

**IMPROVING FINE MOTOR ABILITIES OF EARLY CHILDHOOD THROUGH DRAWING AND COLORING ACTIVITIES BASED ON PARTICIPATORY ACTION RESEARCH AT INTEGRATED PAUD KEMALA BHAYANGKARI 14 PANYABUNGAN**

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**Abstract**

This study aims to improve the fine motor skills of early childhood through the implementation of drawing and coloring activities in the Integrated PAUD Kemala Bhayangkari 14 Panyabungan. The study used a Participatory Action Research (PAR) approach with two cycles including the planning, implementation, observation, and reflection stages. The activity involved 133 students divided into groups of Kindergarten A and Kindergarten B. The research instrument used an observation sheet with a rating scale of 1-4, namely Very Well Developed (BSB), Developed According to Expectations (BSH), Starting to Develop (MB), and Not Yet Developed (BB) and analyzed using percentages to see improvements between cycles. The results showed an increase in the percentage of the BSB category from 27% in cycle I to 46% in cycle II. These findings indicate that drawing and coloring activities designed in a structured and reflective manner are effective in stimulating the fine motor development of early childhood.

**Keywords:** Drawing, Coloring, Fine Motor Skills, Early Childhood

**INTRODUCTION**

Fine motor development is a key foundation for early childhood growth and development because it directly influences the skills needed for daily activities and future academic pursuits. Fine motor skills involve complex coordination between nerves, muscles, eyes, and fingers, so children need consistent stimulation from an early age to optimize their development. Stimulation through coloring activities can encourage children's active involvement in regularly using the small muscles of their hands, resulting in significant improvement in fine motor skills over time. Coloring activities can be an effective way to develop hand strength and writing skills in early childhood. Improved fine motor skills have been observed after implementing structured and measured coloring activities. Visual arts activities are not merely entertainment but also meaningful learning strategies in early childhood education. Therefore, selecting activities such as drawing and coloring in the

context of early childhood education (Early Childhood Education) is an appropriate choice to stimulate overall fine motor development (Marhaeni et al., 2022).

Drawing is one activity that can stimulate neuromuscular coordination between a child's hands and eyes in a natural and enjoyable way. In drawing activities, children are encouraged to use the fine muscles in their hands to create shapes or lines according to their imagination, which in turn trains their hand control skills more intensively. Free-form drawing activities can gradually improve students' fine motor skills over several learning cycles. This improvement occurs because children are given freedom to express themselves while practicing better hand control than before. Consistently providing drawing assignments can help children become more skilled at handling complex fine motor tasks. Creative visual activities can serve as an important learning medium in early childhood development. Therefore, planning coloring and drawing activities is part of a motor stimulation strategy in early childhood education that educators should seriously consider (Sulastri, 2019).

Art activities in general, both coloring and drawing, play a role not only in stimulating fine motor skills but also in fostering creativity and self-expression in children. The process of choosing colors, shapes, and how to fill the drawing space provides them with a space to express thoughts and feelings visually. This indirectly develops creative thinking skills and imagination, essential in early development. Activities that utilize free finger movement help children better sense and control fine movements. Finger painting activities also provide a fun learning experience while enhancing children's sensory awareness of texture and hand movement. Therefore, art activities in any form provide a rich medium for children to develop various aspects of their fine motor skills as well as their creative abilities (Ditha et al., 2025).

The use of visual arts activities in early childhood education is also linked to children's readiness for advanced skills such as handwriting and proper writing. Writing is a complex skill that requires a strong foundation of fine motor skills, including good eye-hand coordination and stable finger control. Children who are familiar with coloring and drawing activities are better prepared when they begin learning to write. In some cases, children who do not receive sufficient fine motor stimulation show difficulty writing efficiently when they enter the next level of education. Therefore, drawing and coloring activities are not merely creative activities, but integral parts of a comprehensive educational strategy to prepare young children for higher learning demands (Permatasari et al., 2024).

