

# IMPROVING CHILDREN'S FINE MOTOR ABILITY THROUGH COLLAGE OF NATURAL MATERIALS IN CHILDREN AGED 5-6 YEARS AT TKIT CENDEKIA

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**Abstract.** This study aims to improve fine motor skills of children aged 5-6 years through a collage of natural materials at TKIT Cendekia. This research is motivated by the limited media available in schools, monotonous learning activities, and the lack of stimulation that is carried out because institutions prioritize calistung activities for their students, fine motor development activities are not optimal and are still low. This research used a classroom action research methodology where this research consisted of two cycles and each cycle was held in three meetings. The subjects of this study were 12 children, consisting of 5 girls and 7 boys aged 5-6 years. Data collection techniques using observation and documentation techniques. The results showed that there was an increase in fine motor skills in early childhood aged 5-6 years through collage activities using natural materials which could be seen from the increase in children starting from cycle I and cycle II. The pre-action observation showed that 16.6% were in the Very Good Developing ability, the results of Cycle I observations showed that 33.3% were in the Very Well Developed criteria. Whereas in cycle II it shows that 50% are in the Very Good Developing criteria. It can be concluded that collage activities with natural materials can improve fine motor skills.

**Keywords:** fine motor skills, collage, children aged 5-6 years

## INTRODUCTION

Kindergarten is a form of formal education preschool education. Preschool education is education to help the physical and spiritual growth and development of children outside the family environment before entering basic education. In accordance with the National Education Act No. 20 of 2003 Article 1 paragraph 14 states that "Early childhood education is a coaching effort aimed at children from birth up to the age of six which is carried out through the provision of educational stimuli to help growth and development of the physical and so that children are ready to enter further education. Early childhood has great potential to optimize including the development of fine motor skills. That fine motor is a movement that involves only certain body parts by small muscles, such as fingers and precise wrist movements (Sujiono, 2012). The purpose of education in Kindergarten is to achieve the development of Religious and Moral Values, Gross and Fine Motor Physical development, Cognitive development, Language development, and Social-emotional development. In connection with the achievement of increased gross motor development, fine motor development must also increase at the age of four to six years. The eye and hand coordination of children aged 5-6 years is getting better, children can already use the ability to train themselves with the help of adults. Children can already use spoons and forks, open and put on shoes, button clothes, comb their hair, and so on (Asmuddin et al., 2022)

Fine motor skills for early childhood are very important for child development. Children need hands to learn well for life skills, they learn to coordinate eye and hand movements. Fine motor movements are movements that only involve certain body parts and are carried out by small muscles, such as the skill of using the fingers and precise hand movements (Ramdani & Azizah, 2019). Fine motor activity is movement skills that involve small muscles consisting of eye and hand coordination which are coordinated in a balanced way so as to create a skill. In the way it

works fine motor movements don't really require a lot of energy but only involve eye coordination and careful hand movements (Tangse & Dimiyati, 2021). In children who have good fine motor maturity, they usually tend to show independent activity because their hands can already be skilled at doing various things for the purpose of fine motor skills, namely: a) Being able to function small muscles such as finger movements. b) Able to coordinate hand and eye speed. c) Able to control emotions. One of the indicators contained in basic competence regarding fine motor aspects is that children can use their limbs and children can present their various works in the form of pictures, that is, children can thicken the shape of the pictures, stick according to the pattern of the pictures and the neatness of the work (Sujiono, 2012).

However, in reality the researchers encountered a problem in TKIT Scholar at this time that children's fine motor skills were still low, because many children were still unskilled in using their right and left hands, there were still children who got bored quickly during the learning process, this was due to because the media used by the teacher is not interesting, the teacher is less creative in providing learning activities to children, the teacher often provides drawing, coloring and working on children's worksheets, the teacher also often repeats by providing the same activities so that children do not get the same learning experience new.

Related to these various problems, there needs to be an effort to improve the development of children's fine motor skills. There needs to be an activity to hone and develop children's fine motor skills. In addition, it is necessary to have an activity that helps the smooth muscles in the hands to move, especially the fingers of the child's hand. Efforts that can be made by educators or teachers to improve children's fine motor skills are through creative and fun media for children. For this reason, researchers chose collage activities using used materials as a means to improve fine motor skills in children. This collage activity can train hand muscles, and train eye-hand coordination (Saroinsong et al., 2022). Collage activities can also produce a work of art, so that children who do this activity will feel happy and children can also enjoy the work that has been made. Using collage activities is expected to improve children's fine motor skills, especially in training the ability of the fingers, skills to use the right and left hands in various activities. The media used by researchers are natural materials, such as colored paper, seeds and cotton. The purpose of this study was to determine children's fine motor skills after applying collages using natural materials at TKIT Cendekia Purwakarta. Based on the background of the problem, the researcher is interested in conducting research with the title "Improvement of Children's Fine Motoric Ability through Collage of Natural Materials in Children Aged 5-6 Years at TKIT Scholar".

