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Improving Children's Fine Motor Skills Through the Mosaic Technique in Group B at Pedang Emas Rambatan Kulon, Indramayu

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A B S T R A C T

Fine motor skill development is an important aspect of early childhood education because it supports children's readiness for learning activities such as writing, drawing, cutting, and pasting. Initial observations in Group B at TK Pedang Emas Rambatan Kulon, Indramayu, showed that several children still experienced difficulties coordinating hand movements, sticking materials neatly, and maintaining concentration during learning. This study aimed to examine the implementation of the mosaic technique and its contribution to improving children's fine motor skills. The research employed Classroom Action Research (CAR) using the Kemmis and McTaggart model, comprising planning, action, observation, and reflection stages carried out over two cycles with 17 children aged 5–6 years. Data were collected through observation, documentation, and field notes, then analyzed using qualitative and quantitative approaches. The findings showed a gradual improvement in children's fine motor development after the mosaic activities were implemented, marked by better hand-eye coordination, finger flexibility, concentration, and task accuracy, along with a more engaging and enjoyable learning atmosphere. The mosaic technique can therefore be considered an effective alternative learning activity for supporting fine motor development in early childhood.

1. Introduction

Early childhood education plays a crucial role in supporting children's overall growth, including the development of fine motor skills, particularly during the golden age when growth occurs rapidly and requires stimulation suited to children's needs. Fine motor skills involve coordination of small muscles, especially the fingers and hands, used in activities such as writing, drawing, cutting, and pasting (Sanenek et al., 2023). Developing these skills early supports children's readiness

for learning and independent writing (Andini et al., 2024), while also improving hand and visual coordination, accuracy, and focus (Suarmini et al., 2022). Initial observations at the Pedang Emas Kindergarten in Rambatan Kulon, Indramayu, revealed that children's fine motor skills have not developed optimally, shown by difficulties sticking neatly, weak hand-eye coordination, stiff finger movements, and low focus, conditions worsened by classroom activities that lack variation and quickly bore children. This may stem from insufficient hands-on creative stimulation (Kholilah & Mayar, 2023) and teacher-centered learning that limits children's motor exploration (Wahyuningrum & Watini, 2022), pointing to the need for engaging activities such as the mosaic technique, which trains hand-eye coordination, precision, and finger flexibility through arranging materials into patterns (Rezieka et al., 2022). Young children learn best through play, so enjoyable activities like mosaic making, arranging and attaching material pieces into a pattern, can make them more active and enthusiastic in learning (Halilah & Suzanti, 2023; Noor, 2023).

Through mosaic activities, children practice hand-eye coordination while arranging and sticking materials into patterns, which also trains finger flexibility, concentration, accuracy, and creativity during learning (Aini et al., 2024). Arranging materials in this technique helps children control hand movements according to available patterns, strengthening visual motor skills (Rizqiyani et al., 2023), while colorful materials such as origami paper, dried leaves, or colored paper keep learning interesting and sustain children's attention and participation (Dini, 2023). Because children are directly involved in producing their own artwork, mosaic activities encourage active engagement while steadily refining fine motor coordination. For this reason, the mosaic technique was chosen as an alternative activity to improve fine motor skills among group B children at the Pedang Emas Kindergarten, Rambatan Kulon, Indramayu.

Several previous studies support the use of creative arts activities to develop fine motor skills in early childhood. Akollo et al. (2023) found that collage and pasting activities improve children's hand-eye coordination and finger control accuracy, while Mahmuddin et al. (2021) reported that mosaic activities effectively enhance fine motor skills by engaging children in exercises that train finger flexibility, concentration, and creativity. Wahyuningsih et al. (2023) showed that creative arts activities make children more active and improve focus during learning, and Anwar et al. (2025) demonstrated that pasting and arranging activities strengthen visual motor coordination in early childhood. Colorful materials also create a more enjoyable atmosphere and reduce boredom, and interesting media increase children's attention and participation, while hands-on creative activities help children practice precision and finger motor skills through enjoyable experiences (Novie, 2025). Together, these studies confirm that creative arts activities, particularly mosaic techniques, positively influence fine motor development in early childhood; however, research on mosaic techniques among group B children at the Pedang Emas Kindergarten remains limited, making this study important.

