

Efforts To Improve Fine Motor Skills Through Paper Folding Activities In Group A1 At Sangkareang Sukadana State Kindergarten

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Abstract

This research is motivated by the low fine motor skills of group A1 children in TK Negeri Sangkareang Sukadana, indicated by children's difficulties in moving their finger muscles, eye-hand coordination, and inability to complete paper folding to the final stage. This study aims to improve children's fine motor skills through paper folding (origami) activities. The type of research used is Classroom Action Research (CAR) conducted in two cycles, referring to the Kemmis & McTaggart model. The research subjects were 15 children (7 boys and 8 girls). Data were collected through observation, interviews, and documentation. Data analysis used the percentage of classical learning completeness with a success criterion of 80%. The results showed that in the pre-action condition, the classical completeness of the children was at 0% (all children were in the Undeveloped category). After implementing the action in Cycle I, the percentage of classical learning completeness increased to 60%. In Cycle II, after improving the method with a more interactive demonstration approach and using appropriate folding paper, the completeness percentage reached 86.67%. Thus, it can be concluded that the application of paper folding activities is proven to significantly improve the fine motor skills of early childhood group A1 at TK Negeri Sangkareang Sukadana.

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1. INTRODUCTION

Early Childhood Education (PAUD) is a level of education provided before primary education as a form of guidance for children from birth to age 6. Based on Permendikbudristek Number 7 of 2022 concerning Content Standards for PAUD, Primary, and Secondary Education, PAUD is an educational service aimed at children aged 0 to 6 years to provide stimulation for children's physical, mental, social, emotional, and intellectual development as preparation for continuing to the next level of education (Depdiknas, 2022). According to Beichler and Snowman (in Yulianti, 2021), early childhood is children between the ages of 3 and 6 years. Meanwhile, the National Association for the Education of Young Children (NAEYC) explains that early childhood is children aged 0 to 6 years who are experiencing very rapid growth and development and therefore require appropriate and precise educational stimulation (Widarmi et al., 2021).

The early stages of fetal development play a crucial role in the formation of brain cells. After birth, nerve cell elimination and the formation of connections between them significantly influence a child's intellectual development. Early childhood (0–8 years) is known as the golden age. Therefore,

efforts to cultivate an intelligent, creative, pious, and virtuous generation should begin in Early Childhood Education.

Based on the results of initial observations conducted on January 22, 2026, at Sangkareang State Kindergarten, researchers found learning problems in group A1. The number of students in group A1 was 15 children, but the children's fine motor skills were still not optimally developed. Around 8 children experienced difficulties in moving hand muscles and coordination between the eyes and hands, especially when imitating shapes. This was seen in the pattern cutting activity, the results of which were still less neat. In addition, in the paper folding activity, several children still needed teacher assistance to complete the folds. Most children were not able to complete the folds to the final stage. This condition caused children to be less enthusiastic in participating in fine motor skill development activities.

To present the preliminary condition more systematically, the initial observation focused on three observable aspects of fine motor skills: (1) finger-muscle movement when manipulating paper, (2) eye-hand coordination when following and imitating a fold, and (3) the ability to complete the folding sequence independently. Of the 15 children in Group A1, 8 children were observed to have difficulty moving their hand muscles and coordinating their eyes and hands, particularly when imitating shapes. The difficulty was also reflected in cutting patterns that were still less neat. During paper-folding activities, several children still required teacher assistance, and most children were unable to complete the folding sequence to the final stage. These observations became the baseline for the intervention and were subsequently monitored through the same aspects during each research cycle.

Fine motor skills are movements involving specific body parts using small muscles in a coordinated and precise manner (Mursid, 2023). This aligns with Syarifah's (2022) opinion, which states that fine motor skills are movement abilities that require precision and eye-hand coordination, such as paper folding. The goal of developing these skills is to help develop children's psychological and physical potential, including emotional control and independence (Sumantri, 2021). Therefore, appropriate stimulation is necessary. One activity considered effective is paper folding, or origami.

Paper folding activities aim to develop hand-eye coordination, train hand muscles, and improve children's concentration (Khadijah & Amelia, 2022). Through this activity, children learn to use visual information received by the eyes to direct hand movements in an integrated manner. Paper folding skills can provide children with initial knowledge for independent learning in everyday life. Furthermore, these folded objects can also be used as a play tool (Nugraha, 2022). According to Sumanto (2023), paper folding requires structured fundamentals, such as using appropriate paper and understanding folding instructions.

In the context of learning theory, this is relevant to the behaviorist theory put forward by Skinner (in Budiningsih, 2024), where providing stimuli in the form of interesting paper folding activities and positive reinforcement by teachers can increase children's responses in the form of gradual improvements in fine motor skills (Noviardila, 2023).

