

Using Maria Montessori Method on Collage Activity to Develop Students' Fine Motor Skills at Ummul Habibah Pre-school, Klambir V Kebun Village

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ABSTRACT

This study was motivated by the results of observations showing that the very low development of fine motor skills of early childhood at Ummul Habibah school, Klambir V Kebun village. With this background, it is necessary to improve fine motor development that can be done with media made from loose parts with the Maria Montessori method. The Maria Montessori method is one of the suitable media for early childhood because the Maria Montessori method is a method of freeing children to make what they want with the media that has been provided. The goal is to improve the fine motor development of early childhood at Ummul Habibah school, Klambir V Kebun village. The method used in this research was classroom action research because there were actions given to early childhood. The results of the research in cycle 1 at meetings 1 and 2, found a percentage of 75%, while in cycle 2 at meetings 3 and 4 there was an increase to 90%, which meant that research with the Maria Montessori method with media made from loose parts with collage activities could improve the fine motor development of early childhood who attend Ummul Habibah Pre-school, Klambir V Kebun village.

Keywords: *Fine Motor Skills; Maria Montessori Method.*

INTRODUCTION

Early childhood is a child who is in the age range of 0-6 years or what is commonly called the Golden Age (golden age). Where early childhood is a unique individual, and has its own characteristics that are in accordance with the age stage. Improving the quality of children at this golden age is a very important phase for the future. If during the golden age the growth and development needs of children are not met properly, it will greatly affect the growth and development of children at a later stage. The phenomenon that occurs in the world of education which is also an important educational problem to be addressed is the problem of the learning process that only emphasizes the aspect of memory "memorizing". This is due to several factors; the teacher only uses the lecture method, the form of questions that are only multiple choice, the cultivation of knowledge that does not reach the concept or understanding and values, and the atmosphere of the class that is active-negative (such as actively taking notes, actively listening) but not active-positive (such as actively asking questions, actively discussing, actively experimenting, actively reflecting) (Rahman & Kencana, 2020).

Early childhood education is one level of education that is of concern to the government. Early childhood education includes *Raudhatul Athfal (RA)*, Kindergarten and Early Childhood Education (ECE) or playgroup education units. Based on Law No. 20 of 2003 concerning the National Education System explicitly mandates the need for handling early childhood education, this can be seen in Chapter 1 Article 1 point 10 which reads "Early Childhood Education is a coaching effort aimed at

children from birth to 6 years of age which is carried out through providing educational stimuli to help physical and spiritual growth and development so that children have readiness to enter further education" (Ministry of Education and Culture, 2014).

Early childhood education in kindergarten or *Raudatul Athfal (RA)* is one form of formal education that aims to optimize the growth and development of physical motor, social emotional, cognitive, language, and religious moral values. Many parents are obsessed that their children from an early age are already good at reading, writing and calculating, so they tend to force their children to learn and neglect aspects of child development. This demand is one of the factors why many schools and teachers devote too much attention to producing children who are good at reading and arithmetic.

Another mistake made by schools and teachers is that so many teachers force children to sit still, while doing repetitive tasks in the room. As a result, children seem to be forced to learn so that they feel bored and inactive in the learning process. It is very important for teachers and parents as early educators to understand the characteristics of early childhood. Teacher pedagogical competence plays a very important role in efforts to shape character and develop the potential of early childhood, a teacher must have knowledge and be creative in creating interesting learning media to improve the quality of learning in the classroom.

One aspect that needs to be developed as early as possible is fine motor physical development. It is important for parents and teachers to understand how important fine motor skills are for early childhood, because improving children's fine motor skills will affect children's readiness to write. In addition, fine motor development will affect the child's adjustment in socializing in participating in classroom activities, children who are stiff in their fine motor movements will hinder participation in group activities and can cause the child to feel ostracized by their friends. Some children in kindergarten such as children who still lack the courage to interact with other friends so that these children dare to interact only with their close friends, children do not dare to appear in public, children do not dare to express their opinions, children have difficulty cooperating with their groups, children do not believe in their own work. All of these problems are factors in the lack of self-confidence and interpersonal intelligence in children (Widya, 2019).

The issues encountered during observation at Ummul Habibah Pre-school involve children showing delays in the development of their fine motor skills. This can be characterized by their lack of skill and flexibility in using their fingers. Children are unable to apply the right amount of glue to patterns for sticking; some apply too much, crossing the lines and tearing the paper, while others use too little, causing the materials to not adhere well to the patterns.

