



Improving Children's Fine Motor Skills Through Finger Painting Activities in Kindergarten

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Abstrak

Kemampuan motorik halus merupakan aspek perkembangan yang menentukan kesiapan anak menulis dan kemandirian dalam aktivitas sehari-hari, namun di Kelompok B TK Islam Baiturrahim Kota Jambi keterampilan ini belum berkembang optimal. Penelitian ini bertujuan meningkatkan kemampuan motorik halus anak usia 5–6 tahun melalui kegiatan finger painting. Penelitian menggunakan pendekatan Penelitian Tindakan Kelas (PTK) model Kemmis dan McTaggart yang dilaksanakan dalam dua siklus, masing-masing terdiri atas tahap perencanaan, pelaksanaan, observasi, dan refleksi. Subjek penelitian adalah 15 anak Kelompok B semester genap tahun ajaran 2025/2026. Data dikumpulkan melalui observasi terstruktur menggunakan lembar pengamatan delapan indikator motorik halus dengan skala empat kategori (BB, MB, BSH, BSB), kemudian dianalisis secara deskriptif kuantitatif dengan menghitung rata-rata skor dan persentase ketuntasan. Hasil penelitian menunjukkan peningkatan yang progresif: rata-rata skor Siklus I sebesar 2,75 (Berkembang Sesuai Harapan) dengan ketuntasan 75%, meningkat menjadi 3,94 (Berkembang Sangat Baik) pada Siklus II dengan ketuntasan gabungan BSH dan BSB sebesar 100% serta 94% anak mencapai kategori tertinggi. Seluruh delapan indikator pada Siklus II mencapai sekurang-kurangnya kategori Berkembang Sesuai Harapan sesuai milestone anak usia 5–6 tahun. Disimpulkan bahwa kegiatan finger painting yang dirancang secara bertahap—dari pengenalan satu warna dasar menuju eksplorasi dua hingga tiga warna dan pola sederhana—efektif meningkatkan kemampuan motorik halus anak usia dini.

Kata Kunci: Finger Painting; Motorik Halus; Anak Usia Dini

Abstract

Fine motor skill is a developmental aspect that determines a child's writing readiness and independence in daily activities; however, in Group B of TK Islam Baiturrahim Jambi City this skill had not developed optimally. This study aims to improve the fine motor skills of children aged 5–6 years through finger painting activities. It employed a Classroom Action Research (CAR) approach using the Kemmis and McTaggart model, conducted in two cycles, each comprising planning, acting, observing, and reflecting stages. The subjects were 15 children of Group B in the even semester of the 2025/2026 academic year. Data were collected through structured observation using an eight-indicator fine motor observation sheet with a four-category scale (BB, MB, BSH, BSB), then analysed using descriptive quantitative techniques by calculating mean scores and completion percentages. The results showed a progressive improvement: the mean score in Cycle I was 2.75 (Developing as Expected) with 75% completion, rising to 3.94 (Developing Very Well) in Cycle II with combined BSH and BSB completion of 100% and 94% of children reaching the highest

category. All eight indicators in Cycle II reached at least the Developing-as-Expected category, consistent with the developmental milestones for children aged 5–6 years. It is concluded that finger painting activities designed in stages—from introducing one basic colour toward exploring two to three colours and simple patterns—are effective in improving early childhood fine motor skills.

Keywords: *Finger Painting; Fine Motor Skill; Early Childhood*

Introduction

Early childhood is a golden age that is highly decisive for all aspects of a child's development. In the range of zero to six years, the growth of brain cells and nerve networks proceeds very rapidly, so that appropriate stimulation during this period has a long-term influence on the quality of the child's later development [1], [2]. One aspect that demands directed stimulation is physical-motor development, particularly fine motor skills.

Sumantri explains that fine motor skill is the organized use of small muscle groups such as the fingers and hands, which often requires precision and eye-hand coordination [3]. This skill is an important foundation for a child's readiness to hold a pencil, write, cut, button clothes, and perform various activities that demand precise finger movement [4], [5]. Children with good fine motor skills are better prepared to enter the next level of education and more independent in meeting their basic daily needs.

