

Development of Fine Motor Skills in Early Childhood Through Beading Activities at Imanuel Christian Preschool Palangka Raya

Resa Agustina*, Wirastiani Binti Yusuf, Agus Sutrisno Muljono

Institut Agama kristen Negeri Palangka Raya, Indonesia

Email: resaagustina0508@gmail.com*, wirastianibiyaknpky@gmail.com,
agussutrisnomuljono79@gmail.com

Keywords:

fine motor development, *meronce* activities, children aged 5–6 years, immanuel christian kindergarten palangka raya

Abstract

Fine motor development is an essential aspect of early childhood growth because it supports children's ability to control hand and finger movements, coordinate eye and hand movements, and perform daily activities independently. However, learning practices at Imanuel Christian Kindergarten Palangka Raya still show limitations in providing varied and stimulating activities, causing some children to experience difficulties in precision, coordination, and concentration. This study aims to describe the development of fine motor skills in early childhood and analyze the implementation of beading activities (*meronce*) as a learning strategy to stimulate fine motor development at Imanuel Christian Kindergarten Palangka Raya. This study employed a qualitative descriptive approach. Data were collected through non-participant observation, semi-structured interviews, and documentation involving one classroom teacher and children aged 5–6 years. Data analysis was conducted using the Miles and Huberman model, consisting of data reduction, data presentation, and conclusion verification. The results showed that beading activities contributed positively to children's fine motor development. Through five learning meetings with different themes, children demonstrated gradual improvements in eye-hand coordination, finger flexibility, accuracy, concentration, creativity, and independence. The implementation of beading activities was carried out systematically through preparation, teacher demonstration, children's practice, and evaluation. Supporting factors included teacher guidance, attractive learning materials, and children's motivation, while inhibiting factors involved differences in children's initial abilities and concentration levels. In conclusion, beading activities are effective as a meaningful and enjoyable learning medium for stimulating fine motor development in early childhood. This activity is recommended as an alternative learning strategy to support children's developmental needs.

INTRODUCTION

The development of fine motor skills is one of the important aspects of early childhood development related to the ability to use small muscles, especially in the fingers and wrists, which involves coordination between the eyes and hands in a directed and controlled manner. This ability has a very important role in supporting children's activities, both in daily activities and in learning activities at school (Hasmidar et al., 2025). According to Aulina (2021), fine motor skills are part of a child's physical development that needs to be stimulated from an early age so that children are able to develop basic skills needed in daily life. According to Sutapa (2022), fine motor skills require precision, coordination, and good movement control so that children can carry out various activities appropriately and in a directed manner. According to

Santrock (2021), children's motor development is influenced by the interaction between biological and environmental factors that provide learning experiences to children.

The development of fine motor skills is seen from the age of 3, when the child's abilities are still related to infant activities, such as placing and grasping objects. At the age of 4, the child's fine motor coordination is increasingly developed and more directed. Meanwhile, by the age of 5, children have better eye and hand coordination by involving the arms and other limbs in movement (Hanum et al., 2023). Various studies show that children's fine motor development is influenced by stimulation through concrete and meaningful learning experiences (Hidayat et al., 2022). Children who often do manipulative activities such as playing blocks, *meronce*, drawing, and making crafts tend to have better fine motor skills (Helda Sari et al., 2025).

In practice, children are still found who have difficulty holding stationery, cutting according to patterns, and sticking neatly (Putri & Yuliana, 2023). This is influenced by the lack of variety of activities, limited media, and not optimal learning strategies (Fitriana & Sudaryanti, 2025). *Meronce* activity is a form of handicraft activity that is carried out by arranging or assembling small hollow objects such as beads, straw pieces, or other natural materials using rope, thread, or wire into a certain series (Fadlillah, 2021). This activity is considered effective in stimulating fine motor skills because it involves the activity of inserting objects into ropes, arranging patterns, and practicing finger precision and coordination (Helda Sari et al., 2025). Through this activity, children can practice eye and hand coordination, precision, and creativity in an integrated manner (Fitriani et al., 2023).

Based on the results of initial observations made by researchers at Imanuel Christian Kindergarten Palangka Raya, conditions were found that showed a gap between ideal conditions and learning practices that took place. This school has four educators consisting of three teachers and one principal, with a total of twelve children. In the implementation of daily learning, the activities given to children tend to be monotonous and less varied. Activities that are often done repeatedly include coloring pictures, cutting out patterns that have been provided, and simple writing exercises. Its less innovative implementation causes some children to show signs of boredom, such as lack of enthusiasm and easy to distract. *Meronce* activities as a form of fine motor stimulation have not been carried out regularly and structured, only about twice a month.