Regarding the description above, the researcher conducted observations in one of the Class A groups consisting of 10 children at Ummul Habibah Pre-school. The activity aimed at enhancing the children's fine motor skills was seed collage. The initial observations by the researcher of the children in Group A at Ummul Habibah Pre-school revealed that their fine motor skills are still underdeveloped. Out of the 10 children in Group A at Ummul Habibah Pre-school, only 1 child showed expected development, capable of producing neat and correct seed collages, while 1 child showed some progress, and 8 children have not yet developed well. The low development of early childhood fine motor skills at Ummul Habibah Pre-school is due to uninteresting and uncreative learning methods, resulting in children feeling bored and less actively engaged in the learning process.

One learning activity that can be done using natural materials as a learning medium for young children is the collage technique. Using natural materials for collage techniques actually trains teachers to develop their creativity in planning, preparing, and creating teaching materials that are innovative, interesting, and enjoyable for children. Simply put, collage is an activity that children can engage in by sticking or attaching objects onto a provided picture. Collage is a branch of visual arts that involves attaching pieces of paper and/or other materials to produce a specific design or composition, which can be done by anyone without needing to know general art techniques (Akollo et al., 2023).

The development of motor skills in young children can be achieved by fostering their creativity. Further elaboration on the role of creativity in early childhood education is outlined as follows: (1) it can generate ideas for students to be creative in their lessons; (2) it can facilitate students in learning school subjects because if their creativity develops, school subjects become easier for them; (3) once students' creativity emerges, they will seek ways to achieve good learning outcomes; (4) creativity

from teachers makes it easier for them to create teaching materials that are understandable for students, thereby motivating students to be more enthusiastic about learning; (5) teacher creativity helps them find ways to motivate lazy students to become diligent learners. Kurniawan et al. (2020) suggest that childhood is an ideal period for learning motor skills because children's bodies (physiology) are more flexible compared to adults or teenagers. Childhood offers potential to master various skills in adapting to their surroundings, thus children engage in repetitive enjoyable activities to develop their motor skills (Kurniawan et al., 2020).

Children's world is a world of play through play activities children learn various things, play is a very important part in the growth and development of children to become whole human beings. For children, play activities are always fun by playing, they can express various feelings and brilliant ideas about various things. They can also explore their limitless imagination, which will stimulate the development of their vast natural creativity. Through play, children can achieve physical, intellectual, emotional and social development. Intellectual development can be seen from their ability to use or utilize the environment. Emotional development can be seen when children feel happy, angry, win and lose. Social development can be seen from their relationship with their peers, helping them and paying attention to the interests of others (Rozana, 2019).

RESEARCH METHODS

The study employed Classroom Action Research (CAR) as its methodology. One cycle, or the stages of the CAR, is the planned action and reflection that come before the activity. Planning, Action, Observation, and Reflection are the stages. The data was gathered using tests, observations, and documentation. The researcher computed the average test score, which was then utilized to compare the test findings (Wandira et al., 2024). This study was conducted at Ummul Habibah Pre-school, Klambir V village. This study focused on 10 students who were instructed through collage activities that were based on loose parts.

RESULTS AND DISCUSSION

1. Result

Pre-Cycle

From the results of observations before conducting classroom action research activities, there were several problems that were encountered during the learning process that had been carried out by several teachers at Ummul Habibah Pre-school, Klambir V village. The main problems are as follows:

- a) The teacher's understanding of fine motor development in early childhood is still low.
- b) The media provided is not interesting so that children are very easily bored and bored when the learning process takes place, and for the next day, they look lazy and not eager to go to school.

With some of the problems found in Ummul Habibah Pre-school, Klambir V village, based on the results of this observation, it can be concluded that:

Table 1. The pre-cycle observation result

No.	Students' Name	Indicator			
		NYD	StD	DaE	DVW
1	Zikri	√			
2	Azmi		√		
3	Qori	√			
4	Adra	√			
5	Candra	√			
6	Dayu	√			
7	Yudi	√			
8	Dinda	√			
9	Kiki	√			
10	Reyna	√			

Observation Instrument Description:

- a. DVW (Developing very well), that is, if the student can do it independently and can help his/her friend who cannot yet.
- b. DaE (Developing as expected), if the student can do it independently and consistently.
- c. StD (Starting to develop), if the student still has to be reminded or assisted by the teacher.
- d. NYD (Not yet developed), if the student cannot do the activity at all.

