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Improving Fine Motor Skills in 4-5 Year Old Children Through Paper Cutting and Folding Media Activities at Bhaktiwati Kindergarten, Surabaya

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ABSTRACT

This study was motivated by the limited fine motor skills of 4–5-year-old children in cutting folded paper, partly due to teachers' greater emphasis on student worksheets, which reduced engagement in hands-on activities. This classroom action research aimed to improve children's fine motor skills through folded paper cutting activities. The study involved 10 children aged 4–5 years at TK Bhaktiwati, Sukomanunggal District, Surabaya, conducted from December 2024 to January 2025. The research applied the Kemmis and McTaggart model, consisting of two cycles, each including planning, action, observation, and reflection. Data were collected using observation sheets focusing on children's ability to hold scissors correctly, follow cutting lines, and complete tasks independently. The findings showed a consistent increase in cutting skills. The pre-cycle average score was 45% (5 children), which improved to 64.64% (7 children) in Cycle I. In Cycle II, the incorporation of smile card rewards made activities more engaging, resulting in increased mastery to 86.66% (9 children). Since the indicators were met in Cycle II, the research was completed. These results indicate that the use of demonstration methods combined with folded paper cutting activities positively enhances children's fine motor development and engagement in learning.

Keyword : Motor Skills, Paper Cutting, Folding Media

INTRODUCTION

Early childhood represents a critical developmental period in which foundational abilities that support later academic and life success are established. During these years, children undergo rapid growth in physical, cognitive, emotional, and social domains, with motor development serving as a core prerequisite for adaptive functioning (Hastuti, 2009; Hasanah, 2016). Fine motor development, in particular, involves the maturation of small muscle movements, dexterity, bilateral coordination, and eye–hand coordination, all of which underpin children's ability to manipulate tools, engage in creative tasks, and develop early writing skills (Gallahue & Ozmun, 2012). When fine motor abilities are insufficiently stimulated during early childhood, children may exhibit delays in tasks such as drawing, cutting, buttoning, and writing, which may later impede

academic adjustment, self-management, and autonomy in school environments (Payne & Isaacs, 2017).

Effective fine motor development requires purposeful, scaffolded, and interactive learning experiences. According to Vygotsky's sociocultural theory, motor skills are shaped not only biologically but through social mediation, modeling, and guided practice by adults and peers. Learning through demonstration and hands-on interaction enables children to internalize motor procedures more efficiently than passive instruction alone (Vygotsky, 1978). Similarly, Piaget's constructivist perspective emphasizes that children at the preoperational stage learn best through concrete manipulation of objects, which allows them to explore, refine, and coordinate movement patterns through sensory–motor feedback (Piaget, 1964). Cutting activities, in this context, provide multisensory stimulation—requiring visual tracking, hand positioning, grip strength, bilateral coordination, and attentional control—which collectively reinforce neuromotor pathways.

Despite this theoretical importance, preliminary observations at Bhaktiwati Kindergarten reveal that cutting activities have not been optimally implemented. Teachers primarily rely on worksheet-based tasks, resulting in minimal engagement with manipulative media. Consequently, many children exhibit limited scissor control, difficulty following geometric cutting trajectories, and low persistence during fine motor tasks. Moreover, motivation and affective engagement—essential elements in motor task mastery—appear insufficiently supported, as reinforcement strategies such as rewards or visual demonstrations are rarely applied.

These instructional gaps underscore the pedagogical necessity of Classroom Action Research (CAR). CAR allows teachers to systematically improve practices by planning targeted interventions, acting through experimentation, observing changes, and reflecting for iterative enhancement (Kemmis & McTaggart, 1988). Through the integration of folded paper cutting activities with demonstration-based instruction and motivational reinforcement, this research seeks to provide an empirically grounded and pedagogically responsive strategy to strengthen fine motor abilities, learning engagement, and early school readiness in young children.

METHOD

This research on improving fine motor skills in 3-4 year old children through paper- cutting activities at the PPT Bunga Tanjung Surabaya is a classroom action research (CAR), a practical intervention by teachers aimed at improving classroom learning situations with the goal of producing improvements (Putri et al., 2021).

Classroom Action Research (CAR) is research conducted by teachers in their own classrooms through self-reflection, with the goal of improving their performance as teachers, thereby enhancing children's learning outcomes. Because it collects numerical data and interprets the results, the research findings are not the researcher's opinions but rather the characteristics of the phenomena being studied. Arikunto (2009:9) defines CAR as a systematic, reflective study of various "actions" or actions by teachers/actors, from planning to researching actual classroom actions in the form of

teaching and learning activities to improve the learning environment. This classroom action research was conducted at Bhaktiwati Kindergarten in Surabaya, where the author conducted the research. This allowed the author to directly observe the classroom process and address various issues that arose in the classroom. The author also directly observed the research process and the various problems that arose during the learning process. Thus, the objective of this classroom action research, which was to improve children's fine motor skills, was successfully achieved. Based on the definition of Classroom Action Research (CAR) stated above, classroom action research aims to improve and enhance the quality of learning. Through CAR, teachers can conduct their own research related to classroom learning, including aspects of teacher-student interaction, the strengths and weaknesses of the methods used, media, and learning evaluation tools.