Research on fine motor development in early childhood has been widely conducted through creative activities such as collage, paper folding, and playing with

plasticine, known to train hand coordination, finger flexibility, and concentration during learning (Chayanti & Setyowati, 2022), while creative arts activities involving direct hand movements have also been shown to stimulate visual motor coordination in young children (Wirdalena & Mayar, 2022). However, most previous studies examine fine motor development in general terms, with few specifically applying mosaic techniques as the main activity, and existing mosaic research has largely been conducted in different locations and subjects, leaving its application to group B kindergarten children still limited, even though children aged five-to-six years require optimal fine motor stimulation before the next level of education. Mosaic activities, involving arranging and pasting materials into patterns, are considered effective in training hand-eye coordination, accuracy, and finger flexibility through repetitive, enjoyable engagement (Adibah & Rocmah, 2023). This study therefore focuses on the use of mosaic techniques to improve the fine motor skills of group B children at the Pedang Emas Kindergarten, Rambatan Kulon, Indramayu.

Based on the problems identified and supported by previous research, this study aims to examine the application of mosaic techniques among group B children at the Pedang Emas Kindergarten in Rambatan Kulon, Indramayu, and to observe the improvement of their fine motor skills through mosaic activities carried out during learning. Through arranging and sticking materials into patterns, children are expected to practice hand-eye coordination, finger flexibility, accuracy, and concentration, since creative activities support fine motor development through active, enjoyable learning (Harahap et al., 2023), while art activities can further increase children's attention, motivation, and engagement (Bahri et al., 2023). Other research indicates that mosaic activities can improve children's finger motor skills and visual motor coordination through arranging and sticking materials into patterns (Siti, 2021). Accordingly, this study also aims to describe changes in children's fine motor skills following the implementation of mosaic techniques in Group B at the Pedang Emas Kindergarten in Rambatan Kulon, Indramayu, hoping that this technique can serve as an engaging and appropriate activity supporting optimal fine motor development in early childhood.

2. Methodology

This study employed the Classroom Action Research (CAR) method with qualitative and quantitative approaches. The study was conducted to help improve children's fine motor skills through mosaic activities in group B at the Pedang Emas Kindergarten, Rambatan Kulon, Indramayu. The research model used refers to the Kemmis and McTaggart model, which includes planning, action, observation, and reflection. The study was conducted in two cycles, each consisting of two meetings.

The research was conducted through several stages: planning, action, observation, and reflection. During the planning stage, the researcher prepared a Daily Learning Implementation Plan (RPPH), determined indicators of fine motor skills, and prepared the tools and materials used in the mosaic activity. The materials used included colored origami paper, glue, picture patterns, dried leaves, scissors, and

pieces of colored paper. During the action implementation stage, the teacher explained the steps of the mosaic activity and showed examples of the work to the children. Next, the children were asked to arrange and stick the pieces of material on the picture patterns provided. During the activity, the researcher conducted observations to see the development of the children's fine motor skills. After the activity was completed, the reflection stage was carried out to evaluate the learning outcomes and determine improvements for the next cycle. The research instruments used were observation sheets, documentation, and field notes. The observation sheets were used to assess children's fine motor development based on several indicators, such as the ability to stick according to patterns, eye-hand coordination, finger flexibility, accuracy, and concentration during the activity. Assessment of children's development used the categories Not Yet Developing (BB), Starting to Develop (MB), Developing as Expected (BSH), and Developing Very Well (BSB). Documentation in the form of photos of learning activities and children's work was used as supporting data for the research, while field notes were used to record children's activities and responses during the mosaic activity.

Data collection techniques were conducted through observation, documentation, and field notes. Observations were conducted directly during each learning activity to determine the development of children's fine motor skills in each cycle. The data obtained were then analyzed using qualitative and quantitative analysis techniques. Qualitative data analysis was carried out through the stages of data reduction, data presentation, and drawing conclusions based on the results of observations and field notes. Meanwhile, quantitative data analysis was carried out by calculating the percentage of children's fine motor skill development. The research was declared successful if at least 75% of children achieved the Developing According to Expectations (BSH) and Developing Very Well (BSB) categories on the predetermined fine motor ability indicators.