Based on the description above, this study aims to examine and empirically prove efforts to improve fine motor skills through paper folding activities in children in group A1 at Sangkareang Sukadana State Kindergarten.

2. METHOD

The type of research used in this study is Classroom Action Research (CAR). CAR is research that focuses on implementing an action with the aim of improving the quality of learning or solving problems in the group of subjects studied (Samsudin, 2022). This study uses the Kemmis and McTaggart research design model, which consists of four main stages in each cycle: Planning, Action, Observation, and Reflection (Arikunto, 2022).

In each cycle, the four stages were implemented as follows. (1) Planning: the researcher identified the fine motor problem, prepared the lesson plan (RPPH), selected the paper-folding activity and materials, prepared the observation sheet, and determined the success criterion of 80% classical completeness. (2) Action: the teacher implemented the planned paper-folding activity through demonstration and guided practice, while providing stimulus, assistance, and positive reinforcement to the children. (3) Observation: the researcher observed children's finger movements, eye-hand coordination, ability to imitate the demonstrated folds, independence, and completion of the folding sequence using the structured observation sheet. (4) Reflection: after each cycle, the observation results and learning obstacles were reviewed to determine whether the 80% criterion had been achieved and to identify improvements required for the following cycle. The reflection from Cycle I was used as the basis for modifying the demonstration arrangement, paper material, and supporting media in Cycle II.

This research was conducted from May to June 2026 at Sangkareang Sukadana State Kindergarten, located in Sukadana Village, Bayan District, North Lombok Regency. The subjects were 15 children from Group A1, consisting of 7 boys and 8 girls.

The data collection techniques used include: (1) Observation, namely direct observation of the learning process and children's fine motor skills using structured observation sheets (Sugiyono, 2024); (2) Interviews, conducted with class teachers to determine obstacles and real learning conditions (Nugroho, 2022); and (3) Documentation, in the form of photos of activities and Daily Learning Implementation Plans (RPPH) (Kusumastuti et al., 2025).

The collected data were analyzed descriptively quantitatively. Child development assessments were categorized as Not Yet Developing (BB) with a score of 1-40%, Beginning to Develop (MB) with a score of 41-60%, Developing as Expected (BSH) with a score of 61-80%, and Developing Very Well (BSB) with a score of 81-100%. Classical learning completion was calculated using a percentage formula. A class was considered complete if at least 80% of the total children achieved the Developing as Expected (BSH) or Developing Very Well (BSB) categories.

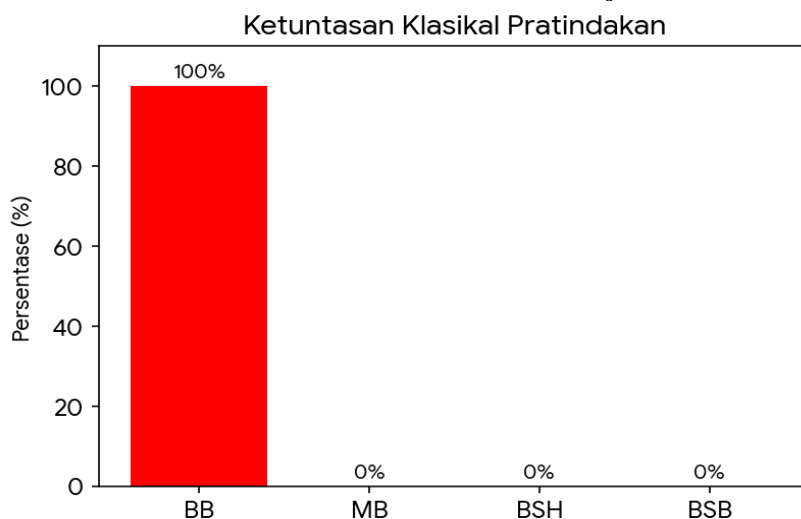
The main instrument was a structured observation sheet completed during each paper-folding activity. The observation sheet assessed three indicators: (1) finger-muscle movement in holding, pressing, and folding the paper; (2) eye-hand coordination in following the teacher's demonstration and matching the required fold; and (3) independence and accuracy in completing the folding sequence from the first step to the final shape. Each indicator was assessed using a four-level developmental rubric. BB (Not Yet Developing, 1–40%) indicates that the child has not yet demonstrated the expected skill or can only perform it with substantial teacher assistance. MB (Beginning to Develop, 41–60%) indicates that the child begins to demonstrate the skill but still needs repeated prompts or assistance. BSH (Developing as Expected, 61–80%) indicates that the child can perform the folding steps and coordinate hand and eye movements with limited assistance and achieves the expected task. BSB (Developing Very Well, 81–100%) indicates that the child can perform the folding sequence accurately, independently, and consistently with very little or no assistance. The observation results for the indicators were used to determine each child's developmental category, while classical completeness was calculated from the number of children who reached BSH or BSB.

