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Improving Fine Motor Skills in Children Aged 4-5 Years through Paper Tearing Activity

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Abstract: This study was motivated by the problem of underdeveloped fine motor skills among children aged 4–5 years in one kindergarten in Serengan District, Surakarta City, although these skills are one of the main prerequisites for early childhood academic readiness. This study aimed to improve children's fine motor skills through paper-tearing stimulation. The study employed both quantitative and qualitative approaches. The research design was classroom action research based on the Kemmis and McTaggart model, consisting of three stages: planning, action, observation, and reflection. The participants were 21 children aged 4–5 years, and data were collected from children and teachers. Data were collected through observation, interviews, tests, and documentation. Qualitative data validity was examined through source and technique triangulation, while quantitative data validity was examined through construct validity based on expert judgment. Qualitative data were analyzed using the Miles and Huberman interactive model, which includes data reduction, data display, and conclusion drawing/verification. Quantitative data were analyzed using the mastery learning formula for children. The results showed that paper-tearing activity improved children's fine motor skills. In the finger strength and flexibility indicator, 19 children (90.5%) achieved mastery. In the hand–eye coordination indicator, mastery reached 100%. In the finger movement accuracy indicator, 20 children (95.2%) achieved mastery. These findings indicate that paper-tearing activity can improve the fine motor skills of children aged 4–5 years.

Keywords: **early childhood; fine motor skills; paper-tearing activity**

INTRODUCTION

Fine motor development is an important aspect of early childhood growth because it influences children's readiness to perform daily activities and academic tasks at the next level of education. Rozenboom (2020) states that stimulation of fine motor skills plays an important role in supporting young children's academic development. Nik Roseli et al. (2024) also show that an educational approach focused on observation and planned intervention can significantly improve fine motor skills through precise and collaborative activities in Malaysian preschool settings. Fine motor skills refer to children's ability to use the small muscles of the hands and fingers to perform movements that require accurate, controlled coordination, such as holding a

pencil, stringing beads, and pasting. This aspect is essential because fine motor skills provide the foundation for more complex activities, particularly educational activities such as writing and drawing (Kamelia, 2019).

Adiningsih and Syafrina (2019) explain that children's fine motor growth is closely related to the development of small muscles and nerves, particularly in the hands. Children with good fine motor coordination tend to be more prepared to face learning challenges at school, whereas children who have not yet developed these skills often encounter difficulties in learning activities that require hand skills. Weak fine motor ability may also affect children's self-confidence and learning motivation, as well as hinder the development of independence. Ratnamuslihah et al. (2021) further state that fine motor skills involve finger and wrist movements with precise hand–eye coordination. These skills, therefore, need to be developed because they support fine motor development and the integration of overall motor functions.

In this study, children's fine motor skills were focused on three main indicators. The indicators used to measure children's fine motor skills aged 4–5 years were adapted from Kid Sense Child Development Corporation (2018). These indicators include finger strength and flexibility, hand–eye coordination, and finger movement accuracy. The three indicators were selected because they represent essential basic skills that support early childhood academic readiness, particularly in learning activities that require manipulative skills such as writing, cutting, and tearing paper.

A preliminary observation conducted in a kindergarten in Serengan District, Surakarta City, showed that most children aged 4–5 years still experienced difficulties with activities requiring fine motor skills, particularly finger strength and flexibility, hand–eye coordination, and finger movement accuracy. Of the 21 children observed, only three were able to carry out activities requiring finger strength and flexibility, namely cutting patterns independently without assistance. Thirteen children still needed teacher assistance, while five children were not yet able to perform the task at all.

Five children still had difficulty performing hand–eye coordination activities, such as holding a pencil and writing, whereas only seven could do so independently. In activities requiring finger movement accuracy, 13 children were still highly dependent on teacher assistance when forming playdough into various shapes. These findings indicate that children's fine motor development had not yet reached an optimal level and required appropriate and planned stimulation.