3. Results and Discussion

Before presenting the improvement in children's fine motor skills across each cycle, this section first describes the overall research process and how the mosaic technique was implemented, including its preparation, materials, and procedures. This study applied the mosaic technique as a learning activity to improve the fine motor skills of children aged 5–6 years. The research was conducted through Classroom Action Research consisting of two cycles, and each cycle included planning, implementation, observation, and reflection stages. Before the activities began, the teacher prepared learning materials such as worksheet patterns, colored origami paper, glue, scissors, and other supporting materials needed for mosaic activities. The implementation of the mosaic technique involved several stages. First, the teacher introduced the learning materials and explained the activity procedures. The teacher then demonstrated how to cut, arrange, and attach mosaic materials according to the provided picture pattern. After the demonstration, children completed the mosaic independently with guidance from the teacher when necessary. Through these activities, children were encouraged to practice hand eye coordination, finger control, concentration, accuracy, and other fine motor skills.

The implementation process and learning materials used in this study are presented in Figures 1 and 2.

Figure 1. Mosaic Learning Materials Used in the Study

Figure 1 shows the pattern worksheet, colored origami paper, scissors, and glue that the teacher prepared before the mosaic activity began. The blank picture pattern served as the base on which children were asked to paste small pieces of colored paper, while the scissors and glue were the main tools children used to cut and attach the materials during the activity.

Figure 2. Example of a Completed Mosaic Pattern Used as a Guide

Figure 2 shows a completed example of the house-shaped mosaic pattern, labeled "ini rumahku" (this is my house), which the teacher used as a visual guide. The colored dots at the top of the sheet indicated which origami colors corresponded to each section of the pattern, helping children understand how the finished mosaic should look before they began working on their own. Based on Figures 1 and 2, the mosaic learning activity utilized several materials, including worksheet patterns, colored origami paper, glue, and scissors. These materials were selected because they provide children with opportunities to engage in various fine motor activities, such as cutting, arranging, and attaching materials according to the designated pattern. Through these processes, children are encouraged to practice hand eye coordination, finger control, concentration, and movement accuracy while completing the assigned tasks. The use of attractive and colorful materials also helped increase children's interest and participation during the learning activities.

After the learning materials had been prepared, the implementation of the mosaic technique was carried out gradually through the pre cycle, Cycle I, and Cycle II stages. The pre cycle stage was conducted to identify the initial condition of children's fine motor skills before the intervention, while the subsequent cycles were implemented to observe improvements resulting from the mosaic activities.

Initial Conditions of Children's Fine Motor Skills

Based on initial observations before the intervention, the fine motor skills of group B children at the Pedang Emas Kindergarten in Rambatan Kulon, Indramayu, have not yet developed optimally. Most children still have difficulty sticking materials according to patterns, their hand eye coordination is not yet well developed, and their finger movements still appear stiff when performing skill activities. Furthermore, some children still lack focus during the learning process, resulting in their work not looking neat. During the pre cycle stage, learning activities were carried out using conventional classroom practices without the implementation of the mosaic technique. Children were asked to complete simple fine motor tasks to identify their initial abilities. The observations showed that many children experienced difficulties in controlling finger movements, maintaining concentration, and completing tasks accurately. Their responses indicated a need for more engaging and hands on learning activities to stimulate fine motor development. The preliminary observation was conducted to identify the initial condition of children's fine motor skills before the implementation of the mosaic technique. The observation results showed that most children were still categorized as Beginning to Develop (MB) and Not Yet Developing (BB), indicating that further stimulation was needed. The detailed results of the pre cycle observation can be seen in Table 1.

Table 1. Observation Results of Fine Motor Skills of Pre Cycle Children

Category	Pre Cycle (Number of Children)	Pre Cycle (%)
BSB	2	12%
BSH	3	18%
MB	7	41%
BB	5	29%
Total	17	100%

The table shows that most children are still in the Beginning to Develop (MB) and Not Yet Developing (BB) categories. These results indicate that children's fine motor skills still need to be improved through more engaging learning activities tailored to the characteristics of early childhood.

