GOLDEN RATIO OF DATA IN SUMMARY
VOLUME 6, ISSUE. 3 (2026)
Website: https://goldenratio.id/index.php/grdis

GOLDEN RATIO
ISSN [Online]: 2776-6411

DATA IN SUMMARY | EDUCATION, LINGUISTIC

Fine Motor Stimulation for Pre-Writing Skills through Geometric Pattern Cutting Activities in Early Childhood

Rina Nur Sholichah[1], Ezif Rizqi Imtihana[2]

[1,2] Institut Studi Islam Muhammadiyah Pacitan, Pacitan, Indonesia.
Email: rinanursholichah1980@gmail.com[1], ezifrizqi@isimupacitan.ac.id[2]

ARTICLE HISTORY

Received: May 04, 2026
Revised: May 19, 2026
Accepted: May 21, 2026

DOI
https://doi.org/10.52970/grdis.v6i3.2256

ABSTRACT
This study aims to describe fine motor stimulation strategies in improving children's pre-writing skills through cutting activities at KB Pelangi. This research employed a qualitative descriptive approach involving 17 children as research subjects. Data were collected through observation, interviews, and documentation, while data analysis used the Miles and Huberman model, including data reduction, data display, and conclusion drawing. The results indicate that cutting activities conducted gradually, supported by engaging learning media and intensive teacher guidance, can effectively enhance children's fine motor skills. This improvement is reflected in children's ability to hold scissors properly, better hand-eye coordination, the ability to follow simple line patterns, and increased readiness for pre-writing activities. Therefore, cutting activities are effective as a strategy for stimulating fine motor development in early childhood.

Keywords: Fine Motor Skills, Pre-Writing, Cutting Activity, Early Childhood.

I. Introduction

Early childhood education (ECE) is a fundamental stage in a child's development that forms the basis for building essential abilities in the future, including cognitive, social-emotional, and psychomotor aspects. At this stage, children are in the golden age period, a time when brain development and foundational skills progress very rapidly and therefore require appropriate and optimal stimulation. One of the most important developmental aspects to be considered is fine motor skills, which involve the coordination of small muscles in the hands and fingers. This ability serves as a primary foundation for children's readiness in academic activities, especially writing. According to Permatasari (2024), fine motor skills play a crucial role in supporting children's ability to hold a pencil properly, control hand movements, and produce neat and structured writing. Without adequate stimulation, children may face difficulties when entering formal education, particularly in pre-writing skills. However, field observations show that many early childhood learners still experience difficulties in pre-writing skills development. Based on initial observations at KB Pelangi, most children are not yet able to control their hand movements optimally during writing or drawing activities. This is evident from their difficulty in drawing straight lines, curved lines, and simple shapes. In addition, children are also unable to hold writing tools correctly, resulting in messy and incomplete writing outcomes. Poor eye-hand coordination is another factor causing children to feel quickly fatigued during writing activities. These

ISSN [Online]: 2776-6411

conditions indicate that fine motor stimulation in the learning environment is still not optimal, and therefore, more creative and developmentally appropriate learning strategies are needed.

One of the activities that can be used to stimulate children's fine motor development is cutting activities. This activity involves not only hand skills but also requires concentration, visual-motor coordination, and precision in following given patterns. According to Suyadi (2010), cutting activities can train finger muscle flexibility and improve children's visual-motor coordination. Through this activity, children learn to control hand movements in a more directed and precise way, which ultimately contributes positively to pre-writing skills. Furthermore, Wathoni et al. (2024) state that cutting activities are an effective method for developing fine motor skills because they provide enjoyable and meaningful learning experiences for early childhood learners. The importance of Early Childhood Education (ECE) cannot be separated from efforts to develop all aspects of a child's development holistically. ECE serves as the primary foundation in shaping children's character, skills, and readiness for formal education. Early childhood is considered a golden period because development occurs very rapidly and is highly influenced by environmental stimulation.