These obstacles were caused by several factors. First, classroom-directed stimulation remained limited because art-based manipulative activities were rarely provided. Second, teachers used a limited variety of learning media, so children had fewer opportunities to practice finger skills intensively. Third, children had different home stimulation backgrounds; some were not accustomed to activities involving fine motor skills, such as stringing beads, cutting, or shaping plasticine. These factors contributed to reduced finger strength, suboptimal hand–eye coordination, and reduced finger movement accuracy among children aged 4–5 years.

Ideally, children aged 4–5 years should be able to demonstrate fine motor skills such as holding a pencil steadily, cutting simple shapes, and independently performing manipulative activities using their fingers and hands (Józsa et al., 2023). Such manipulative activities include tasks requiring precise finger coordination, for example cutting, stringing beads, folding, drawing and colouring, shaping playdough, buttoning clothes, and arranging blocks or puzzles. Józsa et al. (2023) explain that mastery of manipulative activities during the preschool period plays an important role in developing hand–eye coordination, movement accuracy, and finger strength, which later support children's success in both academic and non-academic tasks. This shows that directed stimulation of manipulative skills from an early age is an important aspect of supporting children's optimal growth and development.

Based on preliminary observations, most children aged 4–5 years still had difficulty performing activities requiring fine motor skills. Their finger strength and flexibility remained weak, as shown by the number of children who were not yet able to cut along a pattern. Their hand–eye coordination had not developed well, as indicated by an unstable, incorrect pencil grip. Their finger movement accuracy was also low, as children found it difficult to control their movements during manipulative activities. These difficulties occurred because of weak finger muscles, limited hand–eye coordination, and insufficient consistent stimulation through manipulative activities. This condition indicates that children's fine motor development was not yet optimal and required an appropriate stimulation strategy.

One approach to stimulate children's fine motor development is to implement exploratory art-based or manipulative activities. Damayanti et al. (2020) explain that every manipulative activity requires the ability to control or manipulate an object so that the individual can effectively master the object in the hand. One such activity is paper-tearing, namely, tearing paper according to a pattern or freely to create a specific form. In practice, children are given paper with pattern images and are then guided to tear it along straight, curved, zig-zag, circular, and other specific shapes.

Although paper-tearing activity appears simple, it contributes significantly to children's fine motor development. When children tear a sheet of paper with their thumb and index finger, the small muscles of the hand are trained and strengthened. Paper tearing also trains children to control finger strength, improve hand–eye coordination, and develop focus and perseverance (Annisa Vani Ramadhani et al., 2022). Thus, paper-tearing can serve as a creative and enjoyable alternative activity that simultaneously stimulates fine motor development in children aged 4–5 years.

Previous studies have also shown the effectiveness of paper tearing as an initial stimulation for more complex skills. Hamid (2020) explains that paper-tearing is an early stage before children can use scissors properly. During cutting activities, children's fingers move according to the shape being cut, which helps prepare them for writing, especially in relation to pencil grip (Maududi, 2024). This statement aligns with Salindeho et al. (2022), who suggest that tearing activities can serve as a foundation for other skills requiring fine motor control, such as cutting and writing. Tearing activities help train children's finger and wrist muscles to become more flexible and stronger, making children more prepared to face more challenging learning tasks.

In addition to physical benefits, paper tearing activity also contributes to children's psychological development. This activity provides space for children to express themselves, develop imagination, and practice independence. It is also enjoyable and easy to carry out, thereby reducing boredom in the learning process. Children become more actively involved and feel more confident when they successfully complete their tasks (Yusuf et al., 2023; Adiningsih & Syafrina, 2019). This is consistent with Rozenboom's (2020) finding that integrating fine motor activities into classroom learning is an effective strategy for improving fine motor skills and self-confidence.

Based on this background, this study focuses on improving the fine motor skills of children aged 4–5 years through paper-tearing activity in one kindergarten in Serengan District, Surakarta City. The study aimed to determine the extent to which paper-tearing activity can improve the fine motor skills of children aged 4–5 years. The main focus was on three directly observed indicators of fine motor skills, namely finger strength and flexibility, hand–eye coordination, and finger movement accuracy. The findings are expected to contribute meaningfully to teachers, early childhood education institutions, and other researchers in designing learning activities that are not only enjoyable but also effective in developing young children's basic skills.