Based on the table above, it can be seen that student who began to develop his/her skill was 1 student, with a percentage result of 20%. The students who had not developed their skills were 9 children, at all reach 80%. In the assessment indicators, developing skills as expected and developing skills very well are still 0%.

Cycle 1

1. Planning stage

After knowing the things that cause difficulties in early childhood at Ummul Habibah Pre-school, Klambir V village, in early childhood fine motor development, then the first thing to do was to plan for problem solving. The activities done in the planning stage were as follows:

- a. Preparing the Daily Learning Implementation Plan.
- b. Arranging student worksheets in the form of pictures that will be discussed.
- c. Making observation sheets for Learning Implementation activities and student learning activities during learning.
- d. Designing the division of groups divided into 2 groups of 10 students.
- e. Developing evaluation instruments to determine the level of student success at the end of the lesson.

2. Action stage

At meeting 1 in cycle 1, the students before entering the classroom, they lined up in front of the class and prayed, as usual activities. Then, students were prepared to follow the lesson. Next, the research team conducted the action with the following steps:

- a. Students were divided into 2 groups consisting of 5 people in one group.
- b. The researchers started the lesson by saying greetings.
- c. The researchers conditioned the students to be ready for the lesson.
- d. Next, the researchers conducted the action.
- e. Group A was given the game *engklek* and group B was given the game *congklak*.
- f. By giving directions and commands, the research team assisted by the class teacher explained and demonstrated how to play the game in playing activities with loose part media.
- g. Explaining the material on *engklek* and squeezing using coconut pulp because coconut pulp is an example of a loose part.
- h. Giving time to students for question and answer sessions.
- i. Practicing the activity accompanied by the teacher and the research team.
- j. At the end of meeting 1 in cycle 1, the research team gave a test of student learning outcomes, in the form of children's worksheets as an evaluation of the activities at that time, namely the activity of squeezing coconut pulp, and sticking with coconut pulp.

3. Observation stage

The learning process of cycle 1 was carried out for two meetings, namely meeting 1 and meeting 2. In this case, the teacher and the research team experienced obstacles, namely obstacles that often occurred in students, namely students who did not concentrate, but with various efforts given, in the end, these obstacles did not become an inhibiting factor in success. *Engklek* and *congklak* playing activities to improve cognitive development of early childhood at Ummul Habibah Pre-school, Klambir V village. Initially, the students were very enthusiastic and excited about jumping, playing *engklek* and matching pictures with cards. At the time of task distribution, there were some children who were not willing to do the tasks ordered by the teacher, not a few of them were still happy to play with their group friends, both group A and group B. So that in cycle 1, assigning tasks to groups A

and B was determined to children who really wanted to join. Then, the teacher instructed children or conditions early childhood to return to playing by matching the cards that had been provided.

The observation results showed that learning activities had been done in accordance with the daily lesson plan. In the end of learning activities, the teacher conducted evaluation activities to determine the improvement of early childhood abilities in the aspect of children's fine motor development in the material, drawing according to ideas, cutting according to patterns that had been pasted with coconut pulp, folding into a meaningful shape and sticking according to the pattern.

Increased fine motor development through the Maria Montessori method through collage activities made from loose parts at Ummul Habibah Pre-school, Klambir V village on indicators of drawing according to ideas achieved 75% success, cutting according to patterns that had been pasted with coconut pulp achieved 75% success, folding into a meaningful shape achieved 75% success and sticking according to the pattern (collage) achieved 75% success.

Thus, the average results of improving fine motor development through the Maria Montessori method through collage activities made from loose parts at Ummul Habibah Pre-school, Klambir V village at the stage of developing as expected. However, some were starting to develop a little and will develop very well. There were only 2 students who had not developed at the cycle 1 stage at meeting 1. The increase will be clearly visible, when the research team and teachers conducted fine motor activities through the Maria Montessori method through collage activities made from loose parts at the cycle 2 at meeting 3 and 4.

