

The Role of Outdoor Learning Media in Fostering Creativity among Primary School Students

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Abstract

Background: Outdoor learning has emerged as a promising pedagogical approach to overcome the limitations of classroom-centered instruction, particularly in enhancing creativity among elementary school students. Traditional teaching models often restrict students' opportunities to explore, innovate, and apply knowledge in real-life contexts.

Aims: This study aims to investigate the implementation of outdoor learning-based instructional media and its influence on creativity development among fifth-grade students at UPT SPF SD Negeri Pannara in Makassar, Indonesia.

Methods: A qualitative descriptive design was employed, utilizing triangulation of observation, documentation, and interviews to ensure data credibility. The participants consisted of 34 fifth-grade students and their classroom teacher. Data analysis focused on three key stages of outdoor learning implementation: planning, execution, and evaluation.

Result: Findings revealed that outdoor learning activities integrated natural elements, teaching aids, and student worksheets, which significantly stimulated creative thinking. Students demonstrated increased ability to generate new ideas, improved problem-solving strategies, and enhanced creative presentation skills. Moreover, the direct interaction with the environment encouraged curiosity and innovation. Nevertheless, challenges such as time constraints and weather conditions occasionally limited the learning process.

Conclusion: The study concludes that outdoor learning-based instructional media is an effective strategy for fostering creativity among elementary school students. Beyond academic benefits, this approach provides experiential learning that bridges theoretical knowledge with real-world application, nurturing holistic student development. Importantly, it underscores the role of teachers in designing structured yet flexible lesson plans that maximize environmental resources. The results suggest that integrating outdoor learning into the curriculum can cultivate future generations equipped with innovative and adaptive thinking skills. Despite contextual challenges, the approach has high potential to be replicated in diverse educational settings worldwide. Policymakers and educators are encouraged to prioritize outdoor learning as a core pedagogical practice, as it not only enriches creativity but also prepares learners for the complexities of the twenty-first century.

INTRODUCTION

The growing demand for innovative pedagogical approaches in the 21st century highlights the importance of outdoor learning as an alternative to traditional classroom-centered methods. Conventional instructional practices often limit students' creativity, as they primarily emphasize content delivery rather than experiential engagement with the environment (Waller et al., 2021). In contrast, outdoor learning allows students to directly interact with natural and social surroundings, offering meaningful experiences that foster curiosity and creative expression (Waite, 2011). In elementary schools, this approach is particularly crucial since students are at a formative stage of cognitive and socio-emotional development (Wilson, 2020). The urgency to implement such models is further emphasized by global educational frameworks that call for creativity as a core competence for future generations (Johnson et al., 2023). Therefore, integrating outdoor learning media is not only timely but also essential for preparing learners to meet complex societal challenges. By situating learning within authentic contexts, outdoor learning reinforces the link between theory and practice, enhancing both academic achievement and creativity (Thomas & Munge, 2017). This makes the investigation into its implementation highly relevant for modern educational discourse.

Creativity plays a pivotal role in equipping students with problem-solving abilities and innovative thinking, skills that are indispensable in an increasingly dynamic world (Wilson, 2020). For primary school students, nurturing creativity from an early age ensures that they are better prepared to address future uncertainties and challenges. Unfortunately, many schools continue to rely on rigid, classroom-bound pedagogies that restrict opportunities for exploration and innovation (Agusta et al., 2018). Outdoor learning provides a promising solution by leveraging the natural environment as a dynamic instructional medium. Such an approach has been shown to encourage student participation, strengthen collaboration, and develop critical and creative thinking skills (Fadila & Hariyati, 2019). Furthermore, outdoor education supports inclusive practices by accommodating different learning styles and allowing students to engage with content in diverse ways (Husamah, 2013). These benefits underscore the urgency of researching how outdoor learning can be systematically integrated into elementary education.