The Child Development Achievement Level Standards (STPPA), as regulated in Minister of Education and Culture Regulation No. 137 of 2014, emphasize that children aged 5–6 years are expected to be able to coordinate finger movements well, control hand movements that use fine muscles, and produce work through various media [6]. Therefore, early childhood education institutions are obligated to provide activities that are deliberately designed to stimulate the attainment of these standards.

One of the activities widely recommended for stimulating fine motor skills is finger painting, namely painting by applying coloured paste directly with the

fingers without tools [7]. This activity provides direct sensory experience that can improve the control and flexibility of children's fingers while fostering creativity and self-expression [8], [9]. Through the movements of pressing, sliding, and forming patterns with the fingers, the small hand muscles are trained repeatedly, while eye-hand coordination is sharpened simultaneously [10], [11].

Theoretically, the effectiveness of finger painting can be explained through the view that young children learn best through concrete and enjoyable play activities. Directed play gives children room to practise new skills without pressure, strengthens self-regulation, and fosters persistence [12]. Finger painting fulfils this learning-through-play principle because it is exploratory, multisensory, and free, so that children are encouraged to engage actively and repeatedly.

Several prior studies show that finger painting positively affects the fine motor development of preschool children [13], [14] and is effectively applied through classroom action research [15], [10]. Similar studies on other media such as mosaic, collage, threading, and clay play also report an improvement in fine motor achievement from the first cycle to the second cycle, exceeding the success indicator [16], [17]. These findings reinforce the conviction that finger-movement-based activities carried out in a structured and repeated manner can improve children's fine motor skills.

Prior studies generally emphasize the influence of finger painting in general, and few have detailed the staging of the activity from introducing one basic colour toward exploring several colours and simple patterns as a systematic gradual improvement strategy. Herein lies the

research gap addressed by this study. Based on initial observation in Group B of TK Islam Baiturrahim Jambi City, some children were still stiff in moving their fingers, imprecise in following simple patterns, lacked control of finger pressure, and produced untidy work. Some children were also not yet persistent and easily lost concentration. This condition shows the need for a structured instructional improvement action.

Starting from these problems, this study aims to improve the fine motor skills of Group B children at TK Islam Baiturrahim through finger painting activities designed in stages. The urgency of the study lies in providing an applicable model of finger painting activity for kindergarten teachers in stimulating fine motor skills from an early age, while enriching the body of classroom action research in early childhood education. The novelty of this study lies in its emphasis on the colour-and-pattern staging strategy as an action pattern that teachers can practically replicate.

Research Method

This study used a Classroom Action Research (CAR) approach with the Kemmis and McTaggart spiral model, conducted in two cycles. Each cycle consists of four stages, namely planning, acting, observing, and reflecting [18]. The reflection result at the end of one cycle becomes the basis for improving the action in the next cycle, as illustrated in Figure 1.



Figure 1. Classroom Action Research Flow of the Kemmis and McTaggart Model

Source: Adapted from Hasmawaty et al. (2024) [18]

The study was conducted at TK Islam Baiturrahim Jambi City in the even semester of the 2025/2026 academic year. The subjects were 15 Group B children taught by the teacher-cum-researcher, assisted by an observer. Each cycle was conducted in two sessions. Cycle I took place on 12 and 19 January 2026, while Cycle II took place on 22 and 27 January 2026. The action schedule is briefly presented in Table 1.

Table 1. Action Implementation Schedule per Cycle

Cycle	Session	Date	Activity Focus
I	1	12 Jan 2026	Introducing finger painting with 1 basic colour
I	2	19 Jan 2026	Consolidating finger movement with 1 basic colour
II	1	22 Jan 2026	Exploring 2–3 colours and simple patterns
II	2	27 Jan 2026	Consolidating colour and pattern combinations

Source: Primary data (2026)

Action Procedure

In the planning stage, the researcher developed daily lesson plans, prepared finger painting media (safe/non-toxic paint, paper, and work mats), compiled observation sheets, and set the success indicators. In the action stage, the teacher opened the activity with apperception and demonstration, then guided the children to perform finger painting according to the cycle focus. In the observation stage, the observer recorded each child's attainment on the eight-indicator observation sheet. In the reflection stage, the researcher and observer analysed the observation results to identify still-weak indicators and formulate improvements for the next cycle.