The novelty of this study lies in the use of paper-tearing as a medium to stimulate the fine motor skills of children aged 4–5 years. This study emphasizes paper tearing as a simple yet effective activity for developing children's fine motor skills. In addition, the study uses measurable indicators, namely strength and flexibility, hand–eye coordination, and finger movement accuracy, which have not been widely used as the main focus in similar studies. The research context, namely a kindergarten in Serengan District, Surakarta City, also provides a specific contribution by describing the real condition of fine motor development within a particular educational setting.

Arlina (2020) defines ability as an individual's potential to perform various tasks in a particular activity. Meanwhile, fine motor movement involves specific body parts, especially small muscles such as the fingers and wrists (Panggabean et al., 2022). Karmila (2022) explains that fine motor movement only involves certain parts of the body and is performed by fine or small muscles. Although it does not require much physical strength, it requires good hand–eye coordination and precision. Fine motor ability is therefore related to the control and coordination of small muscle movements, especially in the hands, fingers, and wrists, which are used to carry out activities requiring accuracy and dexterity.

Paper tearing activity, also known as tearing paper, is an effective method for improving children's fine motor development. Tearing paper is a fine-motor activity that involves hand and finger coordination to produce paper pieces without using tools. Through paper tearing, children can strengthen the muscles in their hands. Annisa Vani Ramadhani et al. (2022) state that tearing paper is one way for young children to practice fine motor skills. Tearing may be a new experience for some children, which explains why many remain impatient and less careful when tearing an image.

According to Wang Jiang (2011, cited in Istianik, 2017), paper tearing is a relatively simple form of art, although practice is required so that the result corresponds to the intended subject without relying on initial guidelines. Paper tearing is a creative

activity that is highly attractive to children. Based on this explanation, tearing paper can be understood as an important activity for strengthening children's fine motor skills by training their fingers to produce appropriate forms. Based on the problems identified above, the aim of this research is to improve children's fine motor skills through paper-tearing stimulation.

METODE

This classroom action research was conducted in one kindergarten in Serengan District, Surakarta City, during the second semester of the 2024/2025 academic year. The study was carried out from October 2024 to April 2025. The participants were 21 Group A children aged 4–5 years, consisting of seven boys and 14 girls. This study used both qualitative and quantitative approaches. The research design was classroom action research using the Kemmis and McTaggart model, which includes three main stages carried out repeatedly: planning, action, observation, and reflection. The data sources involved the children and the teacher concerned.

Data were collected through observation, interviews, tests, and documentation. The validity of qualitative data was examined through source and technique triangulation, while the validity of quantitative data was examined using construct validity based on expert judgment. Qualitative data were analyzed using the Miles and Huberman interactive analysis model, which includes data reduction, data display, and conclusion drawing or verification. Quantitative data were analyzed using the formula for children's learning mastery level.

The research was conducted in two cycles, with each cycle consisting of three meetings: two meetings for stimulation through paper-tearing activity and one meeting for testing based on the indicators. Each cycle consisted of planning, action, observation, and reflection. The action began with the planning stage, which included preparing the daily lesson plan (RPPH), preparing teaching materials, preparing documentation tools, developing assessment instruments, and preparing observation sheets. The instrument used in this study was a test using an assessment sheet for children's fine motor skills, developed based on developmental indicators for children aged 4–5 years.

The observed indicators were: (1) finger strength and flexibility, measured through the activity of cutting paper according to a pattern; (2) hand–eye coordination, measured through the activity of holding a pencil correctly; and (3) finger movement accuracy, measured through the activity of shaping playdough into various forms. Each indicator was assessed using a scale from 1 to 4, where a score of 1 indicated "Not Yet Developed" and a score of 4 indicated "Very Well Developed". The scores obtained by each child were then totalled to determine individual achievement and analysed classically to examine the level of learning mastery.

Classical mastery was considered achieved when the score obtained reached at least 75% of the maximum total score across all indicators. Observation data were analysed to identify improvements in fine motor skills from one cycle to the next and to evaluate the effectiveness of paper tearing activity as the learning strategy implemented.