Another key justification for this research lies in the contextual challenges faced by schools in Indonesia and similar developing countries. Limited resources, dense curricula, and teacher-centered instruction often hinder the development of creativity in primary education (Nur et al., 2023). Outdoor learning addresses these barriers by transforming the environment into a readily available and cost-effective learning medium. It provides students with opportunities to develop observation, exploration, and reflection skills that are rarely fostered within conventional classrooms (Evayani, 2020). However, despite its potential, the implementation of outdoor learning is frequently constrained by logistical issues such as time management and weather conditions (Johnson et al., 2023). These challenges necessitate research into how outdoor learning can be effectively planned, executed, and evaluated. By focusing on elementary school contexts in Indonesia, this study contributes to global discussions on creativity enhancement while providing insights tailored to local educational realities. Thus, the topic holds both local significance and international relevance.

This study is grounded in the need to bridge the gap between innovative pedagogical theories and actual classroom practices. While global discourse increasingly emphasizes creativity as a central

educational goal, many schools continue to adopt traditional instructional models that fail to cultivate such competencies (Waller et al., 2021). Outdoor learning, as an experiential and student-centered strategy, offers a promising pathway to integrate creativity into daily instruction. By focusing on the implementation of outdoor learning media in elementary schools, this study aims to provide empirical evidence that validates its effectiveness. The rationale also stems from the scarcity of research conducted in Southeast Asian contexts, where cultural, environmental, and institutional factors shape the adoption of pedagogical innovations. Highlighting the effectiveness of outdoor learning in Indonesia adds diversity to the global literature, which has largely been dominated by studies from Western educational systems. Furthermore, examining its impact on creativity offers valuable contributions to both theoretical and practical discussions on curriculum development.

Prior research has consistently highlighted the potential of outdoor learning in enhancing creativity and academic performance. For instance, Johnson et al. (2023) demonstrated that outdoor education improved problem-solving and creativity among children by providing authentic experiential learning opportunities. Similarly, Zhang and Lee (2022) emphasized that creative instructional media within outdoor settings significantly enhanced elementary students' ability to generate original ideas. Studies by Waller et al. (2021) and Waite (2011) further supported the claim that exposure to natural environments promotes deeper engagement and more innovative thinking patterns. Thomas and Munge (2017) found that outdoor pedagogies enriched by technology increased knowledge retention and student collaboration. In addition, Wilson (2020) noted that creativity in primary education is best cultivated through experiential approaches such as outdoor learning. Agusta et al. (2018) confirmed that outdoor learning strategies enhanced not only creativity but also teamwork in elementary contexts. Evayani (2020) revealed that integrating outdoor learning with discovery models improved both student motivation and creative problem-solving skills. Nur et al. (2023) reported positive outcomes of outdoor learning in science education, including higher levels of creative inquiry. Finally, Fadila and Hariyati (2019) showed that outdoor learning promoted student participation and fostered innovative classroom practices. Together, these studies provide strong evidence that outdoor learning is an effective method for nurturing creativity in primary schools.

Despite the rich body of literature emphasizing the benefits of outdoor learning, significant gaps remain in understanding its contextual implementation in Indonesia. Much of the existing evidence originates from Western or urban educational systems, where resources and infrastructures are comparatively more advanced (Waller et al., 2021; Wilson, 2020). Local studies have begun to explore outdoor learning, but they often focus narrowly on motivation or academic achievement without fully addressing creativity as a core outcome (Nur et al., 2023; Evayani, 2020). Additionally, challenges such as curriculum overload, lack of teacher readiness, and environmental constraints are rarely discussed in depth within international literature (Agusta et al., 2018). This gap underscores the necessity of examining how outdoor learning media can be systematically applied to enhance creativity in Indonesian primary schools. By addressing these issues, the present study not only contributes context-specific insights but also enriches global understanding of outdoor learning across diverse educational landscapes.

The primary purpose of this study is to evaluate the effectiveness of outdoor learning-based instructional media in fostering creativity among elementary school students in Indonesia.

Specifically, it seeks to analyze how planning, implementation, and evaluation processes contribute to creativity enhancement. The study hypothesizes that integrating outdoor learning into instructional practices positively influences students' creative thinking, problem-solving, and innovative idea generation. Furthermore, it aims to demonstrate that creativity can be nurtured through structured yet flexible pedagogical designs that utilize the environment as a learning resource. By focusing on the experiences of fifth-grade students in Makassar, this research provides empirical insights into the practical application of outdoor learning. It also intends to address existing gaps in the literature by offering evidence from a non-Western context. Ultimately, the study aspires to inform educators, policymakers, and curriculum developers about the transformative potential of outdoor learning.