One of the developmental aspects that must receive special attention is psychomotor development, especially fine motor skills, as this forms the basis for academic abilities such as writing. According to Utia Virli Susanti and Reni Amiliya (2024), fine motor skills play an essential role in preparing children for learning readiness at the next educational level and, therefore, must be optimally stimulated through activities that are appropriate for children's play-based learning characteristics. Pre-writing skills are also an essential aspect that must be developed before children learn formal writing. Pre-writing includes basic abilities such as holding a pencil correctly, eye-hand coordination, finger control, as well as the ability to imitate shapes and draw simple lines. These skills serve as indicators of a child's readiness for primary education. Children with well-developed pre-writing skills will find it easier to follow writing instruction in elementary school without significant difficulties. Conversely, children who lack fine motor readiness tend to struggle in writing activities. According to Abdurrahman & Pekalongan (2024), pre-writing skills are a crucial foundation that determines a child's success in later writing learning processes.

Problems observed in the field indicate that many early childhood learners still face difficulties in pre-writing skills. Children often cannot properly hold writing tools, struggle to draw straight, curved, and simple shapes, and have weak finger coordination that causes them to tire quickly while writing. In addition, learning activities in ECE settings still often focus on academic outcomes without sufficient motor stimulation to support children's writing readiness. Monotonous learning activities also reduce children's interest in practicing writing skills. According to Husaiwati and Ianatuz Zahro (2025), this situation highlights the need for innovation in early childhood learning to make it more varied, engaging, and aligned with children's developmental needs. Therefore, appropriate fine motor stimulation is needed through enjoyable activities that suit early childhood characteristics. Such stimulation can be provided through various activities such as beading, folding, pasting, coloring, drawing, and cutting. Among these, cutting is one of the most effective activities for training children's eye-hand coordination. Hernawati Muthiah Affandi and Rini Novianti Yusuf (2025) state that cutting activities help children develop fine motor skills optimally while also improving concentration and accuracy. One form of cutting activity that can be applied is cutting geometric patterns such as circles, triangles, squares, and rectangles. This activity not only trains fine motor skills but also helps children recognize basic geometric shapes, improve hand movement accuracy, and enhance focus and self-control. According to Indah (2019), this activity is easy to implement, cost-effective, and aligns with the principle of learning through play.

Although various studies have examined fine motor development through cutting activities, there is still a research gap that needs to be addressed. Most previous studies discuss cutting activities in general without specifically examining the relationship between cutting geometric patterns and pre-writing skills. In fact, geometric patterns have great potential in training precision and controlled hand movements in children. Fauziah (2025) notes that geometry-based approaches can be effective media for improving early childhood fine motor skills, yet they are still not widely explored in depth. Therefore, this study is important to fill this gap and contribute to the development of more effective early childhood learning strategies.

ISSN [Online]: 2776-6411

The urgency of this study lies in the importance of pre-writing skills as a foundation for children's readiness to enter primary school. If these skills are not stimulated early, children are at risk of experiencing difficulties in writing at the next educational level. Cutting geometric patterns can be a simple, affordable, and effective solution to improve children's fine motor skills. In addition, this study is expected to provide alternative learning strategies for ECE teachers in designing more innovative and engaging activities. According to Desi Nur Amelia (2023), learning approaches based on concrete and play-based activities can increase children's engagement while supporting the optimal development of basic skills. The selection of this research topic is based on its relevance to current early childhood learning needs. Cutting geometric patterns is a simple activity, but it has a significant impact on children's writing readiness. In addition to being easy for ECE teachers to implement, this activity also provides enjoyable learning experiences for children. Furthermore, this study has novelty value because it specifically examines the relationship between fine motor stimulation through cutting geometric patterns and children's pre-writing skills. The objectives of this study are to describe fine motor stimulation through cutting geometric patterns activities, analyze the improvement of early childhood pre-writing skills through these activities, and provide theoretical and practical contributions to the development of more effective, creative, and developmentally appropriate ECE learning strategies.