Referring to these conditions, it is not yet known comprehensively the implementation of *meronce* activities that take place in daily learning practices, the development of children's fine motor skills through these activities, as well as the factors that support and hinder it. This study focuses on Imanuel Christian Kindergarten Palangka Raya and aims to: (1) describe the description of the development of early childhood fine motor skills at Imanuel Palangka Raya Christian Kindergarten, and (2) find out the implementation of *meronce* activities in developing early childhood fine motor skills at Imanuel Palangka Raya Christian Kindergarten.

Fine motor is a child's ability to use small muscles such as hand and finger muscles to perform activities that require coordination, precision, and movement control, such as drawing, cutting, folding, and writing (Sumantri, 2021). This ability develops through direct experience of children in manipulating various objects and performing activities that involve active use of hands, such as knitting, attaching, shaping, and arranging small objects (Wiyani, 2022). Fine motor development does not occur automatically, but requires continuous stimulation through

creative and meaningful activities so that children's hand skills develop optimally (Hasanah, 2023).

According to Sujiono (2010), fine motor is defined as movements that use the smooth muscles or a certain part of the body that are affected by the opportunity to learn and practice, not requiring much effort but requiring careful coordination and precision. Lestari and Kurniawan (2025) added that fine motor skills involve the use of muscles in the hands and fingers to control objects of various shapes and sizes, whose development takes place over time and is closely related to the child's cognitive and social development. Khadijah and Amelia (2020) stated that fine motor is a body movement that uses small muscles and requires concentration between the eyes and hands, such as folding, scissors, and scissors, which are the foundation for children's success in performing various motor skills in the future.

The fine motor types of early childhood include four main aspects that are interrelated. First, eye and hand coordination is the ability to align vision functions with hand movements in performing an activity, which is the basis of every fine motor activity (Sujiono, 2010; Hidayat et al., 2022). Second, manipulative skills are the ability of children to hold, move, and manage small objects using their fingers in a controlled manner (Sutapa, 2022). Third, graphomotor skills are related to children's ability to carry out writing and drawing activities as the basis for academic readiness (Santrock, 2021). Fourth, precision is the ability of children to perform movements precisely and in a directed manner so as to produce neater and more precise works (Sutapa, 2022; Fadlillah, 2021).

According to David L. Gallahue and John C. Ozmun, children aged 4 to 6 years are in the early stages of skilled movement. In this phase, children begin to develop more complex and coordinated motor skills, including fine motor skills such as manipulating small objects, scissors, gluing, and drawing with greater precision. Gallahue and Ozmun emphasize that motor development is influenced not only by biological factors, but also by environmental factors and opportunities to practice. The more opportunities children have to do activities that are challenging and in accordance with their abilities, the faster and better motor development will occur (Rohendi, Seba, & Laurens, 2019). This theory is relevant because it provides a framework for specific stages of motor development, especially in the early skilled movement phase that is appropriate for the child's age in kindergarten.

Meronce activity is a form of handicraft activity that is carried out by arranging or assembling small hollow objects such as beads, grains, straws, or other natural materials using rope, thread, or wire into a certain series (Fadlillah, 2021). In the context of early childhood education, *meronce* is understood as a learning activity that provides opportunities for children to practice precision, patience, and eye and hand coordination through the process of arranging small objects into meaningful shapes. This activity not only focuses on the final result in the form of a series, but also on a process that involves exploration, concentration, and creativity of children (Sujiono, 2010). In addition, *meronce* activities are also seen as a fun learning medium because children learn while playing (Suryana, 2023).

The purpose of *meronce* activities in early childhood learning not only focuses on aspects of motor skills, but also covers various aspects of child development as a whole, namely: (1) practicing children's eye and hand coordination, (2) developing fine motor skills, (3) increasing concentration and accuracy, (4) fostering children's creativity and imagination, (5) practicing patience and perseverance in completing tasks, (6) improving the ability to recognize colours,

shapes, and patterns, and (7) fostering confidence through works (Hidayah, 2022; Wiyani, 2025). The implementation of *meronce* activities needs to be carried out in stages, starting from simple activities to more complex activities, adjusted to the abilities of each child so that learning goals can be achieved optimally (Suryana, 2023; Sutapa, 2022).

