

Reflection Article

Impact of teaching methods and support measures on the development of creative thinking in primary school students.

Impacto de los métodos de enseñanza y las medidas de apoyo en el desarrollo del pensamiento creativo de los estudiantes de primaria

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Abstract

This reflective article discusses the influence of teaching and supporting strategies on the emergence of creative thinking in primary school students through a review of the strategies' focus. The reviewed works prove that the strategies of problem-based learning, project-based learning, constructivism, metacreative pedagogy, advance organizers, computational thinking, and cognitive tools can be applied to foster different aspects of fluency, flexibility, originality, and elaboration of creative thinking. Moreover, the cultural, cognitive, and personal characteristics of students and the need for a participatory, discovery-based, idea-oriented, and problem-solving educational environment are taken into account. From the perspective of reflection, the primary school teachers may note the necessity to change their traditional practices to make the pedagogical process more active, flexible, and personalized. In such a case, the teachers are considered to be guides and facilitators of students' creative thinking development who provide the learners with the material, resources, questions, interactions, and opportunities to build their own understanding and express their ideas. Therefore, developing such aspects of creative thinking as flexibility, fluency, originality, and elaboration requires the teachers' special attention, profound practical implementation of the strategies, and the corresponding evaluation to measure the students' progress and actualize the following pedagogical interventions.

Keywords: Class organization, Scaffolding, Pedagogical innovation, Learning activities, Teaching styles, educational strategies. (Source: ERIC)

Resumen

Este artículo de reflexión aborda la influencia de las estrategias de enseñanza y apoyo en el surgimiento del pensamiento creativo en estudiantes de educación primaria, mediante una revisión del enfoque de dichas estrategias. Los trabajos analizados demuestran que estrategias como el aprendizaje basado en problemas, el aprendizaje basado en proyectos, el constructivismo, la pedagogía metacreativa, los organizadores previos, el pensamiento computacional y las herramientas cognitivas pueden aplicarse para fomentar diversos aspectos del pensamiento creativo: fluidez, flexibilidad, originalidad y elaboración. Asimismo, se consideran las características culturales, cognitivas y personales de los estudiantes, así como la necesidad de un entorno educativo participativo, basado en el descubrimiento, orientado a las ideas y enfocado en la resolución de problemas. Desde esta perspectiva reflexiva, los docentes de primaria pueden percibir la necesidad de transformar sus prácticas tradicionales para lograr un proceso pedagógico más activo, flexible y personalizado. En este contexto, se concibe al docente como guía y facilitador del desarrollo del pensamiento creativo del alumnado, proporcionando materiales, recursos, interrogantes, interacciones y oportunidades para que los estudiantes construyan su propia comprensión y expresen sus ideas. Por consiguiente, el desarrollo de dimensiones del pensamiento creativo como la flexibilidad, la fluidez, la originalidad y la elaboración requiere una atención especial por parte del profesorado, una implementación práctica profunda de las estrategias y una evaluación adecuada para medir el progreso de los estudiantes y ajustar las intervenciones pedagógicas subsiguientes.

Palabras clave: Organización de clases, Andamiaje, Innovación pedagógica, Actividades de aprendizaje, Estilos de enseñanza, Estrategias educativas. (Fuente: ERIC)

1. Introduction

In primary education, creative thinking is an essential skill for interpreting situations, proposing alternatives, solving problems, and expressing ideas in diverse ways. However, the ability to engage in these processes does not arise spontaneously nor depend solely on each student's individual characteristics. Rather, it is closely linked to the opportunities provided by the classroom environment to explore, question, imagine,

and construct original responses. From the perspective of a teacher who investigates and observes everyday learning experiences, it becomes evident how the strategies employed can either expand or limit these opportunities. Therefore, reflecting on teaching methods involves analyzing not only the content being taught but also the ways in which students are supported throughout the learning process.

In this regard, the studies reviewed highlight a growing emphasis on methodologies that prioritize students' active participation in their own learning.

The findings indicate that problem-based learning, project-based learning, constructivism, metacreative pedagogy, advance organizers, computational thinking, and various forms of scaffolding can foster key dimensions of creative thinking, including fluency, flexibility, originality, and elaboration. According to Raeisoon (2024), the combination of problem-based learning with a culturally responsive teaching strategy produced better outcomes in creative thinking compared to the control group, while Nurramadhani et al. (2025) confirmed specific benefits related to fluency and flexibility. These studies suggest that creativity develops through meaningful pedagogical experiences rather than through activities that merely seek novelty.

Consequently, the role of the teacher is crucial, as instructional strategies must be accompanied by conditions that allow students to feel free to propose ideas, make mistakes, revise their thinking, and discover multiple solutions to the same problem. In this context, the objective of this reflection article is to analyze the impact of teaching methods and support measures on the development of creative thinking among primary school students, identifying pedagogical practices that streng.

2. Method

A fundamental aspect is moving beyond teaching that is focused exclusively on the transmission of content. According to the study by Rao et al. (2025), conducted with

367 primary school students—in which three teaching styles were identified: balanced, traditional, and diverse—the diverse style was the one that contributed most significantly to creativity. This finding indicates that teachers should not limit themselves to a single instructional approach but should instead adapt their strategies according to the characteristics, interests, and needs of their students.

Likewise, Nurhasanah et al. (2022) pointed out that meaningful learning can promote cognitive development and intelligence when factors such as teacher professionalism, adequate infrastructure, and relevant direct experiences are present. Therefore, creativity begins to strengthen when learning becomes meaningful and relevant to the student.