Kemala Bhayangkari 14 Panyabungan Integrated Early Childhood Education (PAUD) understands the importance of fine motor stimulation, thus choosing drawing and coloring activities as part of a structured and enjoyable learning environment. Within the PAUD environment, these activities are not simply offered as free-form activities but are integrated into the daily curriculum, using a competitive approach that motivates children. This competitive approach was chosen to foster enthusiasm and confidence in children when presenting their work to peers and educators. This healthy competitive atmosphere is expected to avoid creating pressure, but instead encourage children to strive for excellence while still enjoying the process. Children's involvement in these activities demonstrated high enthusiasm, as evidenced by their active participation in every stage of the activity. Thus, the competitive approach in PAUD not only impacts fine motor skills but also children's emotional and social aspects, such as courage to perform and interaction with peers (Suheti et al., 2025).

Structured activities such as drawing and coloring competitions also provide opportunities for teachers to observe each child's individual development. Teachers can note which motor skills have developed and which still need further stimulation. Observations like these provide crucial data for designing learning interventions tailored to each child's individual needs. A responsive learning approach like this is consistently recommended in early childhood education, as each child develops at a different pace. Therefore, the teacher's role is not merely as a facilitator of activities but also as an active observer of development. Subsequent activity planning becomes more accurate because it is based on actual observational findings in the field (Husaen, 2024).

Within the context of child development theory, fine motor stimulation at an early age is also linked to broader sensory and cognitive development. When children color and draw, they not only activate their hand muscles but also think about color, shape, and pattern. This thinking process involves cognitive skills such as color recognition, planning the shape of the image, and simple problem-solving when faced with difficult-to-color sections of the image. These activities help children integrate their motor skills with visual comprehension and creative thinking. Thus, these activities impact not only motor skills but also cognitive and visual perception simultaneously. This demonstrates that fine motor stimulation through creative activities is a multidimensional approach to early childhood development (Marhaeni et al., 2022).

Drawing and coloring activities also positively impact children's emotional development, particularly in terms of pride and personal accomplishment. When children successfully complete a drawing or color as they wish, they experience a sense of satisfaction that increases their motivation to learn. Children involved in finger painting activities feel satisfaction and pride in their work, which emotionally strengthens their engagement in the learning process. This sense of pride can then positively influence their confidence in learning other skills later in life. Therefore, these activities also foster a positive attitude toward learning from an early age. This emotional-focused learning approach is central to holistic early childhood education (Rohmah & Tasuah, 2024).

Despite its numerous benefits, drawing and coloring activities do not automatically yield optimal results without the support of a conducive learning environment and the active role of educators. The quality of stimulation depends heavily on how teachers facilitate the activities, model, and provide feedback that supports children's development. When teachers provide clear instructions, motivate children, and create a pleasant atmosphere, children's fine motor development is more optimal than when activities are conducted without directed guidance. This indicates that the success of fine motor stimulation depends not only on the type of activity but also on the quality of its implementation by educators. Therefore, teacher training and understanding of the role of fine motor stimulation are crucial aspects of early childhood development programs.

Considering these research findings, it is clear that drawing and coloring activities are effective strategies for stimulating fine motor skills in early childhood when designed and implemented appropriately. These activities not only help develop small muscle control and hand-eye coordination but also support children's creative, cognitive, emotional, and social development. Integrated Early Childhood Education (PAUD) Kemala Bhayangkari 14 Panyabungan strives to utilize this diversity of visual arts activities in daily learning to provide

comprehensive stimulation for students. Thus, this study is expected to contribute to a deeper understanding of the role of art activities in the development of fine motor skills in early childhood (Hazhari et al., 2024).

## IMPLEMENTATION METHOD

This research used a Participatory Action Research (PAR) approach with two cycles. This model was chosen because it allows for continuous improvement through reflection at each stage of the activity. The research was conducted at the Kemala Bhayangkari 14 Panyabungan Integrated Early Childhood Education Center (PAUD Terpadu) on February 12–13, 2026. A total of 133 children participated in the drawing and coloring competition. Analysis was conducted on all participants using a structured observation instrument based on fine motor skills indicators. Data were categorized into four developmental levels: BSB, BSH, MB, and BB. The results of each cycle were calculated as a percentage to assess developmental progress.

### 1. Data Collection Techniques

Data were collected through direct observation of children's activities during the activities and documented through photographs and the children's work.