RESULTS AND DISCUSSION

Qualitative findings obtained through observation, interviews, and documentation showed that the fine motor skills of children aged 4–5 years in one kindergarten in Serengan District, Surakarta City, improved after receiving stimulation through paper tearing activity. In the pre-action stage, most children appeared to have difficulty controlling finger movements, lacked patience, and were still highly dependent on teacher assistance when performing activities requiring hand–eye coordination. After the first cycle, however, the children began to show greater enthusiasm and motivation in participating in the activities, although several children still required guidance.

In the second cycle, development was observed in children's control of finger strength, focus, and accuracy when tearing paper according to simple patterns. Improvement became more evident in this cycle, as children demonstrated better independence, more directed hand–eye coordination, and increasingly precise movement accuracy. The teacher also stated that the children became more patient, careful, and confident during the activities, while photographic documentation and field notes strengthened the evidence of positive changes from cycle to cycle.

In Cycle I, Meeting 1, the activity involved tearing paper according to straight, curved, and zig-zag line patterns. In Meeting 2, children tore paper to form circular patterns. In Meeting 3, a skills test was conducted based on the indicators, namely drawing a ketupat shape, cutting it according to its form, and shaping various forms using playdough. In Cycle II, Meeting 1, the activity again focused on tearing paper according to straight, curved, and zig-zag line patterns to strengthen hand and finger coordination. Meeting 2 continued with tearing paper into a butterfly pattern, after which children used the torn pieces creatively by pasting them into a collage on a butterfly image. In Meeting 3, another indicator-based test was conducted, consisting of rewriting the word "gajah" (elephant), cutting out an elephant image and colouring it using finger painting, and then shaping an elephant head using playdough.

The learning action through paper tearing activity was carried out as a form of stimulation for children's fine motor skills, focusing on three indicators: finger strength and flexibility, hand–eye coordination, and finger movement accuracy. The activity was designed to provide concrete and directed stimulation to improve fine muscle coordination in the hands, movement accuracy, and finger strength. This aligns with Maria Montessori's idea that "what the hand does, the mind remembers". Paper tearing is a concrete, sensory, repetitive, and independent activity, all of which reflect fundamental Montessori principles.

Observation of the three indicators showed that most children had achieved mastery in fine motor ability. The recapitulation of mastery based on the indicators in the pre-action stage, Cycle I, and Cycle II is presented in Table 1.

Table 1. Comparison of mastery across actions

Indicator	Pre-action	Cycle I	Cycle II
Finger strength and flexibility	14.30%	61.90%	90.50%
Hand–eye coordination	33.30%	76.20%	100%
Finger movement accuracy	9.50%	57.10%	95.20%

The fine motor development of children aged 4–5 years in one kindergarten in Serengan District, Surakarta City, before receiving stimulation through paper tearing activity was not yet optimal. The data show that children's fine motor skills in the pre-cycle stage were still relatively low because the percentage of mastery had not reached the predetermined criterion of 75%.

The children showed delays in fine motor development and were not yet able to perform activities requiring optimal coordination between the hands and fingers. According to the Group A teacher, children's hand strength had not been sufficiently trained at home, so they needed more stimulation. Planned and repeated stimulation through paper tearing activity had a positive effect on children's fine motor skills. After two cycles of action, improvement in children's fine motor ability became visible. This change was reflected in the way children behaved when performing activities related to hand skills.

The first indicator was finger strength and flexibility, measured through cutting paper according to a pattern. Before the action was implemented, most children still had difficulty cutting paper according to the pattern. The children had not yet developed good skills in controlling hand movements involving fine muscles. Their way of holding scissors was still inappropriate, and the cutting results often did not follow the existing line patterns.

Through stimulation using paper tearing activity, children learned to control the direction of tearing, focus on shapes, and improve finger strength and flexibility. Although paper tearing is not a cutting activity, it strengthens finger muscles and trains fine movement control, which positively affects children's cutting ability. Over time, this improved children's ability to hold scissors correctly and follow predetermined patterns more accurately. As a result, children became more confident and skilled when cutting according to specific lines or patterns.