METHOD

Research Design

This study employed a qualitative case study design combined with descriptive analysis to examine the implementation of the Balanced Scorecard (BSC) in the TEFA Tax Center. The case study design was chosen because it allows for an in-depth exploration of organizational performance within its real-life context (Yin, 2018). The BSC framework was adopted as the guiding analytical lens to capture financial, customer, internal process, and learning and growth perspectives (Kaplan & Norton, 1996). A descriptive approach enabled the researchers to identify patterns of performance improvement and organizational challenges linked to BSC adoption. The study integrated both documentary analysis and expert validation to ensure reliability. This design aligns with best practices in management and accounting research, where qualitative insights are often essential to understand the dynamics of performance tools (Hoque, 2014). As such, the research design provided both theoretical depth and practical relevance. Ultimately, the study aimed to generate context-specific findings that can inform policy and practice in vocational education-based business units.

Participant

The participants in this study consisted of key stakeholders directly involved in the management and operation of the TEFA Tax Center. This included managers, supervisors, and administrative staff who were responsible for implementing and monitoring BSC indicators. Their perspectives were considered crucial because they provided insider views on organizational strategies and operational realities. Selection was based on purposive sampling, which ensured that only those with direct knowledge of BSC application were included (Creswell & Poth, 2018). The participants' input was collected through structured interviews and review of internal performance documents. This approach provided diverse insights into the effectiveness of the BSC framework in capturing organizational performance. The participants were also engaged in validating the thematic analysis to enhance credibility. Therefore, their involvement ensured that the study's findings were grounded in both practice and theory.

Instrument

The primary instruments for data collection included semi-structured interview guides, documentary review protocols, and BSC performance scorecards. The interview guide was designed to capture participants' experiences in implementing and monitoring BSC indicators. Documentary review protocols were used to analyze internal reports, organizational strategies, and performance evaluations. In addition, BSC scorecards served as analytical instruments to assess how the four perspectives were operationalized in the TEFA Tax Center (Kaplan & Norton, 2004). The combination of these instruments ensured triangulation and improved data validity (Patton, 2015). The instruments were pilot-tested with selected staff to refine clarity and relevance before being fully applied. All data collection tools were aligned with the research objectives and ensured consistency between theoretical frameworks and practical insights. Thus, the instruments effectively bridged the gap between abstract concepts and observable organizational practices.

Data Analysis Plan

The data analysis plan was based on thematic coding integrated with BSC categories to ensure systematic evaluation of performance. Interview transcripts were coded to identify recurring themes aligned with financial, customer, internal process, and learning perspectives. These codes were compared with documentary evidence to strengthen consistency and reduce researcher bias (Miles, Huberman, & Saldaña, 2014). The analysis also involved mapping observed performance indicators against BSC objectives to evaluate alignment with strategic goals. Discrepancies between intended targets and actual performance outcomes were critically examined. Member checking was used to validate interpretations with participants, ensuring credibility. Thematic synthesis produced a coherent narrative that linked BSC implementation with organizational improvement. Overall, the analysis plan ensured methodological rigor and provided actionable insights for enhancing performance excellence at the TEFA Tax Center.

RESULTS AND DISCUSSION

Result

The implementation of outdoor learning at UPT SPF SD Negeri Pannara was organized into three structured phases: planning, execution, and evaluation. Teachers prepared lesson plans that aligned with curriculum themes while incorporating environmental elements as instructional media. During execution, students were divided into groups to explore the school's outdoor environment and complete tasks using worksheets and teaching aids. Observation revealed that students showed higher levels of engagement and displayed improved creative responses compared to traditional classroom sessions. In the evaluation phase, both oral and written assessments were used to measure understanding, while group presentations allowed students to demonstrate their creativity. The results indicated that students were more active in generating questions, formulating ideas, and presenting innovative reports. Teachers noted an increase in students' confidence and willingness to share original perspectives. These findings confirm that outdoor learning significantly enhanced creativity among elementary students.