Several previous studies have examined the fine motor development of early childhood through various learning activities. The research of Putri and Yuliana (2023) focuses on the effect of collage activities on fine motor development by using a quantitative approach and emphasizing the final result in the form of improved ability after treatment. The research of Hasanah and Putri (2023) examines fine motor stimulation through play and work activities using experimental methods. Zahro's research (2022) uses the Classroom Action Research (PTK) approach with the aim of improving children's fine motor skills through recycled material media. The three studies are still oriented towards the results of improvement or effectiveness of a method. This research has a novelty in a qualitative descriptive approach that focuses on understanding processes in depth in the context of natural learning. A full comparison is presented in Table 1 below.

Table 1. Comparison of Previous Research with the Author's Research

Yes	Comparative Aspects	Putri & Yuliana (2023)	Hasanah & Putri (2023)	Zahro (2022)	Author's Research
1	Research Title	Effect of Collage Activities on AUD Fine Motor Development	Fine Motor Stimulation through Play and Work Activities	Improving Fine Motor Skills through Recycled Material Media	Development of AUD Fine Motor Skills through <i>Meronce</i> Activities at Imanuel Christian Kindergarten
2	Research Methods	Quantitative	Experiments	Classroom Action Research (PTK)	Qualitative Descriptive
3	Research Objectives	Testing the effect of collage on fine motor	Testing the effectiveness of play and work stimulation	Improves fine motor through repetitive action	Describe the child's fine motor development in depth
4	Study Focus	Fine motor improvement results	Effectiveness of treatment	Improvement through the action cycle	The process of fine motor development through <i>meronce</i> activities
5	Research Approach	Number-based (quantitative)	Treatment testing	Learning improvement actions	Understanding of phenomena naturally (qualitative)
6	Research Object	Early childhood in early childhood	Kindergarten	Kindergarten children in one class	Early childhood at Imanuel Christian Kindergarten Palangka Raya
7	Activities Studied	Collage	Play and create	Crafts recycled materials	<i>Meronce</i> (main focus)

Yes	Comparative Aspects	Putri & Yuliana (2023)	Hasanah & Putri (2023)	Zahro (2022)	Author's Research
8	Data Analysis	Statistics	Comparison of experimental results	PTK Cycle	Qualitative analysis (reduction, presentation, verification)
9	Factors Studied	Not discussed in depth	Limited to treatment	Limited to action	Biological, environmental, and learning stimulation factors
10	Research Orientation	Output	Effectiveness	Increased yield	Process and meaning (process oriented)
11	Differences with Author Research	Focus on influence quantitatively	Focus on treatment testing	Focus on improvement through the cycle	Focus on an in-depth description of the developmental process through <i>meronce</i> activities in a natural context

METHOD

This study used a qualitative approach to deeply understand the process of developing fine motor skills in early childhood through *meronce* activities in natural conditions in the classroom (Sugiyono, 2022). This approach was chosen because it allows researchers to explore the meaning, experience, and practice of learning that occur directly without manipulating the research variables. The type of research is qualitative descriptive research, which is research that aims to describe phenomena systematically, factually, and accurately based on data obtained from the field. In the context of this study, the phenomenon studied is the implementation of *meronce* activities and the development of fine motor skills in early childhood at Imanuel Christian Kindergarten Palangka Raya.

This research was conducted at Immanuel Christian Kindergarten, Jln Bangka No. 16 RT 04/RW XVI, Pahandut Village, Pahandut District, Palangka Raya City, Central Kalimantan. The schedule for the implementation of the research is presented in Table 2 below.

Table 2. Research Time

Yes	Activities	Jan	Stuart O'T	Mar	Apr	May	June	July
1	Submission of title and preparation of thesis proposal	✓						
2	Thesis proposal consultation	✓	✓					
3	Thesis proposal seminar			✓				
4	Thesis proposal improvement			✓				
5	Research and research licensing				✓			

Yes	Activities	Jan	Stuart O'T	Mar	Apr	May	June	July
6	Data processing					✓		
7	Preparation of research results					✓		
8	Thesis consultation					✓	✓	
9	Preparation for the thesis exam						✓	
10	Tests						✓	
11	Review						✓	✓

The data source in this study refers to the opinion of Sugiyono (2022), who distinguishes data into primary data and secondary data. Primary data were obtained directly from classroom teachers (1 person) as learning implementers, as well as early childhood children aged 5 to 6 years as subjects who directly experienced fine motor development activities. Secondary data was obtained from relevant supporting documents, including the Daily Learning Implementation Plan (RPPH), children's works, and photos of learning activities.