4. Reflection stage

Based on the results of reflection conducted by the research team and classroom teachers in cycle 1, in general, the cognitive development of students on the material of counting numbers, distinguishing numbers and distinguishing geometric shapes, has not developed optimally and as a whole. This is based on the observations of the research team in cycle 1, the percentage that has not reached 90% so it is necessary to conduct reflection stage in cycle 2 with two more meetings, namely meeting 3 and 4. The problems that arose during the process of learning activities were as follows:

- a. Students were still confused in distinguishing geometric shapes.
- b. Students still liked to tell stories and played alone with the traditional game media provided.
- c. Students still liked to scramble in playing and taking cards.
- d. Students did not focus on listening when the teacher conveyed traditional game material.
- e. Teachers did not provide clear motivation to students, so students liked to play alone.

The learning process in cycle 1, at meeting 1 and 2 there were still very many shortcomings, so it was necessary to hold cycle 2, namely meeting 3 and 4. Improvements were made in cycle 2 with the aim of achieving more optimal results. Several steps were needed to improve the learning process with collage activities made from loose parts. The following improvement steps that will be implemented in cycle 2 at meeting 3 and 4 are as follows:

- a. The teacher provides more stimulation to students by providing traditional game media, namely *engklek* and *congklak*.
- b. The teacher does various actions in cycle 2 that had been carried out in the previous cycle 1.
- c. The teacher makes different variations in giving assignments in cycle 2, adjusts to the theme so that students do not feel bored during the action in cycle 2 at meeting 3 and 4.
- d. The teacher changes the activity method, namely collaging with wet and dry leaves in the school environment.

Cycle 2

1. Planning stage

In the first instance of Cycle 2, the teacher and research team did the following steps:

- a. They planned the implementation of Cycle 2 for meeting 3 and 4 by creating a daily lesson plan in collaboration with the teachers and team. This plan, which was based on the prepared materials and media, serves as a guide for the delivery of the lessons in Cycle 2.
- b. They prepared a draft of the learning activities using loose parts media for Cycle 2 in meeting 3 and 4.

- c. They selected the theme to be used according to the lesson plan and the learning media for Cycle 2 in meeting 3 and 4.
- d. They prepared observation sheets to collect data during the research process.
- e. They arranged the necessary documentation equipment for the learning activities that would take place in Cycle 2 during meeting 3 and 4.

2. Action stage

In Cycle 2 during meeting 3 and 4, the research team carried out collaborative actions with the classroom teacher. The teacher's task was to observe, assess, and document the collage activities with wet and dry leaves available in the school environment while the children were playing. The research team's task was to conduct the teaching and learning activities using the agreed-upon lesson plans. Before carrying out the collage activity with wet and dry leaves in Cycle 2, the children were stimulated by playing first. Additionally, the teacher prepared the tools and materials and established rules for the activity. The following is a description of the implementation of actions in Cycle 2 during meetings 3 and 4 using loose parts media:

a. Meeting 3 in Cycle 2 featured a recreation theme with a sub-theme of mountains, which differed from Cycle 1. At the start of the lesson, the students were invited to sing. Then, the students were divided into two groups, Group A and Group B. Each student was given the freedom to choose the type of leaf prepared by the teacher. One group collaged with dry leaves, while the other group used wet leaves. After selecting their loose parts media, the students were given the opportunity to watch the teacher or research team begin the collage activity and were encouraged to ask questions. Another teacher prepared pre-printed paper with a mountain image as the task, which would later be decorated with wet or dry leaves. In this activity, the teacher also provided reinforcement using the Maria Montessori method in the loose parts collage activity.

b. Meeting 4 in Cycle 2 continued with the same theme, recreation, but with a sub-theme of the zoo. By this meeting, the students were very interested in the collage activity with dry and wet leaves, so they were eager to finish playing and pick up cards with tasks provided by the teacher at different locations. Teachers and students worked together on the activity, which this time took place in the schoolyard. As before, the teacher divided the students into two groups, Group A and Group B, and provided paper with mountain images for the collage task.

3. Observation stage

Based on the observations, it can be seen that the development of fine motor skills of students at Ummul Habibah Pre-school, Klambir V village, aligned with the Maria Montessori method through collage activities using loose parts. Indicators showed that students were able to cut according to patterns that had been adhered to with wet and dry leaves, fold into meaningful shapes, and adhere to patterns (collage) well and correctly, achieving a target of 90%, with the average student skill development rated as very good. Meanwhile, in the indicators where development was as expected, there were 3 students with a percentage of 10%. For the indicators of underdeveloped and starting to develop, there were no children in these categories (0%). This meant that in Cycle 2, there were no longer any children with skills that were underdeveloped or just starting to develop. In Cycle 2, the teacher and research team had revised the implementation of collage activities using loose parts with the Maria Montessori method.

