



## **Improving Children's Fine Motor Skills Through Playing Plasticine at Raudhatul Athfal Al-Fajar**

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### **Abstract**

This research aims to improve performance so that children's fine motor development can develop well. This research was conducted at RA Al Fajar located at Jln Jermal XV No. 5 Denai, Medan Denai District. This is a classroom action research implemented by researchers in the classroom using self-reflection. This research was conducted in the 2023/2024 school year, specifically in the even semester, involving 20 children as research subjects, consisting of 10 boys and 10 girls. The results showed that the use of plasticine in improving children's fine motor skills resulted in consistent and significant improvements from pre-cycle to cycle II, both in individual scores and class averages. The total score increased from 137 in pre-cycle to 169 in cycle I, and finally reached 374 in cycle II. The research makes a significant contribution in the development of fine motor skills in early childhood. The research offers innovation in learning methods by introducing fun and interactive activities, which helps teachers find alternative teaching approaches that suit children's developmental needs.

**Keywords:** *Early Childhood, Fine Motor Skills, Playing Plasticine*



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### **INTRODUCTION**

Education is an important criterion for the future path of life, because without it a person cannot gain much knowledge and experience. (Kholbu, Astawa, Nurhasanah, & Rachmayani, 2023) Motor development is the process of developing children's movements. This motor development also needs to be considered. Educators must understand that every child needs to develop large and small muscles at each age. This means that although educators need the right equipment, attitude is more important (Riyadi et al., 2023). The reason is, good interaction with children gives them the opportunity to learn and try various activity motor rude and fine Which

good for children (Kholbu, Astawa, Nurhasanah, & Rachmayani, 2023). Because children have different individual abilities, teachers need to prepare different teaching patterns for each child (Yudha Febrianta, 2017). The focus of the teaching pattern provided by the teacher is paying attention to the child's gross motor development.

Gross motor skills include activities that involve the use of the legs, arms, or the whole body, such as standing, walking, jumping, and running. In contrast, fine motor skills involve the use of small muscles. Aspects of physical motor development include body growth, as well as the development of gross and fine motor skills. At age 4, children's fine motor skills develop gradually and consistently. Ability motor fine Which Good greatly affects a child's ability to learn academic basics. (Sabilla, 2022).

The learning process in children age religious is part of completing their development. Several important aspects that need to be developed in early childhood include physical, language, cognitive, social and artistic development in education child age early (Maftutah, Jannah, & Utama, 2021). Interesting for know more far from physical development which begins with motor development, because at the beginning of human life physical development acquires greater strength. Physical development, such as fine and gross motor skills, is included in the development of children's movement skills and behavior (Sitorus, 2016).

Fine motor skills are one of the most important areas of child development. Development of motor skills fine in children, it affects their ability to perform motor tasks such as cutting and writing (Ilham Kamaruddin, Achmad Abdul Azis, Mohammad Syahru Assabana, Arif Ismunandar, & Duwi Meilina, 2022). This exercise integrates certain body parts and begins with the development of small muscles, such as using finger and wrist flexibility, as well as eye coordination exercises (Agustina et al., 2018). Ability to manage motor skills fine involves coordinating the nervous system, muscles, and brain to regulate body movements. Sujiono in (Khadijah & Amelia, 2020) defines fine motor skills as movements that involve the small muscles of the body, such as dexterity in using the fingers and wrist (Dea, Urrofah, & Utama, 2023). Examples of activities carried out by children include cutting, combing hair, writing, brushing teeth, arranging blocks, and others.

Ability motor fine relate with movement small muscles that requires parts body certain things, including the correct use of fingers or wrists, according to Primayana (2020). While strength is not the primary requirement for this action, proper hand-eye synchronization is essential. The better a child's fine motor skills are in activities such as eating, the more likely they will demonstrate higher levels of creativity. Feminim & Pusari (2016) emphasize that fine motor skills are skills. Children with fine motor skills can reach, sketch, squeeze, and perform other tasks that require hand-eye coordination and the use of small muscles. According to Hayati (2019), fine motor skills which include tasks such as cutting, arranging blocks and doodling include small muscle movements and body components which are influenced by motivation to learn and practice. Apart from that, Maemunah & Siahaan (2021) explain that fine motor skills are physical abilities that not only involve the

muscles in the fingers but also the hands, eyes and other related body parts that must be coordinated. Fine motor skills, according to Wisudayanti (2020), require planning how to use small muscles such as the hands and fingers. It helps proper hand-eye coordination of the child. However, like Yunia et al. (2017) noted, children can improve abilities motor smooth with perform developmental activities that allow them to move their hands, coordinate with their eyes, and manipulate related body components with their fingers. According to experts, fine motor skills involve movement requiring coordination between muscles small hand-eye, which allows the child become more skilled and be careful in use fingers for various daily activities.

