



## Finger Painting Activities and Their Effects on Creativity in Early Childhood

Sharen Mella Bungge<sup>1\*</sup>, Durrotunnisa<sup>2</sup>, Hesti Putri Setianingsih<sup>3</sup>, Shofiyanti Nur Zuama<sup>4</sup>

<sup>1,2,3,4</sup>Universitas Tadulako, Indonesia

**\*Corresponding Author:** Sharen Mella Bungge      **E-mail:** melabungge@gmail.com

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### ABSTRACT

This study aims to determine the effect of finger painting activities on the creativity of children in Group B at Efrat Wayura Kindergarten. Using a quantitative descriptive approach, the research involved 15 children and employed observation, interviews, and documentation as data collection techniques. The findings indicate a clear improvement in children's creativity after participating in finger painting activities. Initially, many children demonstrated limited creative expression; however, after the intervention, a significant shift occurred, with more children showing higher levels of creative ability, including greater originality, imagination, and confidence in using colors and shapes. These results show that finger painting serves as an effective learning activity for fostering creativity in early childhood.

Keywords: Finger Painting Activities, Creativity, Early Childhood

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## INTRODUCTION

Education is fundamentally an effort to nurture and develop children's potential by encouraging them to engage actively in learning (Rachmawati & Kurniati, 2019). Learning serves as the core activity in the educational process at all levels yet it does not always proceed smoothly. Young children often require ongoing stimulation, motivation, and supportive environments to grow and develop optimally Nurhayati et al., (2019) Early childhood education plays a crucial role in this process, as it lays the foundation for children's physical, cognitive, emotional, social, and artistic development (Maghfiroh & Suryana, 2021). Creative expression is especially important during the early years because it enhances children's problem-solving abilities, confidence, imagination, and emotional understanding (Ilmiyah et al., 2024; Sutisna & Laiya, 2020).

Creativity in early childhood refers to the ability to think fluently, flexibly, and originally when producing ideas or solving problems (Kenedi, 2013; Novia & Rachmawati, 2025). highlights key indicators of creativity fluency, flexibility, and originality each of which emerges through interaction with supportive learning environments (Kurniati, 2022). Creative development is also influenced by opportunities for exploration, experimentation, and

expressive play (Mutiah, 2015). Thus, early childhood programs should provide stimulating artistic experiences, including activities that foster imagination and encourage children to express ideas freely through sensory-rich media (Winata, 2023).

Despite its importance, creativity development among young children is often constrained by limited learning media, insufficient opportunities for exploration, and teacher-centered instructional practices (Karmila, 2024). Observations in many early childhood settings reveal that children often struggle to combine colors, create imaginative drawings, or describe their artwork due to restricted stimulation, lack of creative opportunities, and minimal encouragement from teachers (Nurmalitasari, 2015). These challenges align with findings who report that children's creative expression frequently stagnates when learning relies on structured, product-oriented tasks rather than open-ended artistic experiences (Artika, 2018; Astuti, 2014; Sukatmi, 2011).

Finger painting is widely recognized as one of the most effective techniques for stimulating creativity in early childhood because it allows children to explore textures, colors, and movements using their hands directly (Rosalinda & Rusdiani, 2023). Studies demonstrate that finger-painting activities enhance children's imagination, fine motor coordination, pattern-making skills, and creative expression (Winata, 2023). Through this approach, children can communicate visual ideas without relying on verbal explanations, making it especially valuable for early learners who are still developing language skills. Finger painting also supports emotional expression, sensory integration, and spontaneous experimentation core components of artistic creativity (Kim et al., 2016).

Although previous research has shown that finger painting can improve artistic skills and creative expression, many of these studies focus primarily on the technical outcomes of artwork or on general improvements in artistic ability. Few studies have specifically examined how finger painting influences multiple dimensions of creativity such as fluency, originality, imagination, and expressive confidence within a natural classroom setting. Moreover, several existing studies are limited to short interventions and lack contextual detail related to the learning environment (Chantika et al., 2024). Therefore, a deeper investigation is required to understand how finger painting can address creativity problems observed in early childhood settings, particularly in contexts where children struggle to express imagination, combine colors, or explore new ideas.