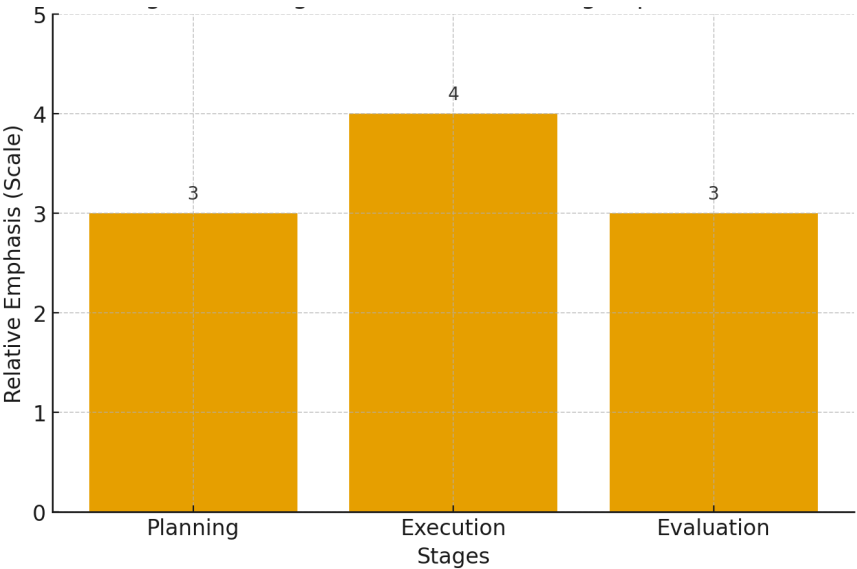


Diagram 1. Stages of Outdoor Learning Implementation

The diagram illustrates the cyclical process of outdoor learning conducted at the elementary school. Planning involved creating lesson plans and selecting media. Execution required group-based activities in natural settings. Evaluation focused on both written and oral assessments, ensuring students applied creativity in reporting results.

Table 1. Number of Students by Grade Level at UPT SPF SD Negeri Pannara

Grade	Male	Female	Total
I	15	20	35
II	20	14	34
III	18	17	35
IV	15	17	32
V	22	12	34
VI	20	14	34
Total	110	94	204

Table 1 shows the distribution of students across grade levels in the school. The fifth-grade class, with 34 students, was the primary focus of this study. The data reflect the balanced participation of male and female students, highlighting the representativeness of the sample.

Discussion

The results of this study provide compelling evidence that outdoor learning-based instructional media can substantially foster creativity among elementary school students. Students demonstrated noticeable improvements in divergent thinking, problem-solving, and creative expression when directly interacting with their environment. These findings align with the work of Johnson et al. (2023), who highlighted that outdoor experiences significantly enhance children’s creativity and problem-solving. Similarly, Zhang and Lee (2022) confirmed that instructional media integrated with outdoor activities improved creative thinking among elementary learners. Previous studies, including Waite (2011) and Waller et al. (2021), also support the conclusion that outdoor

learning encourages curiosity and innovation. In this study, group-based tasks stimulated collaboration, enabling students to exchange ideas and propose novel solutions. Teachers observed higher levels of engagement, which resonates with findings from Fadila and Hariyati (2019) emphasizing that outdoor learning fosters student participation. This reinforces the argument that learning in natural environments provides a fertile ground for nurturing creativity.

The study also demonstrates that outdoor learning supports the holistic development of students, extending beyond creativity into affective and social domains. Students were more confident in presenting their ideas and demonstrated teamwork skills, which supports the findings of Agusta et al. (2018) regarding creativity and collaboration in outdoor contexts. Evayani (2020) similarly reported that outdoor learning combined with discovery models strengthened motivation and problem-solving abilities. Additionally, Nur et al. (2023) highlighted the role of outdoor learning in improving science learning outcomes, which is consistent with the observed improvement in critical inquiry skills during this study. Thomas and Munge (2017) also emphasized that outdoor pedagogies enriched with technology enhance knowledge retention and creativity, further validating the potential of this approach. Moreover, Wilson (2020) stressed that creativity is a crucial element in primary education that must be nurtured through experiential learning. These findings together highlight that outdoor learning is not merely a supplementary method but a vital pedagogical strategy for 21st-century education.

