

Enhancing Children's Creativity Through Art-Based Learning in Early Childhood: A Strategy to Stimulate Gross and Fine Motor Development

Uswatul Hasanah^{1✉}, Fi'isatil Kamila², Rika Wulandari³, Riila Caesar Rahmawati Khoirina⁴

¹²³⁴Department of Early Childhood Education, Universitas Trunojoyo Madura, Bangkalan, Indonesia

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ABSTRACT

Background of the study: Early childhood is a critical period for fostering creativity and developing motor and socio-emotional skills. Integrating art into early childhood education has the potential to stimulate these aspects in a holistic manner. However, there is still limited research on how art-based learning strategies affect children's overall development, especially in the context of Indonesian early childhood institutions.

Aims and scope of paper: This study aims to explore the effectiveness of implementing art as an integrated learning strategy at RA Bakti Telang. It focuses on examining the impact of art activities on the development of children's creativity, gross and fine motor skills, and socio-emotional abilities.

Methods: A qualitative case study approach was employed. Data were collected through classroom observations, in-depth interviews with teachers and parents, and documentation of art activities conducted at the school. Thematic analysis was used to interpret the findings.

Results: The study found that art activities such as traditional dance, hadroh (Islamic percussion performance), and coloring significantly enhanced children's creativity and positively stimulated both gross and fine motor development. Dance activities improved body coordination and balance, while coloring refined fine motor control through the use of writing tools. Additionally, participation in group art projects fostered social skills such as cooperation and empathy. A key challenge identified was the limited involvement of parents, particularly fathers, in supporting these activities.

Contribution: This study contributes to the development of a more inclusive and adaptive model of art education for early childhood settings. It offers practical recommendations for increasing family engagement and provides guidance for other early childhood education institutions seeking to implement more effective and comprehensive art-based programs.

INTRODUCTION

Creativity is a fundamental element that influences various aspects of a child's life, both academically and emotionally. It not only contributes to academic achievement but also enhances children's ability to think critically, solve problems innovatively, and adapt to life's challenges (Janine Coates, 2023). Research over the past decade has highlighted the significant role of creativity in supporting early childhood learning, which also has implications for the development of motor and socio-emotional skills (Suharyat et al., 2023). In this context, art emerges as an effective educational approach due to its multidimensional nature—it involves self-expression, talent development, and the transmission of cultural values.

The integration of art in early childhood education not only nurtures creativity but also stimulates the development of gross and fine motor skills, which are foundational for more complex abilities in later life. According to Hasanah and Priyantoro (2019), art has the potential to enrich learning experiences through activities that engage children physically, emotionally, and cognitively in a simultaneous and integrated manner. Therefore, incorporating art into early childhood curricula is highly relevant in supporting children's holistic development (Hasanah & Priyantoro, 2019).

RA Bakti Telang is one such institution that consistently integrates art into its learning process. Through programs such as traditional dance, hadroh (Islamic musical performance), pencak silat (Indonesian martial arts), and coloring activities, the school strives to create an engaging learning environment that stimulates both creativity and motor skills. However, program evaluations indicate opportunities for further development, particularly in integrating art with more systematic approaches aimed at improving gross motor, fine motor, and socio-emotional skills concurrently. Another challenge lies in the low level of father involvement, despite the crucial role of parental collaboration in supporting children's education (R Ariyana & Rini, 2020).

A review of existing literature reveals a gap in research concerning the integration of creativity, motor development, and socio-emotional learning through a unified art-based approach in early childhood education. Previous studies have typically examined these aspects in isolation, highlighting the need for more comprehensive research to bridge this gap (R Ariyana & Rini, 2020).

This study aims to explore the effectiveness of implementing art as an integrated learning strategy at RA Bakti Telang. In addition to fostering children's creativity, it investigates how art can be optimized to enhance gross and fine motor skills, while also strengthening collaboration between educational institutions and families. It is expected that this research will offer practical contributions to the development of more inclusive and structured art programs, both at RA Bakti Telang and in other early childhood education institutions. Ultimately, such programs are envisioned to cultivate a generation of children who are creative, adaptable, and equipped with essential motor skills for future success.