This finding is supported by Damayanti et al. (2020), whose study showed improvement in children's ability to cut according to patterns after participating in manipulative activities. It is also consistent with Hamid (2020), who explains that paper tearing activity can be continued with cutting activities in early childhood. Initial stimulation that can be given to children includes paper tearing. The process of tearing paper is similar to cutting, yet tearing paper is a basic skill that children need to master

before they are able to use learning tools optimally. Panggabean et al. (2022) also explain that paper tearing is an initial step before children engage in cutting activities.

The second indicator was hand–eye coordination, measured through holding a pencil correctly. Before the action was implemented, many children held pencils inappropriately, for example too tightly, using the whole hand, or unstably when writing. According to MedBridge (2021), one mature pencil grasp is the tripod grip. In this position, the pencil is held using the tips of the thumb, index finger, and middle finger, with a distance of approximately 3–4 cm between the pencil tip and the thumb. Therefore, the researcher provided stimulation through paper tearing activity. This activity aimed to help children improve finger control, which would later be used to hold pencils in the correct tripod grip. By developing stronger and more trained muscles, children became able to hold pencils and write more steadily, as well as trace lines with better coordination.

This statement is in line with Samsidar (2019), who explains that paper tearing skills can serve as an important initial step for children in developing writing ability, particularly in using writing tools such as pencils. Hadijah et al. (2024) also support this finding, showing that paper tearing activity is effective in helping children develop the basic skills needed for writing. After participating in this activity several times, children's finger control improved when they held or manipulated objects. This improvement was evident in children's ability to hold pencils better, although some still required assistance during the process. Akin (2019) states that children with good fine motor skills tend to demonstrate better writing ability.

The third indicator was finger movement accuracy, measured through shaping playdough into various forms. This skill requires accurate finger movements when performing hand-based activities. Before the action, children still showed limitations in early manipulative ability. This was evident from their inability to transform playdough into specific shapes; instead, children tended only to squeeze the playdough and mix several colours together. After receiving stimulation through paper tearing activity, however, children's finger skills improved in pressing and controlling materials. This helped them in shaping playdough. When children became accustomed to using their fingers to tear paper, they became more skilled in actions such as pinching, rolling, and pressing, all of which are important skills for shaping playdough.

Paper tearing activity provides an important foundation for the fine muscle skills children need when shaping playdough. In line with Annisa Vani Ramadhani et al. (2022), this activity offers several benefits, such as stimulating imagination, developing ideas, and increasing interest in art. Through paper tearing activity, children become accustomed to using their finger muscles in a directed and consistent manner, so their imagination develops and the process of shaping playdough becomes easier and more organised. Activities such as paper tearing and shaping playdough support Montessori principles, which emphasise direct, repeated, and sensory-based practice, because both activities stimulate the use of fingers and strengthen the small muscles of the hands. Montessori believed that activities involving repeated coordination between the hands and fingers, such as tearing, pinching, and shaping, can strengthen and improve fine motor control, which also becomes the basis for other activities.

Overall, learning through paper tearing activity had a positive effect on the fine motor development of children aged 4–5 years. This activity is simple yet efficient in helping train the small muscles of the hands and finger flexibility needed in various basic activities when children begin schooling. Paper tearing activity provides a strong foundation for other skills such as cutting, writing, and shaping playdough. In addition, because it is concrete, enjoyable, and can be carried out independently, this activity also increases children's focus, patience, and confidence in completing more complex fine motor tasks.

This finding is consistent with Maria Montessori's theory, which emphasises that concrete and repeated stimulation is essential in building young children's fine motor skills. Montessori underlined the importance of repetition and direct experience in strengthening children's motor coordination. She also believed that children learn through touch and real activities, and that activities carried out repeatedly and independently strengthen fine motor skills and concentration. Repetitive and independent activities such as paper tearing activity can improve coordination, finger strength, and overall hand ability.