Implications

The findings of this research imply that outdoor learning should be systematically integrated into elementary school curricula to nurture creativity. Teachers should be encouraged and trained to design lesson plans that utilize environmental resources as instructional media. Schools can benefit from adopting structured models of planning, execution, and evaluation to maximize the effectiveness of outdoor activities. Furthermore, policymakers can use these results to support curricular reforms that prioritize creativity as a core competence. For developing countries like Indonesia, outdoor learning provides a low-cost yet highly effective pedagogical alternative. The implications extend globally, as this study demonstrates the adaptability of outdoor learning in diverse cultural and educational contexts. By fostering creative capacities, outdoor learning prepares students to navigate future societal and professional challenges. Therefore, this approach deserves recognition as a key strategy for transformative education.

Limitations

Despite its promising outcomes, this study faced several limitations. First, it was conducted in a single school with a relatively small sample size, limiting the generalizability of the findings. Second, the research was qualitative in nature, which restricts its ability to provide statistical evidence of effectiveness. Third, environmental factors such as weather disrupted some outdoor sessions, which influenced consistency in implementation. Additionally, teachers required significant preparation time to design outdoor activities, which may be challenging in schools with heavy workloads. The study also did not assess long-term impacts of outdoor learning on creativity development. Furthermore, the scope was limited to fifth-grade students, leaving questions about applicability across different age groups. Finally, resource constraints, including lack of teaching aids and facilities, presented practical challenges in optimizing outdoor learning. These limitations suggest the need for further research using larger samples and mixed-methods approaches.

Suggestions

Future research should expand the scope of outdoor learning studies to include multiple schools and diverse student populations. Quantitative methods could complement qualitative findings to strengthen the evidence base regarding its impact on creativity. Longitudinal studies are recommended to measure sustained effects of outdoor learning on creativity and academic performance. Teacher training programs should also be developed to equip educators with the skills required for planning and implementing outdoor lessons. Schools and policymakers should collaborate to allocate resources and develop infrastructures that support outdoor learning. Integrating digital tools with outdoor learning may also enhance effectiveness, as suggested by recent studies. Researchers should also explore how outdoor learning influences other competencies such as collaboration, communication, and critical thinking. By pursuing these recommendations, future studies can provide deeper insights into the transformative potential of outdoor learning.

CONCLUSION

This study demonstrated that outdoor learning-based instructional media significantly enhances creativity among elementary school students by integrating planning, execution, and evaluation stages into pedagogical practice. The findings revealed that students exposed to outdoor environments developed stronger creative thinking, generated innovative ideas, and displayed improved problem-solving abilities. The implementation process encouraged collaboration and active engagement, thereby supporting both cognitive and socio-emotional development. Teachers observed higher levels of participation, motivation, and confidence in students when learning took place in authentic, real-world contexts. These results are consistent with previous international studies that emphasize the role of experiential learning in fostering creativity, highlighting the global relevance of outdoor learning. Despite challenges such as time constraints and weather, the overall impact was positive and underscored the adaptability of this approach in diverse educational settings. Importantly, the study provides empirical evidence from an Indonesian context, contributing to the global literature by showcasing its effectiveness in developing countries. Therefore, outdoor learning should be recognized as a transformative educational strategy that prepares students with the creativity, adaptability, and innovation skills required for the twenty-first century.

AUTHOR CONTRIBUTION STATEMENT

Agus Kistian contributed to the conceptualization of the study, the design of the research framework, and the critical revision of the manuscript for important intellectual content. Apif Bidala was responsible for data collection, conducting classroom observations, and drafting the initial version of the manuscript. Nursita Dewi contributed to data analysis, interpretation of findings, and refinement of the manuscript in alignment with international publication standards. All authors discussed the results, provided critical feedback, and approved the final version of the article to be submitted for publication.

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