

Research Article

Improving Fine Motor Skills through Pattern Cutting Activities in RA At-Taqwa Children

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ABSTRACT

This study aims to determine the improvement of children's fine motor skills through the implementation of pattern cutting activities at RA At-Taqwa. This study is a Classroom Action Research (CAR) with a descriptive method approach. This research was conducted collaboratively between researchers and class teachers to improve children's fine motor skills through pattern-cutting activities. This study was designed in two cycles, where each cycle consists of four main stages, namely: a) planning; b) implementing action; c) observing; and d) reflecting. The results showed that 11 of the 17 children (64.71%) had achieved the success indicator, which was at least in the Developing According to Expectations (BSH) category. This result did not meet the success indicator, so it will be continued in cycle II. Based on the results of the reflection, the teacher made a number of improvements in cycle II, including simplifying the pattern, adding motor warm-up activities, and providing assistance based on the child's abilities. After these improvements, the results in cycle II showed a significant improvement. A total of 11 children (64.7%) reached the BSB category, 5 children (29.41%) were in the BSH category, and only 1 child (5.88%) was still in the MB category. No children were in the BB category. This means that 16 of the 17 children (94.12%) have achieved the success indicator, which is at least in the Developing According to Expectations (BSH) category.

Keywords: Early Childhood; Cutting; Fine Motor Skills

1. INTRODUCTION

Early childhood education is a crucial foundation for a child's growth and development, encompassing physical, cognitive, social-emotional, and motor skills (Maulana & Eliasa, 2024; Nurkamelia, 2019). One vital developmental aspect to pay attention to is fine motor development. Fine motor development is a crucial aspect of early childhood development that requires special attention from educators and parents. Fine motor skills are a child's ability to use small muscles, involving hand-eye coordination, to perform activities requiring skill and precision (Sumantri, 2014). During early childhood, fine motor development forms a crucial foundation for a child's future academic abilities, particularly in writing, drawing, and other manipulative activities (Asmara et al., 2024; Iffah & Aulina, 2024).

Children aged 4-6 years are in the golden age, where all aspects of development experience rapid growth, including fine motor skills. At this age, children begin to perform more complex and coordinated movements, such as holding a pencil correctly, cutting paper, stringing beads, and other manipulative activities (Alfiah, 2020; Saripah, 2019). However, this development will not be optimal without appropriate and continuous stimulation through engaging activities tailored to the characteristics of early childhood (Henny et al., 2023). Cutting activities aim to train eye-hand coordination and concentration (Asmara, 2020; Banurea, 2023). Cutting is a highly effective activity in developing children's fine motor skills because it involves complex coordination between the eyes, hands, and fingers (Karmila, 2022; Nurhidayat et al., 2020). Through cutting, children learn to control hand movements, strengthen finger muscles, and develop bilateral coordination, which is essential for the development of later academic skills.

Research conducted by Beaty (2013) shows that cutting activities can improve children's pre-writing skills because the movements used are similar to those required for writing. When children cut, they must control the pressure, direction, and speed of their hand movements, which are fundamental skills needed for writing. Furthermore, cutting activities also help develop children's concentration and focus because they must pay attention to the lines or patterns they are cutting (Kurniawan, 2023). Nurjanah & Andrisyah (2024) state that pattern cutting is a more structured and directed form of cutting than freehand cutting. In pattern cutting, children are given a specific image or shape to follow with the scissors,

thus requiring better motor control and higher concentration. This activity can develop fine motor skills, particularly hand-eye coordination, finger muscle strength, and wrist flexibility (Karyadi et al., 2024; Muniro & Rahman, 2023). Furthermore, this activity also trains children's perseverance, accuracy, and ability to follow visual and manual instructions.