3. RESULTS AND DISCUSSION

Initial Conditions (Pre-action)

Before the implementation of cycle, I, the researcher conducted an initial observation (pre-action) on January 22, 2026. The learning topic at that time focused on Air Vehicles. The observation results showed that the fine motor skills of children in group A1 were still very low. Of the 15 children, 100% were in the Not Yet Developed (BB) category.

Children still have difficulty imitating folded shapes, and their finger muscles appear stiff. This indicates the need for structured intervention to intensively train fine motor skills.



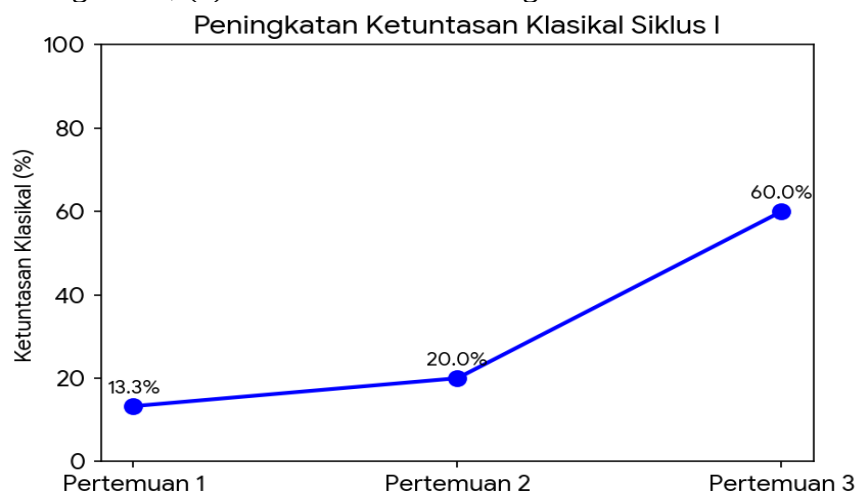
Graph 1. Pre-action Classical Completion Results

Implementation of Cycle I

Cycle I was conducted in three meetings (May 21, 25, and 29, 2026) with the theme "I Am a Servant of God" and the subtheme "My Favorite" (folding a fish shape). During the implementation phase, the teacher used standard-sized origami paper and demonstrated the folding in front of the class using larger paper.

Observation results during Cycle I showed improvement, although the target had not yet been reached. At Meeting 1, classical mastery had only reached 13.3% (only 2 children were Beginning to Develop; the rest were Not Yet Developing). At Meeting 2, classical mastery rose to 20% (3 BSH children). It peaked at Meeting 3, with mastery reaching 60% (9 children achieving completion, with a breakdown of 8 BSH and 1 BSB).

Although there was an increase of up to 60%, this percentage did not meet the classical success criteria set at 80%. Based on the results of the Cycle I reflection, several obstacles were found: (1) The position of the teacher who demonstrated using the table was not clearly visible to all the children; (2) The origami paper used had a stiff texture, making it difficult for children to correct folding errors; (3) The media for attaching the work was not attractive.



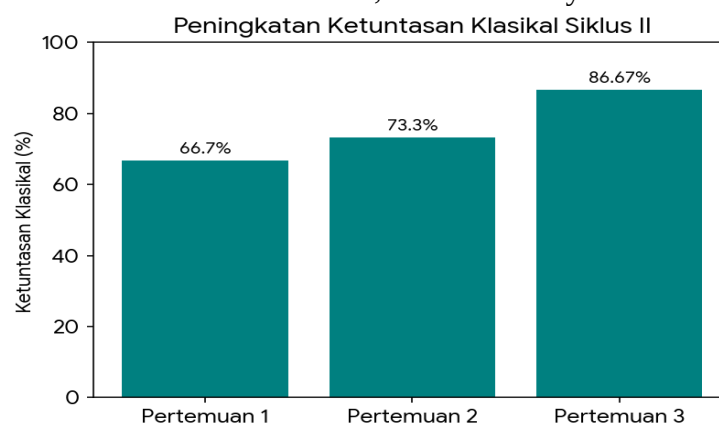
Graph 2. Increase in Classical Completion in Cycle I

Implementation of Cycle II

Based on the reflection of Cycle I, strategy improvements were made in Cycle II. The meetings were held on June 2, 5, and 11, 2026, with the theme 'My Favorite' (folding clothes). Improved actions included: (1) Teachers and children sat in a circle on the carpet so that the demonstration could be seen more clearly without being obstructed by the table; (2) Using softer folding paper and having two different colored sides to make it easier for children to distinguish the folds; (3) Modified sticky notes with more attractive background images.