This study contributes novelty by analyzing finger painting not merely as an art activity but as a targeted creative-development strategy, grounded in established psychological and educational theories. It explores how finger painting can overcome specific barriers to creativity such as limited curiosity, reliance on models, and hesitation to explore while also examining its role in fostering independent expression through sensory-based, open-ended experiences. Based on this background, the present study aims to examine the effect of finger painting activities on the creativity of children in Group B at Efrat Wayura Kindergarten, focusing on improvements in children's imaginative expression, creative confidence, and ability to generate original ideas during artistic activities.

## **RESEARCH METHODOLOGY**

### **Research Design**

This study used a quantitative approach with a pre-experimental design to test the hypothesis regarding the effect of finger painting activities on children's creativity. The specific design adopted was the One-Group Pretest–Posttest Design. This design allows the researcher to measure participants' creativity levels before the intervention (O1) and after the intervention (O2), enabling an effective analysis of the treatment's impact.

### **Research Participants**

The population in this study consisted of all students at Efrat Wayura Kindergarten in the 2023/2024 academic year, totaling 35 children. The sample was selected using purposive sampling, namely a sampling technique based on specific purposes or considerations. The selected sample consisted of all Group B students, totaling 17 children (7 boys and 10 girls) aged 5–6 years. This group was deliberately chosen because they were identified as having challenges in creativity development that aligned with the focus of the study.

### **Research Procedure**

The research was conducted in Group B of Efrat Wayura Kindergarten over a two-week period, from November 30 to December 14, 2024. The procedure consisted of three main stages: Pretest (O1), the initial stage in which children's creativity levels were measured using an observation sheet before the treatment was given. Treatment, in which children in Group B were involved in learning activities using the finger painting method designed in the Daily Lesson Plan (RKH). Posttest (O2), in which children's creativity levels were measured again using the same instrument to observe changes after the treatment period.

### **Instruments and Data Collection Techniques**

Data in this study were collected using several validated techniques and instruments. Observation was carried out systematically to measure children's creativity levels before and after the intervention, using an observation sheet arranged in a rubric format. Interviews were conducted semi-structurally with teachers to obtain supporting qualitative data related to children's creativity development, using an interview guide as the instrument. Documentation involved the collection of photos, children's artwork, and Daily Lesson Plans (RKH) using a camera and field notes to strengthen the research findings.

### **Data Analysis Techniques**

Data analysis was conducted using descriptive and inferential approaches. Descriptive analysis was used to describe children's creativity scores and categorize them into four levels: Not Yet Developed (BB – One Star), Beginning to Develop (MB – Two Stars), Developing as Expected (BSH – Three Stars), and Very Well Developed (BSB – Four Stars). Inferential analysis used the Paired Samples t-test with SPSS software to test whether there was a significant difference between the mean scores of the pretest and posttest. Decisions were based on a significance value of  $\alpha = 0.05$ . The null hypothesis ( $H_0$ ) was rejected if the  $p$ -value  $< 0.05$  or if the calculated  $t$ -value  $> t$ -table, indicating a significant effect of finger painting

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activities on children's creativity. Conversely, H0 was accepted if the p-value  $\geq 0.05$  or if the calculated t-value  $\leq$  t-table, indicating no significant effect.

## RESULTS AND DISCUSSION

### Results

#### Findings Before the Finger Painting Intervention

The preliminary observations conducted at Efrat Wayura Kindergarten aimed to identify the baseline level of children's creativity prior to the finger painting intervention. The results indicated that children in Group B displayed relatively low learning enthusiasm, with many showing limited active participation during learning activities. This low engagement was particularly evident before the treatment was implemented.

In addition, several issues related to children's creativity were noted. Many children had difficulty combining colors, showed limited fluency in painting images, and struggled to narrate or explain their artwork. These observations revealed that the children's creativity had not yet developed as expected. The initial creativity scores before the intervention were summarized in the histogram presented in Figure 1.