Children's motor development is influenced by various factors, including stimulation from family, school and the environment (Latifah, 2020). Learning media such as playing with plasticine involve children in the activity of making and forming plasticine (Kholbu et al., 2023). The aim is for children to become familiar with the soft and easy-to-mold texture of plasticine, which supports children's motoric development according to their age stages. (Oktaviani, Priyantoro, & Hasanah, 2021).

Media is one of the methods used by teachers in learning process for increase skills motor fine is media. Among the media used to stimulate children's fine motor skills is plasticine. Plasticine is a soft material that is available in various colors and can be formed into various shapes through pressing, kneading, shaping and molding, according to the child's wishes and imagination. Therefore, playing with plasticine can make children feel happy and happy with the results of what the child does (Asriani & Setyaningsih, 2021). By playing with plasticine, children can explore their artistic and fine motor skills, as well as train their emotions by coordinating their hands and eyes using small muscle movements.

According to Asriani & Setyaningsih (2021), playing with plasticine allows children to learn to squeeze, roll and thin. These movements are part of physical motor development. Children can learn about objects, changes, and the reasons and impacts of these changes through plasticine activities. The game stimulates the senses, improves hand-eye coordination, teaches players to appreciate the permanence of objects, and investigates ideas about time and space.

The steps for playing with plasticine by Pamahdi in (Asriani & Setyaningsih, 2021) are that initially the teacher shows a concrete object to show the child so that the child can follow what the teacher has made, for example a glass. and plate, then teacher give an example of how how to make glass or plate with use plasticine material Which has been given by the teacher, then the child is asked to show how the child's creative work in making glasses and plates has been demonstrated or the child can also use their own imagination in being creative because the teacher does not limit children who want to be creative in order to develop the child's creativity.

Children play with plasticine on the floor so that children can freely enjoy playing with plasticine freely. To deal with dirty plasticine, the teacher provides a place to wash hands and a cloth after playing with plasticine so that children can clean their hands after playing with plasticine. Playing with plasticine allows children

express creativity them by creating a style unique according to the method expression each. Every work plasticine what a child produces will be different from what other children produce. (Kamala & Chandra, 2020). This activity can train various aspects, including psychomotor, cognitive, sensory, social, language and tactile nerves in children. (Herniwati, Pahrul, & Amalia, 2022).

The advantage of playing with children's plasticine is that it can develop children's fine motor movements such as squeezing, forming plasticine according to the child's imagination, which will increase children's creativity. By choosing plasticine when children play with it, it will not make dirt on arms or clothes child, so give experience regularly direct and concrete (Oktaviani et al., 2021). The disadvantage of playing with plasticine is that children's hands will become dirty, so you have to make sure that after playing with plasticine, children have washed their hands properly. If several colors of plasticine have been mixed, the plasticine will change color to dark and will not be the color it was before mixing. Meanwhile, the purpose of playing with plasticine is for know already so far where ability motor fine child in playing with plasticine.

Observation which was carried out at RA Al-Fajar, totaling 20 children, who had not yet played plasticine for develop motor how smooth it is to be a child Still confused about playing with plasticine, how to shape it, so the child must be guided slowly so that the child can understand the instructions explained by the teacher. Besides That teacher Also Not yet using method Which varies in improve motor skills smooth child.