The Cycle I action focused on introducing finger painting with one basic colour so that children would become accustomed to the paint texture and basic finger movements. Based on the Cycle I reflection, the Cycle II action was developed into exploring two to three colours and creating simple patterns, accompanied by providing pattern examples and strengthening motivation so that children would be more persistent and confident.

Data Collection Technique

Data collection was carried out through structured observation and documentation. The observation sheet contained eight fine motor indicators, namely: (1) finger coordination when dipping the finger into the paint; (2) the ability to press and move the finger on the paper; (3) precision in following simple patterns/lines with the finger; (4) flexibility of finger movement in forming shapes; (5) control of finger pressure strength on the medium; (6) neatness of the finger painting work; (7) the child's independence in carrying out the activity; and (8) persistence and concentration during the activity. These indicators were developed by referring to the concept of fine motor skills [3] and the Child Development Achievement Level Standards [6]. The Developing-as-Expected (BSH) category represents the attainment of the fine motor milestone expected of children aged 5–6 years.

Data Analysis Technique

Each indicator was assessed using a four-category scale in accordance with early childhood development assessment guidelines, namely Not Yet Developing (BB, score 1), Beginning to Develop (MB, score 2), Developing as Expected (BSH, score 3), and Developing Very Well (BSB, score 4). Data were analysed descriptively and quantitatively by calculating the mean score of each indicator and the completion percentage using Equation 1.

$$P = (f / N) \times 100\% \quad (1)$$

where P is the percentage, f is the frequency of children in a certain category,

and N is the total number of children. The success indicator was set such that at least 80% of children reach the Developing-as-Expected (BSH) category or higher [11]. When the success indicator was achieved, the cycle was stopped.

Findings and Discussion

1. Cycle I Results

In Cycle I, the finger painting activity was introduced with one basic colour. The observation of the eight fine motor indicators showed a mean score of 2.75 of a scale of 4.00, which is in the Developing-as-Expected category. The distribution of children's attainment in Cycle I is presented in Table 2.

Table 2. Distribution of Children's Fine Motor Attainment in Cycle I

No	Attainment Category	Percentage (%)	Note
1	BB — Not Yet Developing	0	—
2	MB — Beginning to Develop	25	Not yet complete
3	BSH — Developing as Expected	75	Complete
4	BSB — Developing Very Well	0	—
	Mean score	2.75 / 4.00	BSH

Source: Processed primary data (2026)

As shown in Table 2, 75% of children had reached the Developing-as-Expected category, while 25% were still in the Beginning-to-Develop category. To clarify which indicators were still weak, the mean score of each indicator in Cycle I is presented in Table 3.

Table 3. Recapitulation of Scores per Indicator in Cycle I

No	Fine Motor Indicator	Score	Category
1	Finger coordination when dipping into paint	3.0	BSH
2	Pressing and moving the finger on paper	3.0	BSH
3	Precision in following simple patterns/lines	2.5	MB-BSH
4	Flexibility of finger movement in shaping	3.0	BSH
5	Control of finger pressure on the medium	3.0	BSH
6	Neatness of the finger painting work	2.5	MB-BSH
7	Independence in carrying out the activity	3.0	BSH
8	Persistence and concentration	2.0	MB
	Mean	2.75	BSH

Source: Processed primary data (2026)

Table 3 shows that the weakest indicator in Cycle I was persistence and concentration (indicator 8) with a score of 2.0, followed by precision in following patterns (indicator 3) and neatness of work (indicator 6), each of which obtained a score of 2.5. This result is understandable given that some children were encountering the paint texture for the first time and were still hesitant to dip their fingers, so they were not yet accustomed to sustaining attention throughout the activity. Based on this reflection, the researcher designed improvements for Cycle II in the form of adding colour variation, providing simple pattern examples, and strengthening

motivation so that children would be more persistent and tidy.

2. Cycle II Results

In Cycle II, the activity was developed into exploring two to three colours and creating simple patterns. The observation results showed a significant improvement, with a mean score reaching 3.94 of a scale of 4.00, in the Developing-Very-Well category. The distribution of children's attainment in Cycle II is presented in Table 4.