### 2. Assessment Indicators

The fine motor skills assessment indicators used in both competitions were:

- a. Accuracy of coloring within the lines
- b. Hand-eye coordination
- c. Neatness of work
- d. Control of the use of coloring tools

Each indicator was assessed using a developmental scale of 1–4 based on the child's achievements during the activity. The following is the assessment scale, using a 1–4 scale based on categories:

- 4 = Very Well Developed (BSB)
- 3 = Developing as Expected (BSH)
- 2 = Starting to Develop (MB)
- 1 = Not Yet Developed (BB)

### 3. Cycle Implementation

#### a. Cycle I

In the planning stage, teachers developed the competition technical details and prepared observation sheets. The competition took place on February 12, 2026, with Kindergarten A holding a coloring competition in the classroom and Kindergarten B holding a drawing and coloring competition in the schoolyard. Observations showed that some children were still going outside the lines and were not yet stable in their color pressure. The results of Cycle I are presented in the following table:

Category	Percentage Cycle I
BSB	27%
BSH	38%
MB	25%
BB	10%

b. Cycle II

Improvements were made by providing demonstrations of tripod grip, neat coloring examples, and individual motivation. The implementation was repeated with more intensive guidance. Observations showed significant improvements in neatness and creativity. The data for Cycle II are as follows:

Category	Persentase Siklus II
BSB	46%
BSH	34%
MB	15%
BB	5%

4. Comparison of Improvements

Category	Siklus I	Siklus II
BSB	27%	46%
BSH	38%	34%
MB	25%	15%
BB	10%	5%

There was a 19% increase in the BSB category, indicating the effectiveness of the corrective actions

## RESULTS

The results of the second cycle of research showed more mature fine motor development compared to the previous cycle. Improvements made after the first cycle's reflection, such as demonstrating how to hold crayons correctly and providing guidance on neat coloring techniques, had a significant impact on the children's work. The children appeared more confident when completing their assignments, were no longer rushed, and began to pay attention to small details in the drawings. This process demonstrates that consistent stimulation and appropriate guidance can help children optimize their motor skills gradually. These changes do not occur instantly, but rather through a process of focused practice and repetition. Therefore, the second cycle is a crucial stage in demonstrating the effectiveness of the interventions.

Neatness and cleanliness were the most prominent areas of improvement. Initially, some children often went outside the lines or made a mess of their drawing due to unstable hand pressure. After demonstrations and guidance, the children began to control their hand movements more smoothly and purposefully. Their work appeared more organized, the colored lines no longer stretched excessively, and the drawing surface appeared cleaner. These changes indicate improved hand-eye coordination, which is central to fine motor development. Improved neatness also reflects children's ability to manage focus and precision while working. This indicates that simple exercises like coloring can have a significant impact when done in a structured manner.

Children's ability to control color pressure also showed significant improvement. In cycle I, some children pressed the crayons too hard, causing the colors to appear too bold or even damage the paper. In cycle II, hand pressure became more stable and proportional,

resulting in more even coloring. Children appeared to begin to understand that every hand movement affects the final result of their drawing. This awareness is important because it demonstrates a reflective learning process, not simply following instructions. Improved pressure control indicates that the small muscles in the fingers and wrist are beginning to develop optimally. This development provides an important foundation for children's readiness for writing skills at the next stage of their education.

Beyond technical aspects, improvements were also seen in creativity indicators. Children began to boldly explore more diverse color combinations and were not fixated on a single choice. Some children tried combining light and dark colors to create interesting visual effects. This creativity demonstrates that as motor skills stabilize, children have more room for expression. They are no longer so focused on technical difficulties, but begin to enjoy the process of creating. This situation demonstrates the close relationship between motor skills and freedom of expression in artistic activities. Growing creativity also increases children's confidence in their work.

The decrease in the Not Yet Developing (BB) category from 10% to 5% indicates an overall improvement in basic fine motor skills. Children who previously struggled are beginning to show progress, although not yet fully optimal. This change indicates that the intervention not only impacts children who are already developing well but also helps those who still need additional support. This improvement illustrates that a systematic and reflective approach can narrow the developmental gap between students. Overall, the results of this study indicate that drawing and coloring activities designed through a cycle of improvement can be an effective strategy for stimulating fine motor skills in early childhood. With the right support, every child has the opportunity to develop according to their potential.