RESULT AND DISCUSSION

Results

This research was conducted to improve the fine motor skills of 3-4-year-old children through paper-cutting activities at the PPT Bunga Tanjung Surabaya. Data collection was conducted through observation, documentation, and assessment of children's performance, implemented in two cycles.

1. Quantitative Data

   Based on observations of 15 children, there was an increase in fine motor skills from pre-action to cycle II.

Table 1. Quantitative Data

Stage Percentag	Average Achievemen	Category
Pre-Action	38%	Very low
Cycle I	62%	Fair
Cycle II	85%	good

During pre-action, most children had difficulty holding scissors correctly, cutting along lines, and coordinating hand movements. In cycle I, after being given familiarization and guidance in cutting simple shapes, there was improvement, although many children still lacked neatness in their cutting. In cycle II, after varying activities and providing motivational reinforcement, most children were able to cut patterns well, following lines with more controlled hand-eye coordination.

2. Qualitative Data

   Qualitatively, observation and documentation data show the development of children's attitudes toward fine motor activities:

   Children's enthusiasm for cutting increased, as evidenced by their patience in completing tasks.

   Independence increased; children began to try cutting on their own without much teacher assistance. Hand-eye coordination improved; children focused more on the lines and direction of the cuts.

1. Observation Notes:
   a. "Children are now able to open and close the scissors rhythmically."
   b. "Children begin to understand the concept of following straight and curved lines."
   c. "Children's enthusiasm increased when given simple rewards such as star stickers."

2. Problems Encountered

   Several problems that emerged during the research included:

   a. Initial difficulties in operating scissors: Some children were not yet accustomed to opening and closing scissors correctly.
   b. Low concentration: Children aged 3–4 years are still considered to have a short attention span, so activities need to be more varied.
   c. Lack of persistence: Some children give up easily when their cutting doesn't line up properly.
   d. Strategies used to address this problem include:
   e. Providing examples of simple fine motor movements before cutting activities.
   f. Using colorful origami paper to attract children's attention.
   g. Providing verbal support and motivation to increase children's confidence in cutting.

Discussion

The findings of this study demonstrate that folded-paper cutting activities serve as an effective pedagogical tool for developing fine motor competence in early childhood. Cutting activities require coordinated use of small hand muscles, bilateral manipulation, and visual–motor integration, all of which contribute to the foundational skills needed for writing, drawing, and tool manipulation. These results support Smith's (2022) argument that hands-on, manipulative activities directly stimulate neuromotor pathways responsible for manual dexterity and coordination in young children. Furthermore, the improvement observed through systematic and engaging instruction reinforces Piaget's view that children at the preoperational stage learn best through concrete, action-based experiences that allow them to internalize skills through physical exploration.

This study expands previous findings by highlighting the importance of motivational reinforcement—such as reward systems and engaging media—in sustaining children's persistence and concentration during fine motor tasks. Fine motor development, therefore, is not solely dependent on physical practice but also shaped by emotional engagement and instructional design that scaffolds children's success. These insights imply that educators should integrate structured demonstrations, varied cutting challenges, and positive reinforcement to foster both competence and enthusiasm, ensuring that fine motor stimulation becomes a holistic and meaningful learning experience.

Table 2. Pre-Study, Cycle I, and Cycle II Results Score Category

Pre-Study Cycle I Score Category	Pre-Study Cycle I Score Category	Pre-Study Cycle I Score Category	Pre-Study Cycle I Score Category
Poor <40% - -	Poor <40% - -	Poor <40% - -	Poor <40% - -
Poor 40%-55% LB, PJ -	Poor 40%-55% LB, PJ -	Poor 40%-55% LB, PJ -	Poor 40%-55% LB, PJ -
Fair 56%-75% LA, LC, LD, LE, PA, PB, PC, PD, PE, PF, PG, PH, PI LB, PI	Fair 56%-75% LA, LC, LD, LE, PA, PB, PC, PD, PE, PF, PG, PH, PI LB, PI	Fair 56%-75% LA, LC, LD, LE, PA, PB, PC, PD, PE, PF, PG, PH, PI LB, PI	Fair 56%-75% LA, LC, LD, LE, PA, PB, PC, PD, PE, PF, PG, PH, PI LB, PI
Good 76%-100% LA, LC, LD, LE, PA, PB, PC, PD	Good 76%-100% LA, LC, LD, LE, PA, PB, PC, PD	Good 76%-100% LA, LC, LD, LE, PA, PB, PC, PD	Good 76%-100% LA, LC, LD, LE, PA, PB, PC, PD

CONCLUSION

The results of this study conclude that paper-cutting activities are an effective and practical method for improving the fine motor skills of children aged 3–4 years at Bhaktiwati Kindergarten, as reflected in their improved ability to handle scissors, follow cutting lines, and coordinate eye–hand movements with greater control. In addition to strengthening motor abilities, these activities also enhance children's concentration, persistence, and confidence, demonstrating that effective fine motor stimulation must involve engaging, hands-on tasks supported by clear demonstrations and motivational reinforcement. Therefore, paper-cutting can be recommended as a valuable instructional strategy for early childhood learning, and teachers are encouraged to implement varied cutting tasks, utilize structured modeling, and provide positive reinforcement to ensure that motor development occurs holistically and in ways that meaningfully support children's overall school readiness.

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