Table 4. Distribution of Children's Fine Motor Attainment in Cycle II

No	Attainment Category	Percentage (%)	Note
1	BB — Not Yet Developing	0	—
2	MB — Beginning to Develop	0	—
3	BSH — Developing as Expected	6	Complete
4	BSB — Developing Very Well	94	Complete
	Mean score	3.94 / 4.00	BSB

Source: Processed primary data (2026)

The detailed score of each indicator in Cycle II is presented in Table 5. Almost all indicators obtained the maximum score, and the persistence-concentration indicator, which had been the weakest, experienced the most prominent improvement.

Table 5. Recapitulation of Scores per Indicator in Cycle II

No	Fine Motor Indicator	Score	Category
1	Finger coordination when dipping into paint	4.0	BSB
2	Pressing and moving the	4.0	BSB

	finger on paper		
3	Precision in following simple patterns/lines	4.0	BSB
4	Flexibility of finger movement in shaping	4.0	BSB
5	Control of finger pressure on the medium	4.0	BSB
6	Neatness of the finger painting work	4.0	BSB
7	Independence in carrying out the activity	4.0	BSB
8	Persistence and concentration	3.5	BSH–BSB
	Mean	3.94	BSB

Source: Processed primary data (2026)

Tables 4 and 5 show that in Cycle II no child remained in the Not-Yet-Developing or Beginning-to-Develop category. As many as 94% of children reached the Developing-Very-Well category and the remaining 6% were in the Developing-as-Expected category, so that combined completion reached 100%. Crucially, all eight indicators attained at least the Developing-as-Expected category, meaning every targeted fine motor skill reached the developmental milestone expected of children aged 5–6 years. This attainment has exceeded the established success indicator, namely at least 80% of children reaching the BSH category or higher.

3. Between-Cycle Comparison

The comparison of attainment between Cycle I and Cycle II is presented in Table 6 to show the magnitude of the improvement in the mean score and category distribution.

Table 6. Comparison of Fine Motor Attainment Between Cycles

Cycle	Mean Score	BB (%)	MB (%)	BSH (%)	BSB (%)
Cycle I	2.75	0	25	75	0

Cycle II	3.94	0	0	6	94
Increase	+1.19	—	–25	–69	+94

Source: Processed primary data (2026)

Based on Table 6, the mean fine motor score of children increased by 1.19 points, from 2.75 in Cycle I to 3.94 in Cycle II. The trend of the mean score improvement between cycles is shown visually in Figure 2, the shift in the distribution of attainment categories is presented in Figure 3, and the comparison of the score of each indicator in Figure 4.

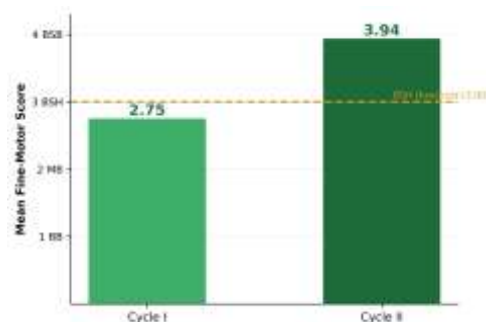


Figure 2. Mean Fine Motor Score per Cycle

Source: Processed primary data (2026)

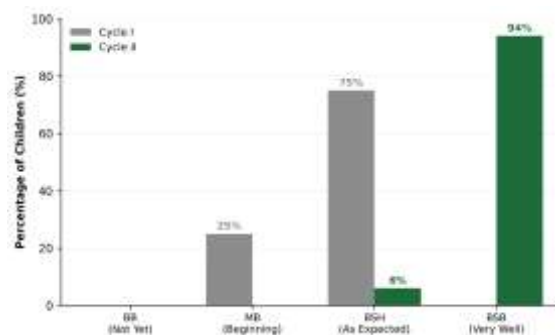


Figure 3. Distribution of Fine Motor Attainment Categories per Cycle

Source: Processed primary data (2026)