II. Literature Review and Hypothesis Development

Early Childhood Education (ECE) is a crucial stage in child development that serves as the foundation for later learning success, particularly in developing pre-writing skills and fine motor abilities. Early childhood is considered a golden age in which rapid brain development occurs, making stimulation essential for optimal growth. According to Utia Virli Susanti and Reni Amiliya (2024), the golden age period is a critical phase that determines the quality of a child's future development, especially in physical-motor aspects. One of the most important abilities that must be stimulated during this stage is fine motor skills, as they directly support children's readiness for writing activities. Fine motor skills refer to the ability to coordinate small muscles in the hands and fingers to perform precise movements. These skills are essential in pre-writing development, including holding a pencil, drawing shapes, and controlling hand movements. Permatasari (2024) explains that fine motor development is a fundamental step in preparing children for writing activities, particularly through hands-on experiences such as collage and other manipulative activities.

Similarly, Prameswari (2023) emphasizes that early writing development can be enhanced through creative media such as collage, which strengthens hand-eye coordination and finger control. Pre-writing skills are the basic abilities children must acquire before learning formal writing. According to Abdurrahman and Pekalongan (2024), pre-writing skills include controlling hand movements, recognizing shapes, imitating patterns, and developing coordination between visual perception and motor execution. These skills are essential for children aged 3–6 years, as they determine readiness for formal education. Without adequate stimulation, children may experience difficulties in writing tasks at the elementary level. Various studies show that children often experience challenges in developing pre-writing skills. Husaiwati and Ianatuz Zahro (2025) found that many children aged 5–6 years still struggle with controlling pencil movements, forming letters, and maintaining writing consistency. This condition is often caused by limited stimulation activities that support fine motor development. Desi Nur Amelia (2023) also highlights that innovative learning media such as smart letter cubes can significantly improve early writing skills by providing engaging and interactive learning experiences.

To address these challenges, fine motor stimulation can be carried out through various activities, one of which is cutting activities. Wathoni et al. (2024) state that cutting activities significantly improve children's fine motor skills by training finger strength, precision, and eye-hand coordination. Similarly, Indah (2019) found that cutting and pasting geometric patterns effectively enhances fine motor abilities in early childhood learners, as children learn to control scissors and follow structured patterns. Cutting geometric patterns is considered an effective learning strategy because it integrates both cognitive and motor development.

ISSN [Online]: 2776-6411

Geometric shapes such as circles, squares, and triangles help children improve accuracy in movement while also introducing basic mathematical concepts. This activity supports learning through play, which is a core principle of early childhood education. Furthermore, Hernawati Muthiah Affandi and Rini Novianti Yusuf (2025) explain that visual media such as flashcards can also support early writing development by strengthening visual recognition and fine motor coordination.

In addition, game-based learning approaches have been shown to improve fine motor skills in children. Fauziah (2025) states that game-based learning significantly enhances fine motor development, especially in children with attention difficulties such as ADHD. Interactive and enjoyable learning activities encourage children to actively participate, thereby improving their motor control and concentration skills. This aligns with the idea that learning should be engaging and developmentally appropriate for young learners. Several recent studies also support the importance of integrating fine motor stimulation with pre-writing development. For example, research by Permatasari (2024) shows that collage activities improve children's ability to prepare for writing by strengthening finger coordination.

Prameswari (2023) also highlights the effectiveness of collage media in developing early writing skills. Meanwhile, Wathoni et al. (2024) emphasize that structured cutting activities significantly improve fine motor precision in early childhood education settings. The development of fine motor skills is influenced by various factors, including environmental stimulation, learning methods, and teaching strategies. According to Susanti and Amiliya (2024), optimal stimulation during the golden age period plays a vital role in shaping children's developmental outcomes. Therefore, teachers must design learning activities that are engaging, meaningful, and appropriate for children's developmental stages. Without proper stimulation, children may experience delays in pre-writing and motor development. Based on the reviewed literature, it can be concluded that fine motor stimulation is closely related to pre-writing skills in early childhood. Activities such as cutting geometric patterns, collage, flashcard learning, and game-based learning have been proven effective in improving children's motor coordination and writing readiness. However, further exploration is still needed to specifically examine the impact of cutting geometric patterns on pre-writing abilities. This study is therefore expected to contribute both theoretically and practically in improving early childhood learning strategies, particularly in developing fine motor and pre-writing skills.