The results of Cycle II observations showed a very significant increase. In Meeting 1, the direct classical completion rate reached 66.7% (10 children completed the course). In Meeting 2, the completion rate increased to 73.3% (12 children completed the course). In Meeting 3, the completion rate reached 86.67% (13 children completed the course, with 7 children in the BSH category and 6 in the BSB category, while 2 children were still MB).

The achievement of 86.67% at Meeting 3 of Cycle II indicated that the classical success criteria (80%) had been exceeded. Therefore, the research cycle was terminated.



Graph 3. Increase in Classical Completion in Cycle II

Discussion

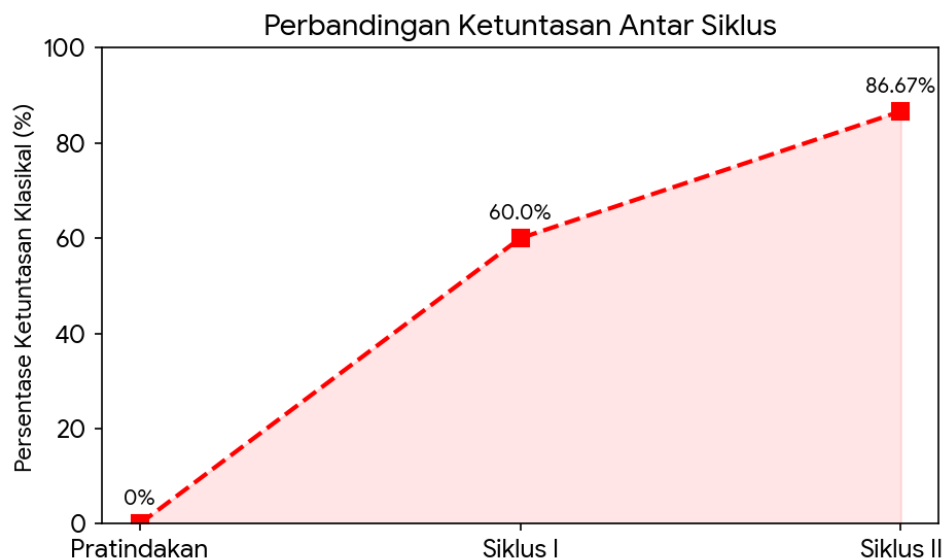
The results of the study showed that paper folding activities significantly improved the fine motor skills of early childhood children in Group A1 of Sangkareang Sukadana State Kindergarten. In the pre-treatment, the children were not able to complete the folding at all (0% completion). After being given structured interventions in Cycle I, the children's abilities increased to 60% and were optimal in Cycle II with 86.67%.

This finding is also supported by the relevance of previous research on paper folding and fine motor development. Hasanah and Deiniatur (2021) specifically examined the improvement of fine motor skills through paper-folding activities in early childhood, while Pratama and Hidayat (2024) discussed fine motor stimulation through origami for children aged 4–5 years. Nugraha (2022) likewise focused on improving fine motor skills through origami paper-folding activities in early childhood education. The present study complements this line of research by documenting the improvement through a Classroom Action Research process conducted in two cycles, with the classical completeness increasing from 0% at pre-action to 60% at the end of Cycle I and 86.67% at the end of Cycle II.

This improvement was greatly influenced by the gradual provision of stimulus and scaffolding (direct guidance) from the teacher. This aligns with behaviorist learning theory, which emphasizes the importance of stimulus, response, and positive reinforcement in developing new behaviors and skills (Budiningsih, 2024). The use of praise and rewards when children complete small folding steps keeps them motivated and keeps them from giving up easily.

Furthermore, improvements to methods in Cycle II, such as sitting in circles and selecting appropriate paper materials, created a learning environment that supports exploration

(experiential learning). Early childhood learns optimally when their visual, auditory, and kinesthetic senses are simultaneously engaged. According to Nugraha (2022), paper folding provides a rich sensory-motor experience, strengthening finger flexibility, eye-hand coordination, and spatial concentration.



Graph 4. Comparison of Improvement in Fine Motor Skills

4. CONCLUSION

Based on the results of Classroom Action Research (CAR) conducted in two cycles, it can be concluded that the application of the demonstration method through paper folding (origami) activities can significantly improve the fine motor skills of Group A1 children at Sangkareang Sukadana State Kindergarten. This increase is shown from the classical completeness data, which moves from 0% in the pre-action stage, increases to 60% at the end of Cycle I, and reaches 86.67% at the end of Cycle II, which means it has exceeded the established success indicator of 80%.