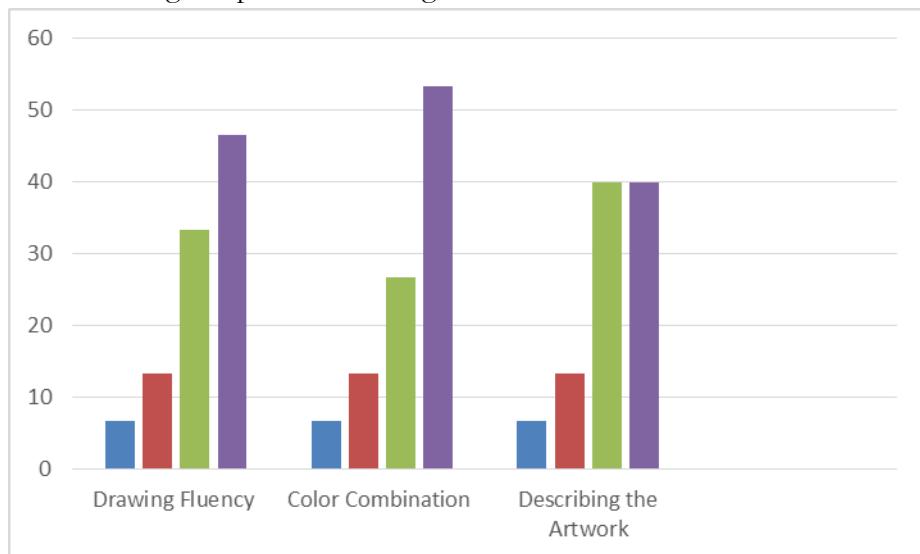


Figure 1. Histogram of Children's Creativity Before Treatment

Based on the summary presented in Figure 1, it can be concluded that most children were categorized as Beginning to Develop (MB) and Not Yet Developed (BB). Many children still lacked fluency in color mixing, drawing recognizable forms, and verbalizing the meaning of their artwork. These findings reinforced the need to implement a finger painting intervention to stimulate improvements in creativity.

#### Findings After the Finger Painting Intervention

The creativity scores after the finger painting activities are presented in the histogram below.

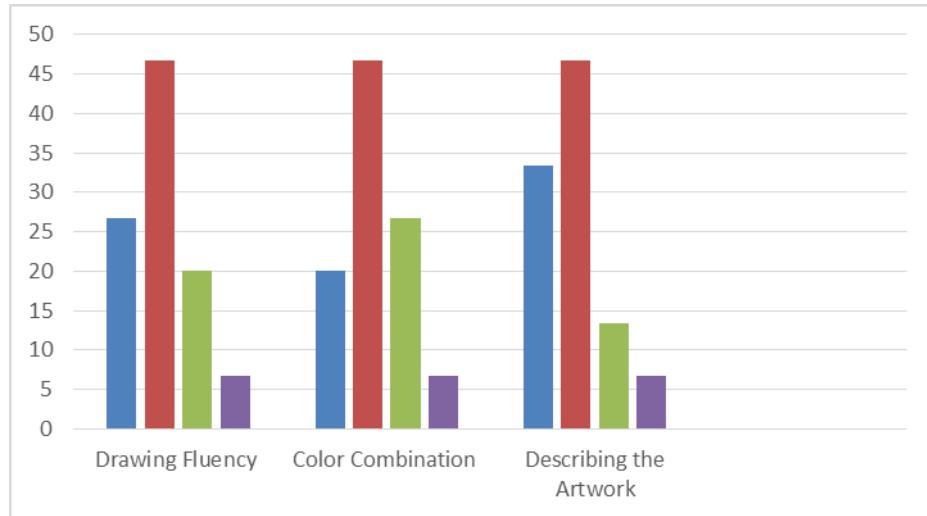


Figure 2. Histogram of Children's Creativity After Treatment

The results illustrated in Figure 2 show a marked improvement, with most children now falling into the categories of Very Well Developed (BSB) and Developing as Expected (BSH). This indicates that the finger painting intervention had a significant and positive influence on the development of creativity among Group B children at Efrat Wayura Kindergarten.

Table 1. Results of the Paired Samples t-test on Children's Creativity Before and After Finger Painting Activities

Statistical Component	Pretest	Posttest	Difference	Test Statistics
Mean	2.05	3.28	1.23	—
Standard Deviation (SD)	0.41	0.39	—	—
t-value	—	—	—	8.742
df (degrees of freedom)	—	—	—	16
p-value (Sig. 2-tailed)	—	—	—	0.000
Effect Size (Cohen's d)	—	—	—	2.12 (Very Large Effect)

As shown in Table 1, the average creativity score during the pretest was 2.05, which increased significantly to 3.28 in the posttest. This improvement of 1.23 points indicates a strong enhancement in children's creative abilities after participating in the finger painting activities. The Paired Samples t-test produced a t-value of 8.742 with df = 16 and a p-value of 0.000 (< 0.05), demonstrating that the difference between pretest and posttest scores is highly significant.