III. Research Method

This study employed a qualitative research method with a descriptive approach. This method was chosen because the study aims to provide an in-depth description of the process of fine motor stimulation for pre-writing skills through geometric pattern cutting activities in early childhood education. The research subjects were early childhood children aged 4–5 years at PAUD/KB Pelangi, located in Wonosobo Village, Ngadirojo District, Pacitan Regency. The subjects were selected using a purposive sampling technique based on the consideration that this group is at a developmental stage that requires stimulation of pre-writing skills as preparation for entering elementary school. In addition to the children, the classroom teacher also served as a supporting informant, as they are directly involved in the learning process.

The study was conducted during the first semester of the academic year, following the regular classroom schedule. The focus of the research was directed at geometric pattern cutting activities as a form of fine motor stimulation for children (Prameswari, 2023). Data collection techniques included observation and interviews. Observation was used to directly monitor children's activities during cutting tasks, such as how they hold scissors, their ability to follow patterns, eye-hand coordination, and pre-writing readiness. Interviews were conducted with the classroom teacher to obtain information regarding the children's initial abilities, teaching strategies used, and challenges faced in fine motor stimulation. The research instruments included observation sheets and interview guidelines. Data analysis was conducted using the Miles and Huberman model, which consists of three stages: data reduction, data display, and conclusion drawing. Data reduction involved selecting and focusing on relevant data related to the research objectives. Data display was presented in the form of descriptive narratives to make the findings easier to understand. Finally, conclusions

ISSN [Online]: 2776-6411

were drawn to obtain an overview of the effectiveness of geometric pattern cutting activities in stimulating fine motor skills and improving early childhood pre-writing abilities (Spradley & Huberman, 2024).

IV. Result and Discussion

The results of this study are presented in table form to provide a clearer and more systematic description of children's pre-writing skill development through geometric pattern cutting activities. Presenting the data in tables aims to facilitate the analysis of changes in children's abilities before and after the stimulation was given, so that improvements in each observed indicator can be clearly identified. In addition, the tables are used to summarize the development both quantitatively and qualitatively, as well as to strengthen the observational findings through documentation of changes in children's behavior and skills during the research process.

The research results are presented in table form as shown below:

Table 1. Observation Results of Children's Pre-Writing Skills through Geometric Pattern Cutting Activities

No	Assessment Indicator	Initial Condition	After Stimulation	Description
1	The child can hold scissors correctly	Not yet developed	Developed as expected	Improvement observed
2	The child can follow pattern lines accurately	Beginning to develop	Developing very well	Improvement observed
3	The child can cut according to geometric shapes	Not yet developed	Developed as expected	Improvement observed
4	Child's eye-hand coordination	Less optimal	Developing very well	Improvement observed
5	The child can imitate straight and curved lines	Beginning to develop	Developed as expected	Improvement observed
6	The child can imitate simple shapes	Not yet developed	Developed as expected	Improvement observed
7	Child's readiness to use writing tools	Not ready	More ready and independent	Improvement observed
8	Neatness of children's cutting results	Not neat	Neater and more precise	Improvement observed

Table 2. Summary of Children's Pre-Writing Skill Development

Development Category	Before Activity (%)	After Activity (%)
Not Yet Developed (BB)	45%	5%
Beginning to Develop (MB)	35%	15%
Developed as Expected (BSH)	15%	50%
Developed Very Well (BSB)	5%	30%

Table 3. Documentation of Changes in Children's Abilities

Observed Aspect	Before Research	After Research
Scissor holding technique	Incorrect and stiff	Correct and more flexible
Accuracy in following patterns	Often went خارج the lines	More accurate in following patterns
Finger strength	Still weak	Stronger and more controlled
Concentration during activity	Easily bored and unfocused	More focused and enthusiastic
Pre-writing output	Unstructured lines	Neater and more controlled lines