Cycle I Research Results

The first cycle of action was implemented through a mosaic activity using colored paper pieces pasted onto a pattern. The teacher first explained the steps of the mosaic activity, showed examples of the work, and then asked the children to arrange and paste the materials according to the provided pattern. Throughout the activity, the children began to show more interest and active participation in the

learning process. In Cycle I, children completed mosaic activities using colored origami paper, glue, and simple picture patterns with large sections. The activity was conducted through teacher demonstrations followed by guided practice. The task difficulty was relatively basic because the materials were easy to handle and the patterns were simple. Most children showed enthusiasm during the activity, although some still needed assistance in applying glue and placing materials accurately within the pattern boundaries. This combination of simple, easy-to-handle materials, teacher-guided steps, and low task difficulty gave children repeated opportunities to practice basic hand-eye coordination and finger control in a low-pressure setting, which helps explain the improvement recorded in Table 2.

Observations in cycle I showed an improvement in the children's fine motor skills compared to the initial stage. The children began to be able to stick the materials to the pattern better, although some still required teacher assistance. The children's hand eye coordination began to develop, and they appeared more focused during the pasting activity. During the implementation of Cycle I, children showed greater interest in participating in the mosaic activities compared to the pre cycle stage. However, some children still required teacher guidance when completing the assigned tasks. In Cycle I, some children still experienced difficulties in cutting paper into smaller pieces and attaching materials within the pattern boundaries. As a result, several mosaic products were not yet arranged neatly and some materials were placed outside the designated areas. Nevertheless, improvements in hand eye coordination and concentration were observed. The results of Cycle I are presented in Table 2.

Table 2. Results of Observations on Children's Fine Motor Skills in Cycle I

Category	Eye and Hand Coordination		Accuracy in Sticking to Patterns		Flexibility of Finger Movements		Concentration and Accuracy		Average %
	F	%	F	%	F	%	F	%	
BSB	4	23,53	5	29,41	4	23,53	5	29,41	26,47
BSH	5	29,41	5	29,41	6	35,29	5	29,41	30,88
MB	6	35,29	5	29,41	5	29,41	4	23,53	29,41
BB	2	11,77	2	11,77	2	11,77	3	17,65	13,24
Total	**17**	**100**	**17**	**100**	**17**	**100**	**17**	**100**	**100**

Based on Table 2, it can be seen that children's fine motor skills in cycle I began to show development. Some children have reached the Developing as Expected (BSH) and Very Well Developed (BSB) categories, although there are still children who are in the Starting to Develop (MB) and Not Yet Developed (BB) categories. These results indicate that mosaic activities began to help children in practicing eye hand coordination, accuracy in sticking according to patterns, flexibility of finger movements, and concentration during learning activities. In the implementation of cycle I, children began to show interest in the activities carried out because learning was provided through direct activities using colored mosaic materials. Most children began to be able to follow the teacher's instructions when arranging and sticking pieces of material on the picture pattern, although the results of some children's work were still not neat and still needed teacher assistance in determining the position of the paste to match the available pattern. This condition indicates that

children's visual motor coordination abilities are beginning to develop, although not yet optimal.

Furthermore, changes in the children's level of focus and engagement in learning were evident throughout the activity. Children began to show enthusiasm when selecting materials, arranging, and attaching paper pieces to the provided pattern. However, some children were still easily distracted, lacked patience in completing tasks, and were unable to control their hand movements in a more directed manner. Therefore, the results of cycle I did not fully achieve the research's success indicators, requiring improvements in learning in subsequent cycles through providing clearer directions, more intensive guidance, and the use of more engaging mosaic materials to help improve children's fine motor skills more optimally.

Cycle II Research Results

The implementation of actions in Cycle II was based on the results of reflections from Cycle I. The teacher provided clearer explanations and examples of mosaic activities and used more varied and colorful materials, so that children appeared more engaged in the learning activities. In Cycle II, children began to become more independent in arranging and attaching materials to the provided pattern. Based on the reflection results from Cycle I, several improvements were implemented in Cycle II. Children used more varied mosaic materials and worked with patterns that required greater precision. The activity was carried out through demonstrations, guided practice, and independent work. Compared to the previous cycle, children appeared more confident, focused, and capable of completing the tasks with minimal teacher assistance.

The increased material variety and the higher precision required by the Cycle II patterns pushed children to refine finer hand-eye coordination and finger dexterity, while the shift from teacher-led demonstration toward independent practice strengthened their concentration and self-regulation, which together account for the sharper gains shown in Table 3. Observations showed that children's fine motor skills had improved significantly compared to the previous cycle. Children were able to attach materials more neatly, their hand eye coordination developed better, and their finger movements appeared more flexible than before. The results of children's fine motor skill development in Cycle II are presented in Table 3.