Raudhatul Athfal (RA) At-Taqwa, as an early childhood education institution, has a responsibility to provide optimal stimulation for the development of its students' fine motor skills. Based on initial observations at RA At-Taqwa, it was discovered that some children still experience difficulties in performing activities requiring fine motor skills, such as holding a pencil correctly, cutting accurately, and performing other manipulative activities. This indicates the need for more effective learning methods to develop children's fine motor skills. The use of pattern-cutting activities as a learning method at RA At-Taqwa is expected to provide a solution to these problems. This activity was chosen because it is not only effective in developing fine motor skills but also can be presented in a fun and engaging format for children. By using varied and interesting patterns, children will be more motivated to participate in the activity, thus optimizing the learning process.

Jean Piaget's developmental theory explains that children aged 4-6 are in the preoperational stage, where they learn through concrete experiences and object manipulation (Marinda, 2020). Furthermore, Nurhasanah (2019) states that pattern-cutting activities provide concrete experiences that enable children to learn through play, in line with the principles of early childhood education that emphasize learning by doing. Through this activity, children not only develop fine motor skills but also learn about shapes, patterns, and basic mathematical concepts. Prasetyo (2023) shows that fine motor skills have a significant correlation with children's academic achievement in elementary school. Children with good fine motor skills tend to be more comfortable with learning activities such as writing, drawing, and cutting, which are essential components of classroom academic activities (Rosalianisa et al., 2023). This demonstrates the importance of developing fine motor skills from an early age as preparation for subsequent levels of education.

The importance of fine motor development is also related to children's school readiness. Children with good fine motor skills will be better prepared to face the academic demands of elementary school, particularly in writing and other manipulative activities. Conversely, children with delays in fine motor development may face difficulties in academic activities, which can affect their self-confidence (Ifalahma & Retno, 2023; Niswatin & Mubarak, 2022). Pattern cutting activities also have the benefit of developing children's creativity and imagination. When children are presented with a variety of interesting patterns, they are stimulated to imagine and create. Furthermore, the results of the cutting work can be used for subsequent activities such as pasting or assembling, thus providing a more comprehensive learning experience (Puspiani et al., 2024; Suary et al., 2024). This can increase children's self-confidence and motivation to learn. Furthermore, pattern-cutting activities carried out in groups can develop children's cooperation and social interaction skills.

The implementation of pattern cutting activities at RA At-Taqwa requires considering various factors, such as child readiness, the availability of media and tools, and the teacher's competence in guiding the activity. Teachers need to understand the stages of children's fine motor development and be able to provide appropriate scaffolding according to the child's individual abilities. Furthermore, pattern variations and difficulty levels need to be adjusted to the child's developmental level so that the activity remains challenging but does not frustrate children. This research is expected to contribute to the development of effective learning methods to improve fine motor skills in early childhood. Furthermore, the results of this study can also serve as a reference for teachers and other early childhood education institutions in implementing pattern cutting activities as an engaging and effective learning strategy.

Based on the background outlined above, this research will focus on efforts to improve children's fine motor skills through pattern-cutting activities at RA At-Taqwa. This research is expected to provide a clear picture of the effectiveness of pattern-cutting activities in developing fine motor skills in early childhood and provide practical recommendations for its implementation in early childhood education institutions.

2. RESEARCH METHOD

This study is a Classroom Action Research (CAR) using a descriptive method. According to Nurhabiba (2023), descriptive methods are used to comprehensively describe the implementation process and the changes that occur in children during the study. This research was conducted collaboratively between researchers and classroom teachers to improve children's fine motor skills through pattern-cutting activities. Classroom action research was chosen because it provides opportunities for teachers and researchers to take direct corrective action to address learning issues and allows for ongoing reflection on the results of the actions taken (Unandar et al., 2023). The study subjects were 17 children from RA At-Taqwa Jember. This study was designed in two cycles, with each cycle consisting of four main stages: a) Planning, b) Acting, c)

Observing, and d) Reflecting. Through this approach, it is hoped that there will be a gradual improvement in children's fine motor skills through structured and enjoyable pattern-cutting activities.