Based on matter Of top concluded that Children still need direction from their teacher on how to play with plasticine, so that it matches the shape that has been demonstrated, but the teacher also frees children to shape according to their imagination what the child wants to make. so that motor development fine child can develop regularly maksimal The formulation of the problem in this study is how the effectiveness of using plasticine in improving fine motor skills in early childhood at Raudhatul Athfal Al-Fajar? What are the changes that occur in children's fine motor skills after participating in plasticine play activities? And how can the application of plasticine play activities be effectively integrated in classroom learning to support early childhood fine motor development? The purpose of this study is to determine the effectiveness of using plasticine in improving fine motor skills in early childhood at Raudhatul Athfal Al-Fajar, identify changes in children's fine motor skills after doing plasticine play activities, and provide guidance on the application of effective plasticine play activities in classroom learning to support early childhood fine motor development.

## METHODOLOGY

The aim of this classroom action research is to improve children's fine motor skills and performance through self-reflection carried out by researchers in the classroom. This research was carried out in the even semester of the 2023–2024 academic year at RA Al Fajar Jln Jermal XV No.5 Denai, Medan Denai District. There were ten boys and ten girls who were research subjects. Descriptive analysis is the data analysis method used. PTK was chosen because of its time flexibility which suits children's learning needs. Classroom action research (CAR) is the methodology used. This is done in two cycles, with four steps in each cycle: planning, implementation, observation (or observation phase), and reflection. By using the child's fine motor observation sheet, data was collected. The data obtained was used to analyze the formula:

$$x = \frac{Fig}{n}$$

**Table 1. Motor observation sheet grid table fine child age 5-6 years**

Variable	Aspect	Indicator
Fine motor skills	Coordination hand with eyes	The child has mixed the colors of plasticine
		Children make shapes of objects around them with plasticine
		The child grasps and squeezes the plasticine
	Skillful and careful use of fingers	Children form plasticine according to the teacher's instructions
		Children make small and large sizes of plasticine
		Child cuts plasticine with a ruler

To measure the success of implementing this action, children are expected to be able to improve their motor skills smooth the child through plasticine play. Success in this research occurs if the active criteria are obtained, namely a minimum of 75% of all individual students at RA Al-Fajar, then the learning is considered successful.

## RESULTS AND DISCUSSION

Building a strong foundation for child development is facilitated by child education age early. Development motor fine is Wrong one of the many areas of child development that needs to be developed optimally at this time. Coordination of small muscles, especially those used in hand and finger movements, is a requirement

for fine motor skills. These skills are very important to support children's daily activities and as preparation for future academic education.

Raudhatul Athfal (RA) as institution education child age early based on Islam responsible for supporting the progress of various aspects of children's development, including fine motor skills. RA Al-Fajar, as an educational institution child age early, understand the importance of optimizing development motor fine child through activity learning Which interesting and effective.

Play with Plasticine is one of the ways to help children develop ability motor smooth. For children, plasticine is a versatile, safe and entertaining medium. Children can strengthen and stretch their fingers, improve hand-eye coordination, and cultivate creativity by doing plasticine play activities.

The aim of this research is to test the effectiveness of using plasticine learning media in improving motor skills smooth child at RA Al-Fajar. It is hoped that this research can provide deeper insight into the benefits of playing with plasticine for the development of children's fine motor skills as well as effective implementation strategies in the learning context at Raudhatul Athfal.

Below is a table obtained after observing and assessing developments children's fine motor skills in early childhood:

**Table 2. Results of Developments Children's Fine Motor Skills in Early Childhood**

N O	NO	PRE-CYCLE		CYCLE I		CYCLE II	
		MAR K	PERCE NT	MAR K	PERCEN T	MAR K	PERCE NT
1	al fatih	7	29%	9	38%	21	88%
2	ahmad	8	33%	9	38%	20	83%
3	hanan	6	25%	7	29%	18	75%
4	lavende r	7	29%	9	38%	19	79%
5	keysha	9	38%	11	46%	22	92%
6	did	6	25%	8	33%	18	75%
7	raisia	6	25%	8	33%	18	75%
8	sabina	7	29%	8	33%	18	75%
9	they are remove d	7	29%	9	38%	19	79%
10	maulan a	7	29%	9	38%	18	75%
11	poor	6	25%	7	29%	18	75%
12	syaukila	8	33%	10	42%	18	75%
13	thalita	7	29%	8	33%	18	75%
14	zaid	7	29%	9	38%	19	79%

15	go up	8	33%	10	42%	18	75%
16	scrap	6	25%	8	33%	18	75%
17	zidane	7	29%	8	33%	19	79%
18	Alicia	6	25%	7	29%	18	75%
19	aishah	6	25%	8	33%	18	75%
20	Athaya	6	25%	7	29%	19	79%
AMOUNT		137	29%	169	45%	374	78%

The results of classroom action research conducted at Raudhatul Athfal Al-Fajar showed a significant increase in motor skills smooth children through plasticine play activities. In the pre-cycle stage, fine motor skills children are still low, with an average score of 6.85 and a success percentage of only 29%. This finding is in line with Suryani's (2023) statement which states that motor skills fine child age religious often underdeveloped optimally without any stimulation sufficient.