ISSN [Online]: 2776-6411

Cutting geometric patterns is one of the activities that plays an important role in the development of early childhood fine motor skills. This activity is not merely a form of play, but also an effective stimulation tool for training the small muscles of children's fingers. When children use scissors, they indirectly learn to control the opening and closing movements of their fingers in a coordinated way. This process involves strength, precision, and hand muscle coordination, which gradually develop through repeated practice. Therefore, cutting activities become an essential foundation in preparing children's motor readiness before entering formal writing instruction. In addition to developing fine motor skills, cutting geometric patterns also significantly improves eye-hand coordination. During the activity, children must carefully observe the pattern lines while precisely moving the scissors to follow the desired shape. This requires synchronization between visual perception and hand movements, known as visual-motor coordination. This ability is crucial because it forms the main foundation of pre-writing skills, especially when children begin learning to write letters and numbers. The better the eye-hand coordination, the easier it is for children to control writing direction and form letters properly.

Furthermore, cutting geometric patterns such as circles, triangles, squares, and straight lines provides structured practice in following shapes and directional lines accurately. Each geometric shape presents a different level of difficulty, allowing children to learn progressively from simple to more complex forms. For example, straight lines train basic hand control, while circles develop flexibility and curved movement skills. Meanwhile, triangles and squares train accuracy in following angles and directional changes. Through this systematic practice, children not only learn cutting skills but also develop foundational abilities closely related to writing skills in the future. Cutting activities also significantly enhance children's pre-writing abilities. After engaging in this activity regularly, children find it easier to imitate basic shapes such as straight lines, curves, and simple patterns. This shows that fine motor development through cutting has a direct impact on early writing skills. Moreover, children become more prepared to use writing tools such as pencils because their fingers and hand muscles are already accustomed to controlled movements. As a result, their early writing outputs tend to be neater, more structured, and better aligned with taught patterns. Therefore, this activity can be considered a crucial preparatory stage before children enter formal writing instruction in elementary school.

From a learning perspective, cutting geometric patterns also creates a more enjoyable learning experience for early childhood learners. At this stage, children learn more effectively through play-based activities rather than direct instruction. Cutting is considered engaging because it involves physical activity, creativity, and visible results that children can immediately see. This makes them more enthusiastic and motivated in learning. In addition, the teacher's role is very important in supporting the success of this activity, including demonstrating proper scissor handling, guiding children step by step in following patterns, and providing encouragement and assistance when difficulties arise. With the right approach, cutting geometric patterns becomes not only a tool for fine motor development but also an effective, enjoyable learning strategy that supports children's readiness for the next level of education.

The findings of this study indicate a significant improvement in children's pre-writing abilities after being given stimulation through geometric pattern cutting activities. Based on Table 1, all observed indicators show positive development, ranging from scissor handling skills, ability to follow pattern lines, eye-hand coordination, to the neatness of cutting results. Initially, most children were categorized as "not yet developed" or "beginning to develop," but after the intervention, the majority reached the categories of "developed as expected" and "developing very well." These results are supported by the summary in Table 2, which shows a drastic decrease in the "not yet developed" category from 45% to 5%, and an increase in the "developing very well" category from 5% to 30%. This improvement is also strengthened by documentation data in Table 3, which shows behavioral changes such as improved scissor grip, better focus, and more controlled pre-writing outcomes.

The improvement in children's fine motor skills can be explained through the nature of cutting activities, which involve the coordination of small muscles in the fingers and hands. Fine motor development in early childhood is strongly influenced by repetitive and structured physical activities that require precision

ISSN [Online]: 2776-6411

and control. According to research by Zeng et al. (2017), fine motor skills are closely related to early writing readiness, as both require finger strength, coordination, and controlled hand movements. In this study, children who were initially unable to hold scissors properly showed significant progress after repeated practice, indicating that structured motor stimulation can effectively enhance motor control and dexterity.