3. RESULTS AND DISCUSSION

This research was conducted in two cycles, each consisting of planning, implementation, observation, and reflection. The objective of this study was to improve children's fine motor skills through pattern-cutting activities at RA At-Taqwa. The activities focused on skills in using scissors to follow specific patterns, such as straight lines, curves, zigzags, and circles, tailored to the children's developmental age. Prior to the intervention, initial observations indicated that most children were not yet able to cut patterns correctly. Many still struggled to hold scissors correctly, cut along the pattern lines, and maintain stable hand movements. Based on this, the teacher designed fun and structured activities in the form of educational games and provided engaging learning media to increase children's interest and engagement.

In the first cycle, the cutting activities were conducted using a play-while-learning approach using basic patterns and engaging visual media. The results of the first cycle indicated that some children were still in the "Starting to Develop" (MB) and "Not Yet Developing" (BB) categories. This suggests that method adjustments are needed to make the activities more effective and appropriate to the learning characteristics of early childhood. The first cycle of activities begins with a brief apperception of shapes around the children, such as circles, squares, and triangles. The teacher shows pictures of these shapes and engages in a light discussion. This initial goal is to foster children's interest in the upcoming activity: cutting these shapes out of paper. Next, the teacher introduces the tools and materials to be used, such as child-friendly, blunt scissors, glue, and simple shape patterns. Children are encouraged to touch and familiarize themselves with the tools while being reminded of how to use scissors safely and correctly.

The main activity continues with children being given worksheets containing patterns in straight, curved, and zigzag lines. Children are asked to cut following the provided patterns. The teacher provides an example first and guides each child individually (Frödén and Tellgren, 2024; Gunawardena et al., 2024; Taylor et al., 2023). To maintain enthusiasm, the teacher plays cheerful children's music throughout the process. This activity is conducted using a playful approach, giving children the opportunity to express themselves while still being supervised and guided. During the activity, some children appear enthusiastic and are able to follow the patterns quite well, but others still experience difficulties, such as unsteady hands, confusion when holding the scissors, or not being able to follow the lines accurately. After the activity, the teacher invited the children to stick their pieces in their workbooks and gave them stickers as a token of appreciation. This aimed to foster self-confidence and pride in their own work. Based on the activities in cycle 1, the children's fine motor development was as follows:

Table 1. Children's fine motor development

No.	Child's Initials	Development Category
1	AN	MB
2	BN	BSB
3	CN	MB
4	DN	BSB
5	EN	MB
6	FN	BB
7	GN	BSH
8	HN	BSH
9	IN	BSB
10	JN	BSH
11	KN	BB
12	LN	BSH
13	MN	MB
14	NN	BSB
15	ON	BSB
16	PN	BSH
17	QN	BSH

Observations showed that of the 17 children, 5 were able to cut neatly (category BSB), 6 were able to follow the pattern fairly accurately (category BSH), and the remaining 6 children still did not demonstrate adequate fine motor skills (categories MB and BB). Reflections from this cycle indicated that the activities were quite engaging, but some children

still experienced difficulties, particularly with hand control and focus. The teacher recognized that some children needed more time and more intensive support. Therefore, improvements for the second cycle will focus on selecting simpler patterns, providing aids such as hand grippers for fine motor practice, and grouping children based on ability to facilitate gradual support.