The data collection techniques in this study include three techniques, namely: (1) non-participant observation carried out by directly observing children's activities while participating in *meronce* activities for five meetings. Data was recorded in the form of field notes, observation sheets, and photo documentation. (2) Semi-structured interviews conducted with one classroom teacher to obtain information about planning, implementation, evaluation, and obstacles in *meronce* activities. (3) Documentation is carried out by collecting photos of activities, children's works, and RPPH. The use of these three techniques is simultaneously carried out for the purpose of triangulation, i.e. verifying the correctness of data from various sources and methods.

The data analysis technique uses the Miles and Huberman model (Sugiyono, 2022). Qualitative data analysis is carried out interactively and takes place continuously until it is complete, so that the data is saturated. There are three stages in the data analysis process, namely: (1) data reduction, namely sorting, simplifying, and focusing data according to the research objectives; (2) the presentation of data in the form of descriptive narratives, tables, or charts that make it easier for researchers and readers to understand the relationship between data; and (3) conclusion drawing or verification that is carried out on an ongoing basis by reviewing the data that has been reduced and presented to find relevant meanings, patterns, and relationships. The verification process is carried out through triangulation of sources, techniques, and time.

RESULTS AND DISCUSSION

Overview of Early Childhood Fine Motor Skills Development at Imanuel Christian Kindergarten Palangka Raya

Based on the results of observations made by researchers at Imanuel Christian Kindergarten Palangka Raya, it is known that the development of fine motor skills of class B children before the implementation of *meronce* activities shows different abilities. In daily learning activities, teachers often provide writing, drawing, and colouring activities as a form

of fine motor exercise. However, from the observation results, it was still found that some children had difficulties in carrying out these activities. The initial condition of children's fine motor skills in the three main activities is summarized in Table 3 below.

Table 3. Early Condition of Children's Fine Motor Skills Before *Meronce* Activities

Activities	Visible Capabilities	Undiscovered Difficulties
Writing	Some children are able to hold a pencil correctly and follow the lines provided	Some children hold pencils too tightly, the writing is not neat, the font size is inconsistent, and still need the teacher's direction
Drawing	Some children are able to draw simple shapes according to the example given by the teacher	Some children have difficulty controlling hand movements so that the shape of the picture does not match the pattern and the line of the picture is not clear
Coloring	Children are able to participate in activities and choose colors according to their wishes	Some children are not able to color according to the limits of the image so that the color is out of line, eye-hand coordination has not developed optimally, and children easily lose concentration

The results of these observations were reinforced through interviews with grade B teachers who said: "Before *meronce* activities are carried out, we often provide writing, drawing, and coloring activities. There are children who are able to write and color neatly, but there are still those who hold a pencil incorrectly, the colors are still out of line, and when drawing the shape is not suitable. In addition, because the activities carried out are almost the same every week, some children seem to be starting to get bored and lack enthusiasm for learning." (D, April 27, 2026).

This finding is in line with Sumantri's (2021) opinion that fine motor is the ability to use small muscles that require continuous coordination, precision, and movement control. Wiyani (2022) states that eye and hand coordination is the basis for fine motor development because almost all manipulative activities require this ability. According to Gallahue and Ozmun, children aged 4 to 6 years are in the early phase of skilled movement, when motor abilities develop through repetitive learning experiences. This condition is the basis for teachers to provide a variety of activities through *meronce* activities as an effort to stimulate children's fine motor development more optimally.

Implementation of *Meronce* Activities in Developing Early Childhood Fine Motor Skills at Imanuel Christian Kindergarten Palangka Raya

The implementation of *meronce* activities at Imanuel Christian Kindergarten Palangka Raya was carried out for five meetings with different subthemes in the theme of the Universe, namely Stars, Sun, Moon, Earth, and Rainbow Rain. Each implementation begins with a joint prayer, greetings, presence, and perception, then continues with the introduction of tools and materials, demonstrations by teachers, the implementation of activities by children independently, and evaluation in the form of appreciation for children's work. A summary of the implementation and development of children at each meeting is presented in Table 4 below.