Table 3. Observation Results of Children's Fine Motor Skills in Cycle II

Category	Eye and Hand Coordination		Accuracy in Sticking to Patterns		Flexibility of Finger Movements		Concentration and Accuracy		Average %
	F	%	F	%	F	%	F	%	
BSB	11	64,71	12	70,59	12	70,59	12	70,59	69,12
BSH	4	23,53	4	23,53	4	23,53	4	23,53	23,53
MB	2	11,76	1	5,88	1	5,88	1	5,88	7,35
BB	0	0	0	0	0	0	0	0	0
Total	**17**	**100**	**17**	**100**	**17**	**100**	**17**	**100**	**100**

Table 3 shows that children's fine motor skills improved significantly in cycle II. Most children achieved the Very Well Developed (VSW) category for almost all fine motor skill indicators. Children appeared more able to control their hand movements when pasting, were more precise in arranging mosaic materials, and demonstrated improved hand eye coordination compared to the previous cycle. In cycle II, children also began to appear more independent when completing mosaic activities. Most children were able to arrange and attach the pieces of material to the pattern more neatly and precisely without much assistance from the teacher. Children's finger movements appeared more flexible, allowing for more focused picking, holding, and pasting of materials. Furthermore, children began to demonstrate perseverance and patience in completing activities.

The implementation of Cycle II showed a more significant improvement in children's fine motor skills. Most children were able to complete the mosaic activities independently and demonstrated better concentration during the learning process. In Cycle II, children were able to complete more detailed mosaic patterns with greater accuracy and less teacher assistance. Their work appeared neater and more closely matched the provided patterns compared to the previous cycle. Children appeared more focused following the teacher's directions, more enthusiastic when selecting and arranging mosaic materials, and more active during the learning process.

The use of colorful and varied mosaic materials helped create a more engaging learning environment, preventing children from becoming bored easily. These results indicate that the learning improvements made based on reflection in Cycle I had a positive impact on children's fine motor development. Thus, the application of the mosaic technique helped to optimally improve hand eye coordination, finger flexibility, accuracy, and concentration in Group B at the Pedang Emas Kindergarten in Rambatan Kulon, Indramayu. To provide a clearer overview of the improvement in children's fine motor skills throughout the study, a comparison was made between the results obtained in the pre cycle, Cycle I, and Cycle II stages. The comparison of children's development across the three stages is presented in Table 4.

Table 4. Comparison of Results from Pre Cycle, Cycle I, and Cycle II

	Pre Cycle		**Cycle I**		**Cycle II**	
	F	**%**	**F**	**%**	**F**	**%**
BSB	2	12	5	29	12	71
BSH	3	18	6	35	4	24
MB	7	41	4	24	1	5
BB	5	29	2	12	0	0
Total	**17**	**100**	**17**	**100**	**17**	**100**

The comparison of children's fine motor skill development across the pre cycle, Cycle I, and Cycle II stages is also illustrated in Figure 3.