After applying the plasticine play method to the cycle I, visible improvement although Not yet significant. Average The value increased to 8.45 with a success percentage reaching 45%. This increase indicates that the plasticine playing method is starting to have a positive effect on development motor fine child. Results This supported by research Astuti (2020) found that playing with plasticine can stimulate muscle development in children's hands and fingers, which is an important component of fine motor skills.

Improvement a very significant thing happened from cycle When cycle II, of which is the average the score jumped from 8.45 to 18.7, with the success percentage increasing from 45% to 78%. This dramatic improvement shows the effectiveness of the method playing with plasticine in developing abilities children's fine motor skills after being applied consistently and with improvements based on reflection from the previous cycle. These findings strengthen the research results of Hidayanti (2021) which concluded that the application of the plasticine play method in a sustainable and structured manner can produce significant improvements in the fine motor skills of young children.

Analysis of individual development shows variations in children's levels of progress. Keysha, who had the highest initial ability, showed very consistent and significant development, increasing from a score of 9 (38%) in pre-cycle to 22 (92%) in cycle II. This is appropriate with the opinion of Winarni (2018) who states that children with good initial abilities tend to be more responsive to stimulation and are able to optimize their potential more quickly.

Meanwhile, children with low initial abilities such as Hanan, Faris, Raisya, and Alisia also showed a significant improvement, from a score of 6 (25%) in the pre-cycle to 18 (75%) in the second cycle. This development supports the findings of Pratiwi (2022) which highlights the importance of an individual approach and consistency in implementing learning methods to help children who initially experience difficulties.

The effectiveness of the deep plasticine play method Improving children's fine motor skills is shown by consistent and significant improvements from pre-cycle to cycle II, both in individual scores and class averages. The total number of marks increased from 137 on pre-cycle, to 169 cycles I, and finally reached 374 cycles II. These results strengthen Rahmawati's (2020) research which found that plasticine as media learning can improve not only abilities motor subtle, but also the child's creativity and concentration. Several factors contribute to the success of implementing the plasticine play method, including the characteristics of plasticine which is easy to shape and attractive to children, systematic and gradual activity design, and a learning-centered approach. on child. Matter This in line with findings which emphasizes the importance of choosing media learning Which in accordance with characteristics and interest child early age (Dewi, 2021).

Although overall the plasticine playing method showed positive results, there were several challenges faced during the research, such as differences in the speed of development between children and consistency in the application of the method outside formal learning hours. The solutions implemented include an individual approach and involvement of parents learning process. This is in accordance with recommendations which emphasize the importance of collaboration between teachers and people old in support child development age religious (Suryani, 2023).

Based on the results of this research, several implications and recommendations can be proposed, including the continued application of the plasticine play method at RA Al-Fajar, development of a variety of activities, teacher training, and increased collaboration with parents. This recommendation is in line with views that emphasize the importance of a holistic approach to development motor skills smooth child age early, involving not only institutions education but also the family and community environment (Rahayu & Suarta, 2018).

Apart from improving motor skills In a significant subtle way, this research also observed the positive impact of plasticine playing activities on other aspects of development in children at RA Al-Fajar. One of The aspect that appears to be experiencing development is the child's cognitive abilities. Through plasticine shaping activities, children No only practice skills motor their subtle, but Also develop an understanding of shapes, colors, and basic mathematical concepts such as size and comparison. Playing plasticine activities can improve abilities child in recognize and distinguish various forms geometric (Tue, Asmah, & Haryono, 2021). In the context of RA Al-Fajar, several children such as Ahmad and Zidane showed increased abilities in making basic shapes such as circles, triangles, and squares with greater precision as the research cycle progresses. The following is a picture of the plasticine forming activity carried out at RA Al-Fajar:





**Figure 1: plasticine forming activities**

Another aspect of development that is positively affected is children's creativity and imagination. Plasticine play activities provide freedom for child to express ideas them in three-dimensional shape. In accordance with the findings of Ermelind Tue, et al 2021, children who are involved in regular plasticine play activities tend to show an increase in ability think creatively and solution problem (Tue et al., 2021). Di RA Al-Fajar, hal This visible from increasing variety of shapes and which object made by children of the cycle In ke cycle II. For example, Keysha, who initially only made simple shapes, at the end of cycle II was able to create play scenarios with characters she made from plasticine. This shows progress No only in motor aspect fine, but Also in ability to tell stories and play roles.

The social-emotional aspect also experiences positive development through plasticine playing activities. Social interactions between children increase during play sessions, where they share ideas, collaborate on joint projects, and learn to appreciate the work of their friends. This is in accordance with Hidayanti's (2021) research which highlights the importance of cooperative play activities in developing skills early childhood social. At RA Al-Fajar, this increase in social interaction is clearly visible in children like Faris and Raisya who initially tended to play alone. At the end of cycle II, they began to show initiative to collaborate with their friends in making plasticine projects together. This shows positive development in their social-emotional aspects.

Apart from that, playing with plasticine also helps children develop their emotional regulation. The process of molding plasticine, which sometimes requires patience and perseverance, helps children learn to manage frustration and celebrate success. Activities that require focus and patience such as playing with plasticine can help children develop skills important emotional management (Dian Cahyani, Intanlis Lape, 2024)

The role of teachers in optimizing plasticine playing methods cannot be ignored. Observations during the research showed that the approaches and strategies used by teachers had a significant impact on the effectiveness of this method. Teachers who are able to provide clear instructions, good demonstrations, and constructive feedback tend to encourage children's development more rapidly. This is in line with

findings which emphasize the importance of teacher facilitation skills in educational play activities (Dian Cahyani, Intanlis Lape, 2024). At RA Al-Fajar, the teachers involved in this research showed increased skills in facilitating activities playing with plasticine from cycle I to cycle II. They become more skilled at providing appropriate challenges with level ability respectively children, as well as in providing appropriate encouragement and appreciation.

One of the important findings of this research is the need to adapt plasticine play methods for children with special needs. Although not explicitly stated in the initial data, observations during the study indicated that some children had specific challenges that required a more personalized approach. For example, a child named Zaid showed difficulty in activities that required a lot of finger strength, such as squeezing hard plasticine. To overcome this, the teacher adapted the method by providing Zaid with softer plasticine at first, then gradually increasing its hardness as his finger strength increased.

Although the main focus of this research is on the use of physical plasticine, technological developments open up opportunities to integrate digital elements in fine motor learning. Several educational applications and games that simulate activities such as molding plasticine can be used as a complement to physical activities. A combination of physical and digital activities can provide an experience study which is more rich for child. At RA Al-Fajar, although not yet fully implemented, there is potential to explore the use of technology such as tablets with virtual drawing or shaping applications as a variation in fine motor development activities.

This research not only reveals the effectiveness of the method playing with plasticine in increase motor skills fine child, but also highlights its positive impact on aspects development others, like cognitive, social-emotional, and creativity. These findings emphasize the importance of a holistic approach in education early childhood, where one activity can provide multiple benefits. However, this research also underlines the importance of adapting methods to suit individual children's needs, the crucial role of teachers in facilitating learning, and the potential of technology integration in enriching learning experiences. In the future, further research is needed to explore the sustainability and transferability of the skills developed, as well as innovative ways to integrate plasticine play methods into the wider PAUD curriculum.

Thus, the plasticine playing method is not only a tool for improving fine motor skills, but also a means of supporting children's overall development, preparing them for the challenges of learning and life in the future.

## CONCLUSION

This research indicates that the use of play methods plasticine is effective in increase motor skills fine children at RA Al-Fajar. Improvement which significant and consistent from pre-cycle until cycle II shows that this method is feasible to be applied on an ongoing basis and can be adopted by other early childhood education

institutions. However, although significant progress has been made, there is still scope for further improvement and development, especially in ensuring that each child can achieve level of development Which optimal according to potential each of them.

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