Table 4. Summary of the Implementation of *Meronce* Activities per Subtheme

Yes	Subtheme	Materials & Activity Steps	Visible Developments	Teacher's Notes
1	Stars	Colored straws, wool threads, scissors, glue, star drawing patterns. Children cut straws, cut out star patterns, <i>meronce</i> , and glue	There are still children who have difficulty adjusting the size of straw pieces; Some children are able to insert wool yarn independently	Initial activities; The teacher gives an example slowly and the child is still given the opportunity to try on his own
2	Sun	Colored straws, wool thread, scissors, glue, sun drawing patterns. The flow of the activity is the same as the previous subtheme	Most children are more skilled than the first meeting; Eye-hand coordination looks getting better	Children are more confident and understand the steps of the activity faster
3	Moon	Colored straws, wool thread, scissors, glue, moon picture patterns. Children start arranging the order of colors according to creativity	Children are more independent in cutting and trimming; Teacher assistance decreased compared to the previous two meetings	The child has begun to understand each stage; The teacher only helps a few children who are struggling
4	Earth	Colored straws (green-blue combination), wool yarn, scissors, glue, earth drawing patterns	Most children are able to follow all stages independently; Neater work	Children are increasingly able to cut straws, insert threads, and stick to patterns
5	Rainbow Rain	Multi-colored straws (resembling rainbow colors), wool yarn, scissors, glue, rainbow rain drawing patterns	Almost all children are independent; the ability to arrange colors neatly and in order; More effective turnaround time	Children look more independent and happier and proud when their work is completed

a. Implementation of *Meronce* Activity Subtheme Bintang

Based on the results of observations, the implementation of the Star subtheme *meronce* activity is the first activity carried out on the theme of the Universe. The teacher starts with an apperception of celestial bodies, shows examples of star-shaped *meronce* works, then distributes tools and materials to each child. The teacher demonstrates how to hold the scissors correctly, how to cut the straw, how to insert wool thread into the straw hole, and how to attach the results to the pattern of the star image. Some children still have difficulty in setting the size of the straw pieces and following the lines of the star pattern, but the teacher gives direct directions without taking over the child's work. According to Khadijah (2020), learning in early childhood should be done through direct experience because children will more easily understand a skill if given the opportunity to do these activities directly. All children are able to complete *meronce* activities according to the stages that have been given.

b. Implementation of *Meronce* Activities with the Sun Subtheme

In the second meeting, the implementation of the Sun subtheme *meronce* activity showed a development compared to the previous meeting. Most children have started to get used to using scissors and are able to cut straws of a more uniform size. Coordination between children's eye and hand movements seems to be getting better, some children are able to

complete a series of ronces independently, while some other children still need the help of teachers. The teacher said: "Children have started to get used to using scissors and putting wool thread in straws. They look more confident and understand the steps I explain faster." (D, April 27, 2026). According to Sumantri (2021), fine motor development is closely related to the child's ability to use small muscles in a coordinated manner so that continuous training is required.

c. Implementation of *Meronce* Activities for the Month Subtheme

At the third meeting, the implementation of the Bulan sub-theme *meronce* activity showed that children's abilities were developing. Most children are able to cut straws more neatly, children look more confident when using scissors, and are more fluent in inserting wool yarn into the straw holes than in the first and second meetings. Children are starting to be able to arrange straw pieces in order of colors according to their creativity. During the activity, it appeared that the coordination of children's eye and hand movements was getting better. The teacher said: "In the subtheme of the month activity, the children have begun to understand the steps of *meronce*. They are more independent when they cut the straw, insert wool yarn into the straw, and attach the results to the pattern." (D, April 27, 2026).

d. Implementation of *Meronce* Activities Subtheme Earth

In the fourth meeting, the implementation of the Earth subtheme *meronce* activity showed that children were getting more used to participating in the stages of the activity. Most children have been able to follow all stages of activities more independently. Children look more skilled when using scissors, are more thorough in cutting according to patterns, and are faster in inserting wool yarn into straw pieces. Most children no longer wait for the teacher's help when cutting straws or inserting wool threads. This is in accordance with Gallahue and Ozmun's theory that the more often children do activities that involve the muscles of the small hands, the more their eye and hand coordination skills will develop. The teacher said: "In the earth subtheme activity, most of the children are able to do it on their own. I only help some kids who are still struggling with certain parts." (D, April 27, 2026).