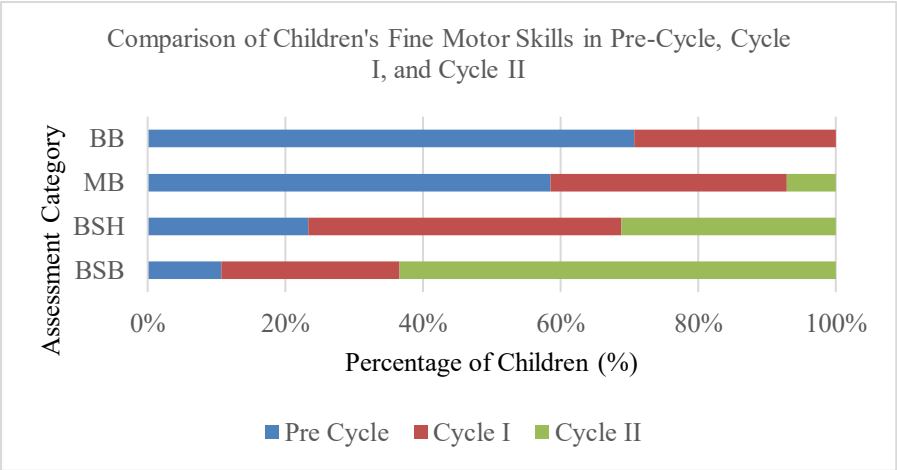

Figure 3. Comparison Graph of Pre Cycle, Cycle I, and Cycle II

Based on the table and comparison graph, it can be seen that there was an increase in children's fine motor skills in each cycle. The number of children in the Very Well Developed (BSB) category increased from 2 in the pre cycle to 5 in Cycle I and to 12 in Cycle II. Conversely, the number of children in the Not Yet Developed (BB) category decreased from 5 in the pre cycle to 2 in Cycle I and to 0 in Cycle II. These results indicate that mosaic activities have a positive impact on children's fine motor development.

Discussion

The research results showed that mosaic activities can help improve the fine motor skills of Group B children at TK Pedang Emas Rambatan Kulon, Indramayu. These improvements were evident in children's development across each cycle, particularly in hand eye coordination, pincer grasp ability (menjepit), cutting and gluing precision, sticking accuracy according to patterns, finger movement flexibility, control of the small muscles of the hand, and the ability to maintain concentration during learning activities. Initially, most children experienced difficulties in sticking materials accurately, controlling hand movements, and sustaining attention throughout the activity. However, after the mosaic technique was implemented gradually over two cycles, noticeable progress began to emerge. Children became more capable of arranging and attaching materials neatly, maintaining focus for longer periods, and completing tasks with greater independence. This finding indicates that repeated stimulation through activities involving direct hand movements can effectively support children's fine motor development (Maknun & Zulfahmi, 2025). Similar improvement in fine motor development among Group B children was also documented by (Nadia, Durrotunnisa, Fitriana, 2026), who found that colored sand media significantly enhanced children's fine motor skills through comparable hands-on manipulation activities. The implementation of mosaic activities during the learning process can be seen in Figure 4.

Figure 4. Documentation of Children's Participation and Mosaic Products During the Learning Activities

Based on Figure 4, children actively participated in the mosaic learning activities by selecting colors, cutting paper, arranging mosaic pieces, and attaching them to the provided patterns. The documentation also shows the completed mosaic products, which reflect children's increasing ability to organize materials more neatly and accurately. During the implementation of the activity, children demonstrated greater independence and confidence in completing the assigned tasks compared to the initial stage of the study.

The learning process revealed improvements in several specific fine motor abilities, particularly hand eye coordination, as children were required to place mosaic pieces accurately within designated areas of the pattern. Their pincer grasp ability also developed through the process of picking up and manipulating small pieces of paper using the thumb and index finger. In addition, children became more accurate in cutting, applying glue, and attaching materials according to the pattern boundaries. These activities stimulated finger movement accuracy and strengthened the small muscles of the hands, which are essential components of fine motor development.

This finding is supported by (Sanenek et al., 2023), who explain that fine motor development involves the coordination of small muscles, finger dexterity, and controlled hand movements during purposeful activities. Similar improvements in young children's motor abilities have also been reported using other engaging methods, such as traditional movement games that enhanced gross motor development in children aged 5-6 years (Purwaningsih & Durrotunnisa, Armina, 2026) and short instructional videos that strengthened agility and coordination among Group B children (Pabemba & Amrullah, Fitriana, 2026), suggesting that both fine and gross motor domains can be optimized through enjoyable, activity-based learning tailored to early childhood characteristics.

Figure 5. Documentation of Mosaic Learning Activities in Group B

Figure 5 presents the implementation of the mosaic learning activity in Group B. Children actively participated by selecting paper pieces, applying glue, arranging the materials according to the pattern, and completing the mosaic collaboratively under teacher guidance. To protect participants' privacy, children's faces were blurred in accordance with research ethics. Furthermore, the mosaic activities provided opportunities for children to manipulate various materials directly through cutting, arranging, and attaching processes. Such activities enabled children to repeatedly practice precision, concentration, and control of hand movements while completing the assigned tasks. According to (Suarmini et al., 2022), activities that involve direct manipulation of materials can effectively stimulate fine motor development because children are required to coordinate finger movements, hand muscles, and visual perception simultaneously. The completed mosaic products further demonstrate the progress achieved by children during the study, as their work became neater, more organized, and more closely matched the intended pattern. These findings indicate that the mosaic technique not only improved children's assessment scores but also contributed to meaningful changes in specific fine motor abilities observed throughout the learning process.