Furthermore, in Cycle II, based on the improvements made in the previous cycle, learning activities were designed to be more enjoyable, varied, and tailored to the children's needs and abilities. Improvements included simplifying the scissor pattern. In the second cycle, activities began with a fine motor warm-up, where children were invited to play with plasticine and pick up small beads to stimulate finger muscles. This activity was fun and relaxed the children before cutting. The teacher introduced a modified scissor pattern, simplified with larger sizes and thicker lines, so the children could more easily follow the pattern's directions without too many errors. The children were divided into three groups based on ability: full assistance, partial assistance, and independent. Each group received assistance as needed to ensure the activity was more focused and each child received sufficient attention. The teacher maintained a fun approach, incorporating story elements. The cutting process was carried out more systematically, and the teacher reminded them of proper scissor-holding techniques and paper positioning. The children were also given more flexible time to avoid feeling rushed. To maintain enthusiasm, the children were given light challenges such as "Who can cut the circular pattern most neatly?" accompanied by symbolic rewards such as gold stars or collective applause. Upon completion, the children's work was displayed on the classroom board. This aimed to increase motivation and self-confidence. The children were also asked to describe the shapes they cut as part of a light reflection. Based on the activities in cycle 2, the children's fine motor development was as follows.

Table 2. Children's fine motor development

No.	Child's Initials	Development Category
1	AN	BSH
2	BN	BSB
3	CN	BSB
4	DN	BSB
5	EN	BSH
6	FN	BSH
7	GN	BSB
8	HN	BSB
9	IN	BSB
10	JN	BSH
11	KN	MB
12	LN	BSB
13	MN	BSH
14	NN	BSB
15	ON	BSB
16	PN	BSB
17	QN	BSB

Observation results showed significant improvement. Of the 15 children, 11 (64.7%) were classified as BSB, 5 (29.41%) as BSH, and only 1 child still needed support (category MB). No children were classified as BB. Reflections on the second cycle showed that a fun approach with stories significantly helped improve children's fine motor skills. The cutting process was conducted more systematically, and the teacher reminded them of the correct scissor-holding technique and paper position. Children were also given more flexible time to avoid feeling rushed. The researchers concluded that this activity successfully achieved the established success indicator, which was 75% of children achieving at least the expected fine motor development target. In cycle 2, 16 children (94.12%) at RA At-Taqwa achieved at least the expected fine motor development target. The development of fine motor skills in early childhood through pattern-cutting activities demonstrated excellent progress across all indicators in cycle II. The success of pattern-cutting activities in improving fine motor skills has been demonstrated through various previous studies. The study showed that children who regularly engaged in pattern cutting activities experienced significant improvements in their grasping skills, eye-hand coordination, and finger movement control (Fitriani & Suryani, 2025; Ismaniar et al., 2023; Marwan & Rohayati, 2025; Maududi & Suriani, 2024).

4. CONCLUSION

Based on the results of the classroom action research conducted over two cycles, it can be concluded that pattern-cutting activities designed to be fun and developmentally appropriate can improve children's fine motor skills at RA At-Taqwa. Careful planning, the use of engaging visual media, and a playful approach have a positive impact on children's enthusiasm and engagement in learning activities. This is evident in the changes in observation results from cycle I to cycle II. In cycle I, most children still experienced difficulty controlling hand movements, holding scissors, and following patterns accurately. Of the 17 children, only 5 (29%) fell into the Very Well Developed (BSB) category, 6 children fell into the Developing as Expected (BSH) category, while the remaining children fell into the Beginning to Develop (MB) and Not Yet Developed (BB) categories. This means that 11 of the 17 children (64.71%) achieved the success indicator, which is at least in the Developing as Expected (BSH) category. This result did not meet the success indicator, and therefore, will be continued in cycle II. Based on the reflection results, the teacher made several improvements in cycle II, including simplifying the pattern, adding motor warm-up activities, and providing guidance based on the children's abilities. After these improvements, the results in cycle II showed significant improvement. Eleven children (64.7%) achieved the BSB category, five children (29.41%) achieved the BSH category, and only one child (5.88%) remained in the MB category. No children were in the BB category. This means that 16 of the 17 children (94.12%) achieved the success indicator, which is at least in the Developing According to Expectations (BSH) category. Thus, the pattern-cutting activity has proven effective in improving the fine motor skills of children at RA At-Taqwa and is worthy of continued implementation as a learning method.

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