e. Implementation of *Meronce* Activities Subtheme of Rainbow Rain

In the fifth and final meeting, the implementation of the Rainbow Rain sub-theme *meronce* activity showed the most optimal development of fine motor skills compared to the previous meeting. Almost all children are able to cut straws independently, coordinate eye and hand movements precisely, and arrange color combinations according to the rainbow color sequence more neatly and attractively. Children look enthusiastic about choosing the color of the straw and showing their work to their friends in front of the class. The teacher said: "In the last activity, the children looked more independent. They already know the steps that must be taken from start to finish. They also look happy and proud when their work is finished." According to Wiyani (2022), fun learning will increase children's motivation to learn so that children are more easily actively involved in every activity given by the teacher.

Based on the results of the research that has been presented, *meronce* activities have a significant positive impact on the development of fine motor skills of class B children at Imanuel Christian Kindergarten Palangka Raya. This is shown by the gradual improvement seen at each meeting, including eye and hand coordination, finger movement flexibility, precision, concentration, and independence of children. This finding is in line with the opinion of Sumantri (2021) that fine motor development requires continuous exercise through various

activities that are appropriate for the child's age. Systematic and gradual implementation is in accordance with Gallahue and Ozmun's theory of the phase of early skilled movement, in which motor development takes place through practice, experience, and repetition of movements.

Supporting factors for the success of *meronce* activities at Imanuel Christian Kindergarten Palangka Raya include: (1) teachers' competence in designing activities that are in accordance with the characteristics and stages of child development as emphasized by Mulyasa (2021); (2) the availability of safe and attractive *meronce* tools and materials in the form of colored straws, wool thread, scissors, and glue, which allow children to explore directly (Suyadi, 2021); (3) a safe and conducive learning environment so as to increase children's concentration and involvement (Nurani, 2022); and (4) high interest and motivation of children in participating in art and play activities (Susanto, 2022). Meanwhile, the inhibiting factors found were differences in children's early abilities, the tendency of some children to lose focus easily, and different variations in fine motor abilities in each child (Sujiono, 2010; Susanto, 2022).

When compared to previous research, the results of this study have similarities with the research of Hasanah and Putri (2023) which shows that work activities are able to stimulate children's fine motor development. Zahro's research (2022) also shows that handicraft activities can improve children's manipulative skills through exercises that are carried out gradually. However, this study has a difference because it does not focus on measuring the improvement of learning outcomes through certain actions or treatments, but rather describes in depth the process of implementing *meronce* activities that take place naturally in the context of real learning at Imanuel Christian Kindergarten Palangka Raya, so as to provide a more comprehensive and contextual picture.

CONCLUSION

This study concludes that the development of fine motor skills of grade B children in Imanuel Christian Kindergarten Palangka Raya before the implementation of *meronce* activities shows **diverse** abilities; Some children are able to participate in writing, drawing, and coloring activities quite well, but others still have difficulty coordinating eye and hand movements, controlling finger movements, maintaining concentration, and producing neat work. After participating in *meronce* activities gradually for five meetings with the subthemes of stars, sun, moon, earth, and rainbow rain, significant improvements were seen in eye and hand coordination, finger movement flexibility, precision, concentration, and children's independence. The implementation of *meronce* activities is carried out systematically through the planning stage, preparation of tools and materials, demonstrations, implementation, and evaluation, with teachers acting as facilitators who provide direction and motivation without taking over children's work, so that *meronce* activities are proven to be effective as a learning strategy in developing fine motor skills in early childhood. Based on these findings, it is recommended to educators to enrich the variety of *meronce* media by combining straws and natural or recycled materials and applying a differentiation approach so that each child gets challenges according to their developmental zone; to the school to continue to support the availability of cheap, safe, and environmentally friendly creative materials to encourage more innovative fine motor stimulation activities; and for the next researcher to develop a mixed approach to quantitatively measure fine motor improvement while understanding the process

qualitatively, including exploring the impact of *meronce* activities on other developmental aspects such as cognitive and social-emotional.