The effect size, represented by Cohen's d = 2.12, falls into the very large category, indicating that finger painting had not only statistically significant effects but also substantial practical influence on children's creativity. Following the intervention, children showed greater fluency in expressing visual ideas, improved color mixing skills, and stronger narrative abilities in describing their artwork. These findings confirm that finger painting is an effective

and developmentally appropriate learning activity that significantly stimulates creativity in young children in Group B at Efrat Wayura Kindergarten.

## **Discussion**

This study demonstrates that finger painting interventions exert a significant positive effect on enhancing early childhood creativity in Group B at Efrat Wayura Kindergarten. The findings align with an expanding body of evidence emphasizing the importance of sensory-based learning as a foundation for cognitive and affective development in young children. The improvements observed were not merely general, but were specifically reflected in three essential components of creativity visual fluency, color elaboration, and narrative articulation drawing upon Parnes' creativity framework and the creativity development strategies described by Rachmawati and Kurniati.

### **Enhanced Fluency in Visual Expression**

The results show substantial improvement in children's fluency, reflected in their ability to generate more visual ideas and produce more varied drawings after the intervention. Prior to treatment, many children appeared hesitant and produced only one or two simple images. After the intervention, however, children demonstrated greater spontaneity and confidence in generating diverse visual forms. This supports the view that process-oriented art activities, such as finger painting, release children from the pressure of creating "perfect" or representational artwork, enabling greater freedom and flexibility in idea production.

Research on early childhood art learning further confirms that tactile activities like finger painting reduce both motor and psychological barriers, thus promoting more spontaneous and diverse creative output (Chantika et al., 2024). Because finger painting allows direct translation of imagination into visual forms without the mediation of tools, it supports divergent thinking a central feature of creativity. The supportive environment created by teachers as facilitators rather than evaluators also plays a crucial role in establishing a psychologically safe atmosphere for exploration, which is essential for nurturing creativity (Kenedi, 2013).

### **Improved Elaboration and Color Exploration**

The second notable improvement relates to children's ability to combine and explore colors. Before the intervention, children mostly used basic primary colors with limited variety. Through finger painting, children actively experimented with color mixing, effectively engaging in informal scientific inquiry. This reinforces previous findings showing that children's creativity can be stimulated through hands-on color-mixing activities (Sukatmi, 2011).

The physical interaction with materials enables deeper conceptual understanding than verbal explanations alone. Through color mixing, children construct their own knowledge of color harmony and contrast, reflecting more advanced aesthetic awareness. Instead of simply "coloring a picture," children learn to "paint with colors," demonstrating a shift from technical execution to creative elaboration. This aligns with recommendations that early childhood art education should emphasize perceptual sensitivity and creative exploration rather than technical precision (Novia & Rachmawati, 2025).

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### Growth in Narrative Ability Through Artwork

One of the most compelling findings of the study was the improvement in children's ability to narrate their artwork. Initially, many children struggled to verbalize the ideas behind their drawings. After the intervention, they became more expressive and capable of constructing coherent narratives. This highlights that finger painting not only stimulates visual creativity but also supports the development of symbolic thinking and early language skills. Artistic expression often serves as a bridge to verbal communication, enabling children to articulate ideas prompted by their own creations. From the perspective of play psychology, when children create something personal and meaningful, their intrinsic motivation to share its meaning increases (Nasution & Srikandi, 2021). Describing their artwork requires children to organize thoughts, apply descriptive vocabulary, and structure events skills that are foundational for early literacy development. Teachers who encourage storytelling around children's artwork further reinforce this linguistic growth, making finger painting an effective medium for holistic expression.

Collectively, these findings provide strong empirical evidence that finger painting is more than a recreational activity it is a strategic pedagogical tool capable of stimulating multiple dimensions of creativity in early childhood. The implications for early childhood educators are clear: sensory-rich and process-oriented art activities should be intentionally integrated into the curriculum to nurture flexible thinkers, expressive communicators, and innovative young learners (Mala & Sandy, 2023; Rosalinda & Rusdiani, 2023).

Finger painting engages the senses, stimulates cognitive processing, and builds emotional expression, making it a developmentally appropriate and highly effective approach for enhancing creativity as emphasized in child-centered learning frameworks. Its impact on visual, aesthetic, and linguistic creativity demonstrates its relevance not only for art development but also for broader educational goals.

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