During Cycle 2, in meeting 3 and 4, the different Maria Montessori method was applied, using loose parts as the material. In Cycle 1, the material used was coconut husks, whereas in Cycle 2, the materials used were wet and dry leaves. The research team and teachers worked together to observe the learning activities conducted, using the prepared observation sheets. From the results of the learning activity observations in meeting 3 and 4 of Cycle 2, it was evident that the percentage of observation results fell within the category of good assessment. Thus, the research team achieved 92.58% across all indicators that were to be executed well, with the success indicators exceeding 90%, falling into the category of very good assessment. Consequently, the research team successfully enhanced fine motor development through the Maria Montessori method with loose parts collage activities at Ummul Habibah Pre-school, Klambir V village.

4. Reflection stage

Based on the observations of the research team and the teacher, it can be concluded that there has been an improvement in fine motor development through the Maria Montessori method via collage activities using loose parts at Ummul Habibah Pre-school, Klambir V village, achieving a success rate of 90% in Cycle 2.

Discussion

Based on the stages which were conducted in Cycle 1 and 2, there was an improvement in fine motor development through the Maria Montessori method via collage activities using loose parts at Ummul Habibah Pre-school. It can be seen in Table 2.

Table 2. The results of cycle 1 and 2

Cycle 1	Cognitive Development Skill Scores in Students			
	NYD	StD	DaE	DVW
Meeting 1	15%	15%	35%	35%
Meeting 2	10%	10%	40%	40%
Cycle 2	Cognitive Development Skill Scores in Students			
	NYD	StD	DaE	DVW
Meeting 3	0%	5%	25%	70%
Meeting 4	0%	0%	10%	90%

Based on Table 2, there was a significant improvement in the results of each cycle, as well as in the achievement of the predetermined indicators, showing a successful category of 90% in Cycle 2. The results in Cycle 2 were better compared to Cycle 1 because the percentage obtained was higher, and student activity also increased in Cycle 2. Improvements were made in the learning process in Cycle 2 to meet the achieved indicators. These improvements included providing pre-drawn paper according to the specified theme as the students' worksheets and establishing rules for the collage activity with dry and wet leaves. With the stimulation provided to students, guidance and instructions were given to enable students to perform the collage activity. Through these improvements in Cycle 2, the agreed-upon indicators have been met for students at Ummul Habibah Pre-school, Klambir V village.

This research was in line with a research by Parapat (2021), who found that Fine motor skills of Group A students have increased. Likewise, based on behavioristic theory in this study that the provision of stimulus in the form of paper folding activities, the response that arises, namely the increase in fine motor skills in Group A students at Al-Hikmah Kindergarten, Sukaraya Village.

Another research also supported this research result, Rozana et al. (2024) who found that the integration of loose parts in the learning process at TK ABA Kartini Kota Binjai successfully increased children's interest in reading and engagement in literacy activities. The innovative and creative use of loose parts provides effective stimulation for children, encouraging them to be actively involved in reading and literacy activities. Through child-centered and play-based learning experiences, loose parts foster curiosity and enthusiasm for learning, especially in literacy. The application of loose parts in learning at TK ABA Kartini Kota Binjai is an effective strategy to increase children's interest in reading and involvement in literacy activities.

CONCLUSIONS

Improving the fine motor skills of early childhood children by using collage made from loose parts at Ummul Habibah Pre-school, Klambir V village through 2 cycles, consisting of 4 meetings. In cycle 1 at meeting 1 with percentage results of 15% (NYD), 15% (StD), 35% (DaE), and 35% (DVW). At meeting 2, with an increase in results of 10% (NYD), 10% (StD), 40% (DaE), and 40% (DVW). Meanwhile, in cycle 2 at meeting 3, with results of 0% (NYD), 5% (StD), 25% (DaE), and 70% (DVW) and at meeting 4 with results of 0% (NYD), 0% (StD), 10% (DaE) and 90% (DVW). The application of loose part-based collage in early childhood at Ummul Habibah Pre-school, Klambir V village by applying the Maria Montessori method so that early childhood has freedom of activity while applying the idea of direct learning through group exercises and games.

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