REFERENCES

- Aulina, C. N. (2021). *Early childhood motor development*. Umsida Press.
- Aulina, C. N. (2021). *Textbook of methodology for early childhood fine motor development*. Umsida Press.
- Fadlillah, M. (2021). *Early childhood education: Concept and implementation*. Kencana.
- Fadlillah, M. (2021). *Early childhood learning design*. Ar-Ruzz Media.
- Fitriani, F., Rahmawati, D., & Lestari, P. (2025). Meronce activity in improving fine motor in early childhood. *Journal of Early Childhood Education*, 7(2), 120–128.
- Fitriana, F., & Sudaryanti, S. (2025). Learning strategies in early childhood fine motor development. *Indonesian PAUD Journal*, 9(1), 15–25.
- Hanum, Z., & Widayati, N. W. A. S. (2023). *Optimizing the growth and development of toddlers*. Nuansa Fajar Cemerlang.
- Hasanah, U. (2023). *Early childhood development: Learning theory and implementation*. Tinjauan Aditama.
- Hasanah, U., & Putri, A. N. (2023). Characteristics of early childhood development in the context of 21st century learning. *Journal of PAUD Nusantara*, 9(1), 23–35.
- Hasmidar, H., Sari, D., & Pratiwi, R. (2025). Early childhood fine motor development in learning. *Journal of Early Childhood Education*, 9(1), 30–40.
- Helda Sari, H., Amanda, R. S., & Rahman, K. A. (2025). Efforts to improve fine motor skills of children aged 4–5 years through art and craft activities at Kirana Kindergarten, Jambi City. *Journal of Early Childhood and Inclusive Education*, 5(2), 98–110.
- Hidayah, N. (2022). *Basic concepts of early childhood education: Theory and practice*. Pustaka Pelajar.
- Hidayat, M., Rachman, R., & Dewi, S. (2022). The role of manipulative activity in early childhood fine motor development. *Indonesian Journal of Child Education*, 11(2), 121–132.
- Khadijah. (2020). *The right way to understand student development*. Madza Media.
- Khadijah, & Amelia, N. (2020). *Early childhood physical motor development: Theory and practice*. Prenada Media.
- Kurnia, R. (2025). *Early childhood motor development*. Rajawali Pers.
- Lestari, D. W. S., & Kurniawan, H. (2025). *Fine motor basics for early childhood and kindergarten*. Tata Aksara.
- Mulyasa, E. (2021). *Early childhood education*. PT Remaja Rosdakarya.
- Nurani, Y. (2022). *Basic concepts of early childhood education*. Indeks.
- Nurani, Y. (2024). *Social-emotional development methods*. Universitas Terbuka.
- Putri, S. A., & Yuliana, R. (2023). The effect of collage activities on early childhood fine motor development. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, 7(3), 3675–3684.
- Rohendi, A., Seba, L., & Laurens. (2019). *Motor development: An introduction to theory and its implications in learning*. Alfabeta.
- Santrock, J. W. (2021). *Child development*. Erlangga.
- Sugiyono. (2022). *Educational research methods: Quantitative, qualitative, and R&D approaches* (Rev. ed.). Alfabeta.
- Sujiono, B. (2010). *Methods of physical development*. Direktorat Jenderal Pendidikan Tinggi.
- Sujiono, Y. N. (2010). *Basic concepts of early childhood education*. Indeks.
- Sujiono, Y. N., & Sujiono, B. (2010). *Early childhood art and creativity development methods*. Prenadamedia Group.

- Suryana, D. (2023). *Early childhood education: Stimulation and aspects of child development*. Kencana.
- Susanto, A. (2022). *Early childhood development*. Kencana.
- Susanto, A. (2022). *Theory of learning and early childhood learning*. Kencana.
- Sutapa, P. (2022). *Motor development and learning at an early age*. Balai Layanan Perpustakaan D.I. Yogyakarta.
- Suyadi. (2021). *Early childhood learning psychology*. Pustaka Pelajar.
- Suyadi. (2021). *Early childhood learning theory in a developmental perspective*. Diva Press.
- Wiyani, N. A. (2022). *Psychology of early childhood development*. Ar-Ruzz Media.
- Wiyani, N. A. (2022). *Early childhood learning management based on child characteristics*. Ar-Ruzz Media.
- Zahro, N. (2022). *Improving students' fine motor skills through used cardboard recycling materials media at Raudhatul Atfal Asalam Sumberjo* (Undergraduate thesis, IAIN Parepare). <https://repository.iainpare.ac.id/id/eprint/5726/>