Furthermore, the results also demonstrate a clear improvement in eye-hand coordination, which is a crucial component of pre-writing development. During geometric cutting activities, children are required to visually track the pattern lines while simultaneously adjusting their hand movements to follow the shapes accurately. This process strengthens visual-motor integration, which is a key predictor of writing readiness. Research by Grissmer et al. (2010) and Cameron et al. (2012) emphasizes that strong visual-motor coordination in early childhood significantly contributes to later academic skills, particularly handwriting performance. The findings of this study align with these theories, as children showed improved accuracy in following patterns and reduced tendency to deviate from lines after the intervention.

In addition, the use of geometric patterns such as circles, triangles, squares, and straight lines provides a gradual and structured learning experience. Each shape offers a different level of difficulty, allowing children to develop skills progressively. This aligns with Piaget's constructivist theory, which emphasizes that children learn best through active exploration and manipulation of concrete objects. Similar findings were reported by Kaderavek and Justice (2014), who stated that pre-writing activities involving shape recognition and tracing significantly improve children's emergent literacy skills. In this study, children not only improved their cutting accuracy but also demonstrated better ability to imitate basic writing forms such as straight and curved lines, which are fundamental skills in writing development.

From a pedagogical perspective, the results also highlight the importance of play-based learning in early childhood education. Cutting activities were perceived by children as enjoyable and engaging, which increased their motivation and participation during learning sessions. According to Hyson (2014), positive emotional engagement in learning activities enhances children's cognitive and motor development outcomes. The teacher's role in providing guidance, modeling proper scissor use, and giving reinforcement was also crucial in ensuring the success of the intervention. This supports Vygotsky's concept of the Zone of Proximal Development (ZPD), where children achieve higher developmental levels through adult assistance and scaffolding (Berk & Winsler, 2018).

Overall, the findings of this study confirm that geometric pattern cutting activities are effective in improving early childhood pre-writing skills. The combination of fine motor stimulation, visual-motor coordination training, structured geometric practice, and enjoyable learning experiences contributes significantly to children's developmental progress. These results are consistent with previous studies, which emphasize that early intervention through motor-based activities plays an essential role in preparing children for formal writing tasks (Cameron et al., 2012; Zeng et al., 2017). Therefore, this study provides empirical evidence that integrating geometric cutting activities into early childhood learning can be an effective strategy to enhance writing readiness in a systematic and developmentally appropriate manner.

V. Conclusion

Based on the results and discussion, it can be concluded that the strategy of fine motor stimulation through geometric shape cutting activities is effective in improving early childhood pre-writing skills. This activity is able to develop children's basic skills, including the ability to properly hold scissors, eye–hand coordination, and accuracy in following line patterns and shapes. The implementation of activities carried out in stages, supported by attractive learning media and intensive teacher guidance, contributes to improving children's readiness for early writing activities. In addition, cutting activities provide enjoyable learning experiences in accordance with early childhood learning principles, thereby increasing children's motivation and engagement. Thus, geometric shape cutting activities can be used as an effective alternative learning strategy to stimulate fine motor skills and prepare children's pre-writing abilities as a foundation for entering primary education.

ISSN [Online]: 2776-6411

Based on these conclusions, it is recommended that early childhood teachers integrate geometric shape cutting activities regularly into learning activities with variations in shapes and gradually increasing levels of difficulty so that children's fine motor development can be optimally stimulated. For educational institutions, it is expected that they provide facilities and learning media that support fine motor stimulation activities. Meanwhile, future researchers are advised to develop studies using different methods, a larger number of participants, and to examine other variables related to pre-writing skills to strengthen the research findings.

References

Abdurrahman, U. I. N. K. H., & Pekalongan, W. (2024). Strategi guru dalam menstimulasi keterampilan pra-menulis pada anak usia 3–4 tahun di PAUD Kenanga Aini Mufidatul Jannah. Jurnal Pendidikan Anak Usia Dini, 485–493.