The research findings also show that children develop more easily when learning involves hands on experiences. In mosaic activities, children use visual and hand coordination when selecting materials, holding, arranging, and then sticking them to the provided pattern. This process helps children train the small muscles in their hands while also accustoming them to working more precisely. The results of this study align with (Fang et al., 2017), who explained that motor coordination, visual perception, and executive function are related to the development of visual motor skills in preschool aged children. In other words, activities that involve eye hand coordination, such as arranging and pasting, can help children improve their visual motor skills. Furthermore, learning through hands on activities is also considered to help develop fine motor skills because children are actively involved using their hands and fingers during the learning process (Sintia et al., 2025). This is consistent with (Yuliarini & Pamungkas, 2025), who found that nature-based art learning activities effectively developed aesthetic experience and motor engagement in children aged 5-6 years, reinforcing the value of art-based, hands-on learning for this age group.

The improvement in fine motor skills in this study was also evident in the changes in children's attitudes during the learning activities. Children appeared more focused, engaged, and showed greater enthusiasm than before. The use of colorful and varied mosaic materials made children appear more interested in participating in the activities, making the learning atmosphere more enjoyable. Children began to appear serious when selecting colors, determining the placement of materials, and striving to complete the pattern. This suggests that engaging art activities can help increase children's attention and engagement during the learning process. This finding aligns with research by (Hasanah et al., 2025), which explains that art based learning can help foster creativity while stimulating children's motor development through fun and meaningful learning activities. When children feel interested in an activity, they tend to be more active in trying, exploring, and completing it with greater enthusiasm. This aligns with the findings of (Irawati et al., 2026), who observed that engaging, hands-on activities such as water play increased children's positive emotional engagement, indicating that enjoyable learning experiences contribute not only to motor development but also to children's emotional and attitudinal growth.

In addition to fostering motor coordination, mosaic activities also provide learning experiences that help children become more patient, meticulous, and confident. In cycle II, most children began to appear more confident when arranging materials without much teacher assistance and were able to produce neater work than before. Children also appeared more diligent in completing the drawing patterns and began to dare to make their own decisions during the activity process. This condition shows that mosaic activities not only help physical motor development, but can also form more independent and directed learning habits. The results of this study are in line with the findings of (Husni, 2025) who stated that collage activities can help improve children's fine motor skills through sticking activities that train hand movement coordination in a more directed manner. Research by (Rosdiana & Pratiwi, 2023) also explains that creative arts activities can help stimulate children's motor development through active, fun learning experiences and involve children's direct involvement in the learning process.

Based on the results of this study and several previous studies, it can be understood that the mosaic technique is one of the learning activities that are suitable for the characteristics of early childhood because it is carried out through direct experience, a fun learning atmosphere, and involves active motor activity. Through the activity of arranging and sticking materials in certain patterns, children not only learn to move their hands in a more directed manner, but also train accuracy, concentration, and eye hand coordination simultaneously. Therefore, the mosaic technique can be considered as an alternative learning activity that teachers can use to help improve the fine motor skills of children aged 5-6 years.

4. Conclusion

This study concludes that the implementation of the mosaic technique effectively improved the fine motor skills of children aged 5-6 years at TK Pedang Emas

Rambatan Kulon, Indramayu. This improvement was evident not only in increased assessment results from the pre cycle, Cycle I, and Cycle II, but also in observable changes in children's learning behaviors and fine motor abilities. Through mosaic activities, children actively selected materials, cut paper, arranged mosaic pieces, and attached them to designated patterns, developing hand eye coordination, pincer grasp ability, finger movement accuracy, concentration, and control of the small muscles of the hand. Children also became more focused, confident, independent, and enthusiastic during learning, while colorful and varied materials created a more engaging environment and encouraged greater precision in completing tasks. Furthermore, the hands on nature of mosaic activities allowed children to gain meaningful learning experiences while simultaneously stimulating fine motor development. Therefore, the mosaic technique can be considered an effective, engaging, and developmentally appropriate learning alternative for supporting fine motor skill development in early childhood education. Future research is recommended to explore different mosaic materials, learning settings, and longer implementation periods to gain a broader understanding of the effectiveness of mosaic activities.

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