Suggestions that can be given from this research include: (1) For teachers, it is recommended to routinely integrate paper folding art activities with gradual levels of difficulty as a variation of fine motor stimulation; (2) For schools, it is hoped that they will provide learning media with more varied types, colors, and textures; and (3) For further researchers, they can develop this method by combining digital media or integrated collage techniques.

5. BIBLIOGRAPHY

- Arikunto, S. (2021). *Penelitian Tindakan Kelas: Pendekatan Teori dan Praktik*. Jakarta: PT Bumi Aksara.
- Arikunto, S. (2022). *Prosedur Penelitian Suatu Pendekatan Praktik (Edisi Revisi)*. Jakarta: PT Rineka Cipta.
- Budiningsih, A. (2024). *Belajar dan Pembelajaran Abad 21*. Jakarta: PT Rineka Cipta.
- Depdiknas. (2022). *Peraturan Menteri Pendidikan, Kebudayaan, Riset, dan Teknologi Nomor 7 Tahun 2022 tentang Standar Isi pada PAUD*. Jakarta: Kemendikbudristek.
- Fadlilah, M. (2023). *Desain Pembelajaran PAUD Tinjauan Teoretik dan Praktik*. Yogyakarta: Ar-Ruzz Media.
- Hasanah, U., & Deiniatur, M. (2021). Peningkatan Kemampuan Motorik Halus Melalui Kegiatan Melipat Kertas pada Anak Usia Dini. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, 6(1), 125-135.

- Khadijah, K., & Amelia, R. (2022). *Perkembangan Fisik Motorik Anak Usia Dini*. Jakarta: Kencana Prenada Media Group.
- Kusumastuti, D., dkk. (2025). *Metode Penelitian Pendidikan: Kuantitatif, Kualitatif, dan PTK*. Bandung: Alfabeta.
- Mahardika, I. K. (2021). Optimalisasi Perkembangan Motorik Halus Anak. *Jurnal Pendidikan Anak*, 10(2), 90-101.
- Mursid. (2023). *Pengembangan Pembelajaran PAUD: Konsep dan Aplikasi*. Bandung: PT Remaja Rosdakarya.
- Noviardila, I. (2023). *Konsep Dasar Motorik Halus pada Anak Usia Dini*. Bandung: Universitas Terbuka Press.
- Nugraha, A. (2022). Peningkatan Motorik Halus Melalui Kegiatan Melipat Kertas Origami di PAUD. *Jurnal Abdimas Kesehatan*, 4(3), 114-121.
- Nugroho, R. (2022). *Teknik Analisis Data dalam Penelitian Tindakan Kelas*. Surabaya: PT Garuda Emas.
- Pratama, Y., & Hidayat, R. (2024). Stimulasi Motorik Halus Melalui Origami bagi Anak Usia 4-5 Tahun. *Jurnal Pendidikan Anak Prasekolah*, 5(2), 200-210.
- Samsudin. (2022). *Pembelajaran Motorik di Taman Kanak-Kanak: Strategi dan Evaluasi*. Jakarta: Litera.
- Sugiyono. (2022). *Metode Penelitian Pendidikan (Pendekatan Kuantitatif, Kualitatif, dan R&D)*. Bandung: CV Alfabeta.
- Sugiyono. (2024). *Analisis Data Kuantitatif dalam PTK*. Bandung: CV Alfabeta.
- Sumanto. (2023). *Pengembangan Kreativitas Seni Rupa Anak TK*. Jakarta: Direktorat Jenderal Pendidikan Tinggi.
- Sumantri, M. S., dkk. (2021). *Model Pengembangan Keterampilan Motorik Anak Usia Dini*. Jakarta: Depdiknas, Dirjen Dikti.
- Syarifah, A. (2022). Pentingnya Keterampilan Motorik Halus pada Usia Golden Age. *Jurnal Pendidikan Dasar dan Usia Dini*, 3(1), 7-15.
- Widarmi, D., dkk. (2021). *Kurikulum Pendidikan Anak Usia Dini Berbasis Kompetensi*. Tangerang Selatan: Universitas Terbuka.
- Yulianti, D. (2021). *Karakteristik dan Perkembangan Anak Usia Dini*. Jakarta: PT Indeks.
- Yulianti, D. (2022). *Bermain Sambil Belajar Sains dan Seni di Taman Kanak-Kanak*. Jakarta: PT Indeks.