METHODS

Research Design

This study employed a qualitative approach using a case study method to analyze the implementation of art-based learning at RA Bakti Telang and its impact on the development of children's creativity, motor skills, and socio-emotional abilities.

Research Subjects

The primary subjects included children participating in the school's art programs, as well as their teachers and parents.

Data Collection Method

Data were collected through direct observations, in-depth interviews with teachers and parents, and documentation of art activities conducted at the school (Sumirah et al., 2022).

Data Analysis Technique

Observations focused on children's engagement in art activities and the progression of their motor skills, while interviews and documentation provided additional insights into the effectiveness of the program and the collaborative role of educators and families.

RESULT

The findings of this study indicate that art activities such as dance, hadroh, and coloring, implemented at RA Bakti Telang, effectively enhance children's creativity while simultaneously providing positive stimulation for the development of both gross and fine motor skills. These results highlight the potential of art as a holistic educational medium—not only facilitating idea exploration and self-expression but also reinforcing children's physical abilities. For instance, dance activities improve large muscle coordination and body balance, whereas coloring refines fine motor skills through precise control of writing tools.

Children's creativity was observed to increase through consistent participation in art routines, encouraging them to explore new ideas, think outside conventional patterns, and produce unique creative works. This suggests that art, when applied consistently, functions not merely as entertainment but as a strategic educational tool. Activities such as drawing competitions or the use of recycled materials during the pandemic further demonstrate art's high flexibility and adaptability across both formal and informal learning contexts.

However, the success of art programs is strongly influenced by the surrounding environment and the support provided. At RA Bakti Telang, the active involvement of teachers and mothers proved to be a significant contributing factor. Nevertheless, the limited participation of fathers reveals a gap in overall family involvement. This is a notable concern, considering the essential role of parents as primary supporters in early childhood education.

Moreover, the impact of art on children's creativity and motor skills appears to be context-dependent, particularly when not accompanied by a well-structured and flexible implementation strategy. Not all children exhibit the same initial interest or aptitude in art, thus requiring a more inclusive and adaptive approach to ensure that all children can benefit optimally. Another limitation of this study is the absence of quantitative data that could establish a causal relationship between art activities and motor skill development. In addition, the long-term impact of art participation on child development was not explored, rendering the findings more descriptive than generalizable.

Looking forward, the development of more specific evaluation instruments to measure children's creativity and motor skills is crucial. Future research could involve a larger and more diverse population, including children from various cultural and socio-economic backgrounds, to obtain more representative results. Furthermore, technology-based innovations—such as interactive art learning applications—present a promising opportunity to increase student engagement while offering a more modern and appealing approach to art education. The integration of technology also has the potential to expand access to quality art education, especially in regions with limited formal art education facilities. These results highlight the potential of art as a holistic educational medium—not only facilitating idea exploration and self-expression but also reinforcing children's physical abilities.

Table 1. Summary of Art Activity Impacts on Child Development at RA Bakti Telang

Art Activity	Developmental Focus	Observed Impact
Dance	Gross motor skills, creativity	Improved coordination, balance, and creative expression through body movement
<i>Hadroh</i>	Rhythm, teamwork, socio-emotional skills	Increased group cooperation and sense of rhythm
Coloring	Fine motor skills, creativity	Enhanced hand control and color experimentation; stimulated fine motor development
Recycled art projects	Creativity, adaptability	Encouraged innovation, environmental awareness, and problem-solving during pandemic

DISCUSSION

The findings of this study indicate that the art program implemented at RA Bakti Telang has a significant impact on the development of early childhood, particularly in areas such as creativity, gross motor skills, fine motor skills, and socio-emotional abilities. Art activities such as dance, hadroh, and coloring have proven to be effective and enjoyable learning media. Based on observations and interviews with teachers and parents, art functions not only as a means of self-expression but also as a strategic educational tool that holistically supports various aspects of child development.