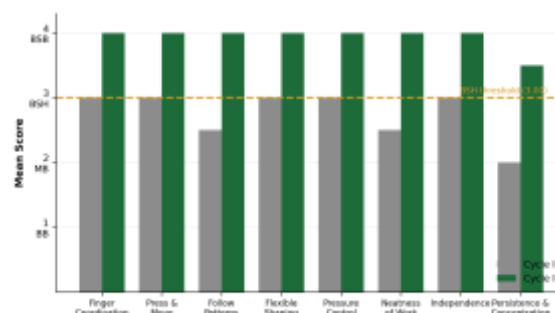


Figure 4. Comparison of Scores per Fine Motor Indicator

Source: Processed primary data (2026)

Figures 2, 3, and 4 clarify the progressive improvement. Figure 3 shows that the Beginning-to-Develop category, which was 25% in Cycle I, disappeared entirely in Cycle II, while the Developing-Very-Well category jumped from 0% to 94%. Figure 4 shows that all indicators rose, with the largest jump in the persistence-concentration indicator (from 2.0 to 3.5) and in precision in following patterns and neatness of work (from 2.5 to 4.0). Notably, in Cycle II every indicator sits at or above the Developing-as-Expected threshold (score 3.00), confirming that all targeted skills reached the age 5–6 milestone.

4. Discussion

The results of this study confirm that finger painting activities designed in stages are effective in improving children's fine motor skills. The improvement can be explained from several angles. First, staging the activity from one basic colour toward exploring several colours provides a gradually increasing challenge, so that children gain repeated practice that strengthens eye-hand coordination and finger flexibility [19], [3]. The repetition of pressing, sliding, and pattern-forming movements with the fingers intensively stimulates the small hand muscles, in line with the concept that fine motor skills develop through structured and consistent practice [11], [2].

Second, the enjoyable and free nature of finger painting makes children more persistent and concentrated. This explains why the persistence-and-concentration aspect, which was initially the weakest in Cycle I (score 2.0), showed the most prominent improvement in Cycle II (score 3.5). This finding aligns with the view that directed play strengthens children's self-regulation and attention span [12], as well as with studies showing the important role of an enjoyable activity atmosphere in fostering children's engagement [20], [8].

Third, the colour and pattern exploration in Cycle II not only trained motor skills but

also provided room for children's expression and creativity, which in turn increased their engagement in the activity [21], [9]. Providing simple pattern examples as a result of the Cycle I reflection proved to help children improve their precision in following patterns and the neatness of their work, two indicators that were initially weak. This shows that the reflection cycle in CAR functions as it should, namely guiding well-targeted action improvement [18].

This finding reinforces prior research concluding that finger painting effectively improves the fine motor skills of young children [15], [13], [14]. The pattern of improvement from the first cycle to the second cycle, exceeding the 80% success indicator, is also consistent with findings on other media such as threading, collage, and clay play [16], [17]. Thus, this study not only confirms the effectiveness of finger painting but also contributes a colour-and-pattern staging strategy that teachers can apply practically in kindergarten.

The practical implication of this study is that kindergarten teachers can make finger painting a structured routine activity, paying attention to the staging of difficulty levels and providing feedback that fosters motivation. A limitation of this study lies in the relatively small number of subjects (15 children) and the scope of a single institution, so the generalization of findings must be done cautiously. Further research is advised to use a broader range of subjects and to compare finger painting with other fine motor stimulation media.

Conclusion

Based on the findings, it can be concluded that finger painting activities designed in stages are proven effective in improving the fine motor skills of Group B children at TK Islam Baiturrahim Jambi City. The improvement is shown by the rise in the mean score from 2.75 (Developing as Expected) in Cycle I to 3.94 (Developing Very Well) in Cycle II, with completion rising from 75% to 100% and 94% of

children reaching the highest category, exceeding the established success indicator. By the end of the study, all eight indicators had reached at least the Developing-as-Expected category, consistent with the developmental milestones expected of children aged 5–6 years. The staging of the activity from introducing one basic colour toward exploring several colours and simple patterns, accompanied by providing pattern examples and strengthening motivation as a result of reflection, became the key to the success of the action. This study recommends that kindergarten teachers make finger painting one of the structured routine activities for stimulating fine motor skills, and recommends further research with more varied media and actions on a broader range of subjects.

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