## **DISCUSSION**

The results of the second cycle of research indicate more mature fine motor development in early childhood compared to the first cycle, especially when stimulation was provided consistently and in a targeted manner. Demonstrating how to hold a crayon correctly and providing guidance on neat coloring techniques appeared to help children better understand how to produce a more organized image. This is consistent with research findings (Dewi & Surani, 2018) that fine arts activities such as drawing and coloring significantly improve hand-eye coordination and wrist flexibility in children aged 4–5 years through continuous stimulation, as conducted in this study. The developments noted included not only changes in the results of the work but also changes in the children's work patterns, becoming calmer and more systematic. Children began to appear more confident when completing their tasks, taking their time, and began to notice small details they had previously overlooked. These findings reinforce the idea that consistent stimulation can help children gradually optimize their motor skills.

Significant improvements were particularly evident in the neatness and cleanliness of their work, which are fundamental aspects of fine motor skills. In cycle I, many children still went outside the lines or lacked control of hand movements due to unstable crayon pressure, but after more intensive guidance in cycle II, children's work became more organized with better control of color lines. This is consistent with the results of research (Hariarja et al.,

2023) which found that fine motor stimulation through coloring showed a significant increase in the Very Well Developed category after a cycle of classroom actions. This improvement indicates that fine motor skills are not something spontaneous, but require a structured process of reflection and repetition. Furthermore, the cleanliness of the drawing area indicates that children can better regulate their focus of attention during the activity. This indicates that not only motor aspects, but also cognitive aspects of children improve through repeated practice.

Children's ability to control color pressure also experienced significant development in cycle II. Initially, excessive hand pressure made the color appear thick and tended to damage the paper. However, after being shown the correct technique, children began to stabilize their pressure, resulting in a more even color effect. This demonstrates that fine motor skills, such as pressure control, are not solely about physical ability but also involve an understanding of self-discipline and awareness of the end result. Research (Rumsiah et al., 2024) shows that through two cycles of coloring activities, children's fine motor skills increased from "Beginning to Developing Very Well," by 88.12% in the second cycle. These findings support your research that repetition and reflection play a crucial role in strengthening children's fine motor control.

Beyond the technical aspects of hand control and color pressure, children's increased creativity is also evident in the way they explore more diverse color combinations. Children who initially only used one or two colors begin to experiment with more complex combinations of light and dark. This situation suggests that as fine motor skills become more stable, children no longer focus so much on technical difficulties but begin to enjoy the process of creating their artwork more freely. This is consistent with research (Sondari et al., 2025), which found that art activities such as finger painting not only improve motor control but also provide enjoyable experiences for children and enhance their creativity. This growing creativity also increases children's confidence in their own work.

The decrease in the "Undeveloped" category from 10% to 5% indicates that the approach used is not only effective for children who already demonstrate fairly good basic fine motor skills, but also helps children who previously experienced more intense difficulties. This decrease indicates that structured stimulation through two cycles of action allows basic fine motor skills to develop in almost all children without exception. The use of reflective and adaptive classroom action methods allows teachers to identify children's individual needs and provide more appropriate guidance. Research by (Kristi & Putri, 2024) also shows that coloring activities can improve children's fine motor skills when delivered with an age-appropriate approach. Overall, these results reinforce the understanding that well-planned and guided drawing and coloring activities can be an effective strategy for stimulating fine motor skills in early childhood.

## CONCLUSION

Based on the results of the action research carried out through two cycles, it can be concluded that the drawing and coloring activities designed in a structured and reflective manner have proven effective in improving the fine motor skills of early childhood children at the Kemala Bhayangkari 14 Panyabungan Integrated PAUD. Improvements made in cycle II, such as demonstrations of correct crayon holding techniques and neat coloring directions, have had a real impact on the quality of children's work. Improvements are seen in indicators of neatness, cleanliness, color harmony, and creativity, indicating a more mature development of eye-hand coordination. The decrease in the Not Developed category and the increase in the Very Well Developed percentage show that the intervention provided is able to reach almost all students.

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