One key finding highlights the impact of dance on gross motor development. Dance movements that involve large muscle coordination play an important role in improving body balance, agility, and children's confidence in controlling their body movements. This supports the study by Nasution and Sutapa (2020), which found that structured physical activities such as dance enhance proprioceptive abilities and gross motor skills in early childhood.

In addition, coloring activities significantly contribute to the development of fine motor skills. These activities train children in grip strength, movement precision, and hand-eye coordination through the use of tools like crayons and colored pencils. Children who initially struggled with holding writing tools began to show noticeable improvements in control and accuracy. This aligns with findings by Cameron et al. (2020), which indicate that visual art activities, including coloring, support pre-writing skills and fine motor development in young children.

Art also serves as an effective medium for fostering social interaction and emotional growth. Group art activities like hadroh require collaboration, coordination, and empathy among children. These interactions reflect Vygotsky's theory of the zone of proximal development, in which social engagement is central to learning and cognitive development (Tudge & Winterhoff, 2020). Through these shared experiences, children learn to take on roles, support one another, and develop mutual respect.

However, the study also reveals challenges in parental involvement, particularly among fathers. While mothers are actively engaged in supporting the art program, father participation remains limited. This is often due to time constraints and a lack of understanding of the importance of art in early childhood education. Yet research by Mayar et al. (2022) emphasizes that fathers' involvement—especially in physical activities like dance and sports—has a positive influence on children's development. Therefore, strategic efforts to increase father participation are essential to fully optimize the benefits of art-based learning in early childhood institutions.

Implications

The findings reinforce the argument that integrating art into early childhood education can accelerate children's holistic development. Therefore, educational institutions and policymakers in the field of early childhood education (ECE) should consider art as a core component of the

curriculum. Furthermore, the role of parents—particularly fathers—needs to be strengthened through inclusive family engagement programs.

Research Contribution

This study provides a significant contribution to the development of a holistic and integrated art-based learning model for early childhood education. By combining creativity, motor skills, and socio-emotional aspects into a unified approach, the study addresses a gap in existing literature, which has often examined these areas in isolation. The findings offer practical guidance for educators in designing art activities that align with the developmental needs of young children.

Limitations

This study has several limitations. First, the data collected are qualitative and descriptive in nature, which limits the ability to establish a causal relationship between art activities and child development through quantitative means. Second, the research was conducted within a single institution—RA Bakti Telang—making the findings less generalizable to broader populations. Additionally, the study did not explore the long-term impact of children's participation in art-based activities.

Suggestions

Educational institutions are encouraged to develop structured and inclusive art curricula that integrate creativity, motor development, and socio-emotional growth. Parental involvement, especially that of fathers, should be strengthened through community-based engagement programs. The use of interactive learning technologies is also recommended to expand access and enhance participation. Furthermore, the development of specific evaluation tools is essential to measure the impact of art activities accurately. Finally, future research should adopt quantitative and longitudinal approaches to explore the long-term effects of art education on child development more comprehensively.

CONCLUSION

This study concludes that the integration of art into the learning process at RA Bakti Telang has a positive impact on early childhood development, particularly in enhancing creativity, gross and fine motor skills, and socio-emotional abilities. Artistic activities such as dance, hadroh, and coloring have proven to be effective tools for fostering self-expression while simultaneously developing children's physical and social skills. In addition to creating an enjoyable learning environment, the art program also supports idea exploration and the holistic development of children's talents. However, the success of this program is significantly influenced by environmental support, active teacher engagement, and parental involvement—particularly the participation of fathers, which remains a key challenge. This gap highlights the need for more inclusive and collaborative approaches. The study contributes to the development of an integrated and adaptive art education model, with potential for broader implementation across early childhood education institutions. Future research involving quantitative and longitudinal methods is recommended to further validate the long-term impact of art on various aspects of child development.

AUTHOR CONTRIBUTION STATEMENT

UH and FK conceived the idea and conducted data collection. RW and RCRK contributed to the literature review. All authors reviewed and approved the final version of the manuscript.

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