Similarly, methodologies based on problems and situations closely connected to students' realities can create concrete opportunities for the development of creative thinking. Juliani et al. (2024) demonstrated that the PBL-CRT model (Problem-Based Learning with Culturally Responsive Teaching) achieved significant improvements in creative thinking skills, as well as greater openness to diversity, compared to the control group. In the same vein, Noorkholisoh (2024) found that integrating culturally responsive teaching with problem-based learning promoted fluency and flexibility, although originality and elaboration did not improve to the expected extent. This finding is particularly relevant for teaching practice because it demonstrates that a strategy may strengthen certain components of creativity without developing all of them equally. Consequently, teachers should pay close attention to which skills are progressing and which require additional supportive experiences.

Based on the above, it is also necessary to consider methodologies that help students become aware of their own creative processes. Paz-Baruch et al. (2025) found that metacreative pedagogy enabled the experimental group to achieve better results in fluency and originality, while also demonstrating significantly superior performance on transfer tasks across all dimensions of creativity. Furthermore, students reported using more metacreative processes while completing activities. This suggests that teaching creativity involves not only offering open-ended tasks but also guiding students to recognize how they generate, transform, and apply their ideas.

According to the analysis of Kuatovna, M. N. (2025), teacher mediation can therefore be directed toward questions, reflections, and opportunities that allow children to understand their own creative processes. In addition, there are strategies that encourage the organization of ideas and provide structures through which students can construct knowledge more actively. Muriharti et al. (2024) demonstrated that learning through advance organizers and mind maps significantly improved creative thinking compared to conventional models, resulting in higher average gains for the experimental group and a notable improvement in elaboration skills.

Similarly, Ghudkam et al. (2023) highlighted the value of an imagination-based learning model developed through advance organizers and the Internet of Things, particularly in areas related to analysis, visual learning, and innovative design. These findings suggest that visual, technological, and organizational supports can serve as mediators that help students represent, connect, and transform their ideas.

In this same context, support measures become especially important when recognizing that not all students begin from the same starting point. Aoonlamai et al. (2025) observed significant improvements in flexibility and elaboration and identified scaffolding and cognitive tools as key predictors of these components of creativity. Their proposal integrated problem-solving activities, learning resources, cognitive tools, collaboration, scaffolding, and mentoring. Likewise, Maksetova (2025) demonstrated that a constructivist pedagogy incorporating project-based learning, design activities, reflective journals, and role definition fostered idea generation, fluency, and participation, resulting in a 19% increase in students' creativity assessment scores. Furthermore, Anandita et al. (2025) argued that, from a teaching perspective, these findings demonstrate that fostering creativity requires providing appropriate resources and support without replacing the student's own initiative.

In addition, the learning experience can be enriched through activities that incorporate play, e-learning, and other innovative methods. Aziz (2025) reported that applying Ausubel's theory within a transition from a traditional educational paradigm to a student-centered approach increased students' self-confidence, enabled them to take greater control of their knowledge acquisition regarding artistic elements, and enhanced both their understanding of practical applications and their artistic skills. Similarly, Sosna et al. (2025) found that creativity could be successfully developed through traditional instruction and observed improvements across all components of divergent thinking, including fluency, flexibility, originality, and elaboration.

Based on the foregoing discussion, Figure 1 synthesizes the information collected regarding the relationship between

teaching methods, support measures, and their impact on the development of creative thinking

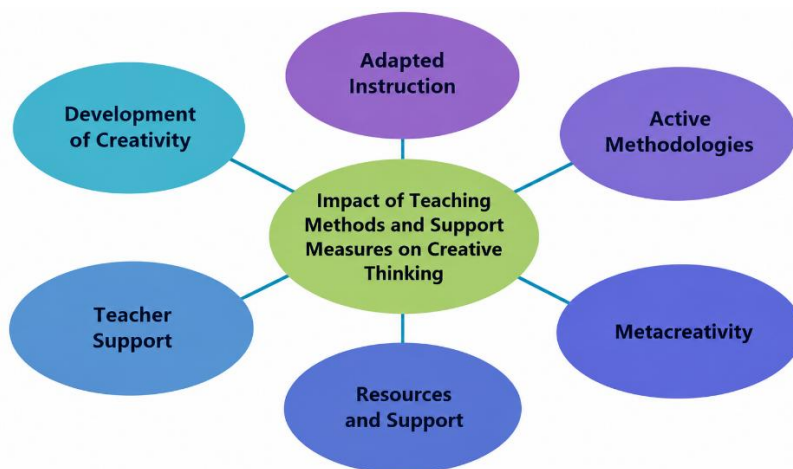


Figure 1. Impact of Excessive Digital Device Use in Early Childhood (Source: Authors' Own Work).

3. Conclusions and Practical Application

In conclusion, as demonstrated throughout this review, the development of creative thinking in primary education contexts is inseparable from the learning opportunities provided both inside and outside the classroom.

Active, constructivist, inquiry-based, and student-centered methodologies can play a fundamental role in fostering the generation of ideas, as well as flexibility, originality, and elaboration. However, their effectiveness depends on how teachers promote their use and adapt them to the dynamics of the classroom. Therefore, a teacher with an inquiry-oriented approach should not view a methodology as a rigid formula, but rather should observe, evaluate, and continuously transform their practice according to students' needs.

It is also important to recognize that developing creative thinking means

empowering each student to think differently, express ideas, and find solutions. Consequently, the teacher's primary task is to transform the educational environment by moving away from a model that prioritizes standardized answers toward a process that values questioning, exploration, learning through mistakes, interaction, the construction of alternatives, and the ability to propose new ideas. In this way, creativity ceases to be an occasional guest in the classroom and becomes an integral part of the school experience, enriching academic learning, autonomy, and student participation.

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