Paper tearing activity was proven effective in improving the fine motor skills of children aged 4–5 years. Improvement was observed in the three main indicators, namely finger strength and flexibility, hand–eye coordination, and finger movement accuracy, with most children achieving mastery after participating in the activities. This shows that a simple activity such as tearing paper is not only enjoyable for children but also provides directed stimulation that supports the development of the small muscles of the hands, coordination, and concentration. Thus, paper tearing activity can be used as an appropriate alternative learning strategy to stimulate fine motor development in early childhood.

CONCLUSION

Based on the results of the study, it can be concluded that paper tearing activity significantly improved the fine motor skills of children aged 4–5 years in one kindergarten in Serengan District, Surakarta City. This improvement was shown by the increased achievement of indicators from the pre-cycle stage to Cycle I and Cycle II: finger strength and flexibility increased from 14.30% to 61.90% and then to 90.50%; hand–eye coordination increased from 33.30% to 76.20% and then to 100%; and finger movement accuracy increased from 9.50% to 57.10% and then to 95.20%.

Paper tearing activity is a simple activity in which children tear paper according to certain patterns, shapes, or teacher instructions. This activity requires hand–eye coordination, finger strength, and finger flexibility, thereby training children to control their fine movements. In this way, children not only develop fine motor skills but also learn concentration, perseverance, and independence through enjoyable play-based activities.

The findings of this study imply that teachers need to be more creative in designing simple yet effective learning activities, such as art-based manipulative activities. Paper tearing activity can be used as an alternative stimulation strategy to

optimise children's fine motor development. In addition, the findings emphasise the important role of teachers in providing consistent guidance so that children become more confident and independent in performing fine motor activities. Therefore, paper tearing activity is worth integrating routinely into daily or weekly learning programmes.

This study has several limitations. It was conducted in only one institution with a limited number of participants, so the findings cannot be generalised broadly. In addition, the indicators used covered only three aspects of fine motor skills and therefore did not fully represent the entire range of fine motor abilities in early childhood.

For future research, it is recommended to involve more institutions and a larger number of children, as well as a longer research period, so that the results are more comprehensive. Fine motor indicators may also be expanded to further explore other art- and hand-skill-based fine motor activities, such as collage, paper folding, and bead stringing, while adapting the approach to children's age characteristics and individual needs. In addition, collaboration with parents at home can be optimised so that stimulation is more continuous between the school and home environments.

REFERENCES

Adiningsih, V. E., & Syafrina, R.-. (2019). Peningkatan Motorik Halus Anak Melalui Kegiatan Merobek Kertas pada Anak Usia 4-5 Tahun TK Negeri 2 Samarinda. Jurnal Warna: Pendidikan Dan Pembelajaran Anak Usia Dini, 4(2), 75–88. https://doi.org/10.24903/jw.v4i2.371

Akin, S. (2019). Fine Motor Skills, Writing Skills and Physical Education Based Assistive Intervention Program in Children at Grade 1.

Annisa Vani Ramadhani, Nur Hidayah, Silvia Zahra, Widia Ulan Dary DN, & Khadijah. (2022). Permainan Merobek Kertas dalam Meningkatkan Kemampuan Motorik Halus AUD Di TK Zia Salsabila. NANAEKE: Indonesian Journal of Early Childhood Education, 5(2), 90–99. https://doi.org/10.24252/nananeke.v5i2.34833

Arlina. A. (2020). Perkembangan Kemampuan Dasar Anak Usia Dini.

Damayanti, F., Palupi, W., & Nurjanah, N. E. (2020). Peningkatan Kemampuan Motorik Halus melalui Gerak Manipulatif Anak Usia 4-5 Tahun. Kumara Cendekia, 8(2), 126. https://doi.org/10.20961/kc.v8i2.39744

Hadijah, S., Yustikarini, R., & Kholifah, S. (2024). Stimulasi Merobek Kertas Terhadap Keterampilan Anak Dalam Menulis Di TKN Satap. Edukreatif: Jurnal Kreativitas Dalam Pendidikan.

