition is essential for effective ESL instruction. While creative thinking enables learners to generate original and diverse ideas, creative cognition ensures that these ideas are structured, evaluated, and applied meaningfully within linguistic contexts. The findings clearly indicate that when both processes are deliberately integrated into classroom practice, students achieve significantly higher outcomes in both language proficiency and cognitive development.

The quantitative results revealed a substantial improvement in the experimental group, with a 27% increase in performance compared to a 10% increase in the control group. This

15-May, 2026-yil

difference highlights the effectiveness of student-centered pedagogical approaches that simultaneously foster idea generation and analytical processing. The qualitative findings further support this conclusion, showing that students became more confident, independent, and capable of expressing complex ideas in English.

From a pedagogical perspective, the study underscores the limitations of traditional teacher-centered methods, which often focus primarily on memorization and fail to develop higher-order thinking skills. In contrast, integrating strategies such as open-ended questioning, problem-solving tasks, and collaborative activities creates a dynamic learning environment where students actively construct knowledge and engage in meaningful communication.

Moreover, the integration of creative thinking and creative cognition contributes not only to language acquisition but also to the development of essential 21st-century skills, including critical thinking, adaptability, and independent decision-making. These competencies are particularly important in the context of globalization and digital transformation, where learners must navigate complex information and communicate effectively across cultures.

In conclusion, ESL educators are encouraged to adopt a balanced instructional approach that promotes both creativity and cognitive structuring. By doing so, they can enhance learners’ intellectual autonomy, improve language proficiency, and better prepare students for academic and real-world challenges. Future research may further explore how these concepts can be adapted across different educational levels and cultural contexts, as well as how digital technologies can support their development more effectively.

REFERENCES:

1. Lev Vygotsky (1978). *Mind in Society: The Development of Higher Psychological Processes*. Harvard University Press.
2. Robert J. Sternberg (2006). *The Nature of Creativity*. Cambridge University Press.
3. E. Paul Torrance (1974). *Torrance Tests of Creative Thinking*. Scholastic Testing Service.
4. John C. Richards (2015). *Key Issues in Language Teaching*. Cambridge University Press.
5. Howard Gardner (1993). *Frames of Mind: The Theory of Multiple Intelligences*. Basic Books.
6. Ken Robinson (2011). *Out of Our Minds: Learning to be Creative*. Wiley.