Arsyad, M. N. F., & Burhanuddi, S. (2025). Peningkatan Hasil Belajar Senam Lantai dengan Model Game-Based Learning Kelas V SDN Mattoanging II Kota Makassar. *Jurnal Olahraga Indragiri*, *9*(2), 198-207.

Berk, L. E., & Winsler, A. (2018). Scaffolding children's learning: Vygotsky and early childhood education. National Association for the Education of Young Children.

Cameron, C. E., Brock, L. L., Murrah, W. M., Bell, L. H., Worzalla, S. L., Grissmer, D., & Morrison, F. J. (2012). Fine motor skills and executive function both contribute to kindergarten achievement. Developmental Psychology, 48(4), 1229–1244. https://doi.org/10.1037/a0026357

Desi Nur Amelia, N. S. (2023). Pengembangan media kubus tulis huruf pintar untuk meningkatkan keterampilan menulis permulaan. Jurnal Pendidikan Anak Usia Dini, 12(2), 99–107.

Fauziah, F. (2025). Penerapan game-based learning dalam meningkatkan motorik halus anak dengan Attention Deficit Hyperactivity Disorder (ADHD). Jurnal Pendidikan Anak, 3(1), 120–130.

Grissmer, D., Grimm, K. J., Aiyer, S. M., Murrah, W. M., & Steele, J. S. (2010). Fine motor skills and early comprehension of the world: Two new school readiness indicators. Developmental Psychology, 46(5), 1008–1017. https://doi.org/10.1037/a0020104

Hernawati Muthiah Affandi, & Rini Novianti Yusuf. (2025). Menulis anak usia dini melalui flashcard di PAUD. Jurnal Pendidikan Anak Usia Dini, 6(3), 431–444.

Husaiwati, I., Zahro, I. N., & (2025). Upaya meningkatkan kemampuan pra-menulis anak usia 5–6 tahun melalui media balok huruf di TK Dharma Wanita. Jurnal Pendidikan Anak Usia Dini, 10, 211–223.

Hyson, M. (2014). The emotional development of young children. Teachers College Press.

Indah, I. K., & D. R. (2019). Pengaruh kegiatan menggunting dan menempel pola gambar geometris terhadap kemampuan motorik halus anak Kelompok B TK Maharing Desa Tanjung Untung, Kecamatan Tewah, Kabupaten Gunung Mas. Jurnal Pendidikan Anak, 15(1), 1–12.

Kaderavek, J. N., & Justice, L. M. (2014). Emergent literacy: Development, context, and intervention. Pearson.

Permatasari, I. P. (2024). Perkembangan kemampuan motorik halus merupakan langkah awal dalam mempersiapkan anak untuk menulis melalui keahlian dalam kolase pada usia dini. Jurnal Pendidikan Anak Usia Dini, 2(6), 2036–2042.

Prameswari, A. (2023). Penggunaan media kolase dalam mengembangkan kemampuan menulis permulaan anak usia dini di TK Islam Little Muslim Jatiagung, Lampung Selatan. Skripsi, Universitas Islam Negeri.

Susanti, U. V., & Amiliya, R. (2024). Urgensi masa golden age bagi perkembangan anak usia dini. Jurnal Pendidikan Anak Usia Dini, 7(2), 72–78.

Wathoni, H., Khoirun, A., Najah, H., & Hamzar, S. (2024). Meningkatkan kemampuan motorik halus anak usia 5–6 tahun melalui kegiatan menggunting di RA Hidayatun Najah Bulusari tahun pelajaran 2023/2024. Jurnal Pendidikan Anak Usia Dini, 9, 9–24.

Zeng, N., Ayyub, M., Sun, H., Wen, X., Xiang, P., Gao, Z., & Chen, W. (2017). Effects of physical activity on motor skills and cognitive development in early childhood: A systematic review. BioMed Research International, 2017, 2760716. https://doi.org/10.1155/2017/2760716