Hamid, L. (2020). Tahapan Menggunting Untuk Meningkatkan Kemampuan Motorik Halus Anak Usia Dini Kelompok Usia 4-6 Tahun. Al-Urwatul Wutsqo: Jurnal Ilmu Keislaman Dan Pendidikan, 1(1), 1–14. https://doi.org/10.62285/alurwatulwutsqo.v1i1.2

Istianik, I. (2017). Meningkatkan Kemampuan Motorik Halus Melalui Kegiatan Merobek dan Menempel Kertas Pada Anak Kelompok B di Taman Kanak-Kanak Dharma

Wanita Karangnongko Kabupaten Malang. Doctoral Dissertation, Universitas Muhammadiyah Surabaya.

Józsa, K., Oo, T. Z., Borbélyová, D., & Zentai, G. (2023). Exploring the Growth and Predictors of Fine Motor Skills in Young Children Aged 4–8 Years. Education Sciences, 13(9), 939. https://doi.org/10.3390/educsci13090939

Kamelia, N. (2019). Perkembangan Fisik Motorik Anak Usia Dini (Standar Tingkat Pencapaian Perkembangan Anak) STPPA Tercapai di RA Harapan Bangsa Maguwoharjo Condong Catur Yogyakarta. Kindergarten: Journal of Islamic Early Childhood Education, 2(2), 112. https://doi.org/10.24014/kjiece.v2i2.9064

Karmila, W. (2022). Meningkatkan Kemampuan Motorik Halus Anak Melalui Kegiatan Menggunting Polaris di Kelompok A TK Muslimat NU Kedungwuni Kabupaten Pekalongan. AUDIENSI: Jurnal Pendidikan Dan Perkembangan Anak, 1(1), 36–49. https://doi.org/10.24246/audiensi.vol1.no12022pp36-49

Kid Sense Child Development Corporation. (2018). Fine Motor Skills.

Maududi, A. (2024). Improving Children's Fine Motor Skills Through Cutting Activities In Group A At TK Amanah Mandiri Mattiro Deceng. Journal of Education, Teaching, and Learning.

MedBridge. (2021). Identifying pencil grasp style & why it matters.

Nik Roseli, N. E., Binti Md. Yasin, S. F., Bin Sharim, M. A., & Vijayaragavan, K. (2024). Case Study on Fine Motor Skills Development in Early Childhood Education. International Journal of Academic Research in Business and Social Sciences, 14(9). https://doi.org/10.6007/IJARBSS/v14-i9/22749

Panggabean, R. D. E., Lumbantobing, P. A., & Farida, N. (2022). Upaya Mengembangkan Kemampuan Motorik Halus Anak melalui Kegiatan Menggunting Kertas (Pola). Jurnal Ilmiah Aquinas, 246–260. https://doi.org/10.54367/aquinas.v5i2.1718

Ratnamuslihah, R., Pudyaningtyas, A. R., & Zuhro, N. S. (2021). Meningkatkan Kemampuan Motorik Halus Pada Anak Kelompok B Melalui Kegiatan String Art. Early Childhood Education and Development Journal.

Rozenboom, M. (2020). Directed, Structured Fine Motor Activities and Handwriting Development.

Salindeho, S. C., Kustiawan, U., & Maningtyas, R. D. T. (2022). Penerapan Kegiatan Menggambar, Melipat, Menempel (3M) Untuk Meningkatkan Kemampuan Seni Rupa Anak Kelompok B TK AGAPE. Jurnal Pembelajaran, Bimbingan, Dan Pengelolaan Pendidikan, 2(3), 181–195. https://doi.org/10.17977/um065v2i32022p181-195

Samsidar, S. (2019). Kegiatan Merobek dengan Media Kertas dapat Meningkatkan Keterampilan Motorik Halus pada Anak Usia Dini di Kelompok B TK Pertiwi I Kota Jambi. Jurnal Literasiologi, 2(2), 15. https://doi.org/10.47783/literasiologi.v2i2.38

Yusuf, R. N., Latip, A. D. A., & Mulyani, E. (2023). Upaya Meningkatkan Motorik Halus Melalui Metode Pemberian Tugas Merobek Kertas di PAUD Pelita Ilmu Palumbonsari Kabupaten Karawang. Jurnal Al-Amar: Ekonomi Syariah, Perbankan Syariah, Agama Islam, Manajemen Dan Pendidikan.