## RESEARCH METHOD

This study uses Class Action Research (classroom action research) or PTK. This research was conducted on children at TKIT Scholars, semester 1 of the 2022/2023 academic year and this research was conducted in 2 cycles. The research subjects in this study were TKIT Scholar group B2 (Al Fiiil) students totaling 12 children, consisting of 5 girls and 7 boys aged 5-6 years. Data collection techniques using observation techniques, and documentation. The research design consists of 4 stages in each cycle. The four stages used in Classroom Action Research are: (1) planning; (2) Implementation; (3) Observation; and (4) Reflection (Sugiyono, 2012). The data analysis used was a qualitative descriptive technique with percentages, namely the learning process in cycle I and cycle II was carried out for 3 meetings. In cycle I, it is expected that the achievement of fine motor development with very well developed criteria in children's collage activities will increase from the data obtained by researchers during the pre-cycle, namely the average development with very well developed criteria for children aged 5-6 years is 20%, increasing to 40%. Furthermore, in cycle II it is hoped that the average fine motor development of students will increase to 50%.

$$P = \frac{N}{n} \times 100 \%$$

P = Presentase

F = The overall value obtained by the child.

N = The maximum score is multiplied by the total number of children.

## RESULT AND ANALYSIS

This classroom action research was conducted at TKIT Cendekia which is located on Jl Veteran Gg. Soka 2, Purwakarta Regency. This school has 3 classrooms, namely the study room for group A children, the study room for group B1 and B2 children. The TKIT Cendekia school is managed by 3 educators with 35 students. The number of students in group A is 11 children, group B1 is 12 children and group B2 is 12 children. This research was conducted in group B2 with 12 students consisting of 5 girls and 7 boys who were in the age range of 5-6 years.

Before carrying out this classroom action research, researchers first made observations to determine the development of fine motor skills of children aged 5-6 years. The initial step taken by the researcher before conducting classroom action research was through observing children's fine motor skills on September 12, 2022. This was done so that researchers knew the initial conditions of children's fine motor skills. The results to be obtained from this observation are compared with the results of the value after taking the action. By making a comparison between the previous value and the value after the action is taken, it will be known the increase that occurs in the learning process to improve children's fine motor skills.

Based on the results of observations made by researchers during the pre-action related to aspects of fine motor development during the learning observations, children experienced difficulties in participating in activities that involved fine motor skills. In general, children still look stiff in moving their fingers. Children still really need guidance and stimulus so that children can develop fine motor skills related to finger movements and eye and hand coordination, such as readiness to write, draw, color, trace, cut and paste.

The results of the observations made can be seen from the initial ability by using the observation sheet instrument, the following data are obtained:

**Table 1.** Pre-action Children's Pre-Action Fine Motoric Ability Data

No	Indicator	Evaluation				Amount
		Undeveloped	Start Growing	Growing As Expected	Very Well Developed	
1	Skilled in using the fingers of the right and left hands in the collage activity to glue the picture pattern.	0	0	8	4	12
2	Skilled in using the fingers of the hand and left in the collage activity to tear the collage material on the picture pattern	0	5	7	2	12
3	Skilled in using the fingers of the hand and left in collage activities in sticking and arranging collage materials on picture patterns	0	6	4	2	12

Based on the table above, the initial conditions of the children at TKIT Scholar in fine motor skills through collage activities include in the first aspect, the child's ability to use the fingers of the right and left hands in the collage activity to give glue to the picture pattern is still low, namely, 4 out of 12 or 33.3 % of children were at Very Good Developing abilities, 8 out of 12 or 66.6% of children were at Expected Developing abilities, at the Beginning to Develop and Undeveloped abilities of 12 children were not found. The second aspect, the ability of children to use the fingers of the right and left in compiling collage materials in collage patterns is still low, namely, 2 children out of 12 or 16.6% of children who develop very well, 7 children out of 12 or 58.3 % of children who are developing according to expectations, at the Beginning to Develop

stage there are 5 out of 12 children or 41.6%, and there are no children who are at the Undeveloped level. The third aspect, the ability of children to use the fingers of the right and left hands in gluing collage material is also still low, that is, children who are at the Very Good Development level are still 16.6% 2 out of 12 children, at the Developing According to Expectations level there are 4 out of 12 children or 33.3%, at the Beginning to Develop level there are 6 out of 12 children or 50% and 0% are at Undeveloped abilities. Seeing the description of the children's initial conditions above, the researchers feel the need to improve children's abilities in children's fine motor skills. For this reason, the researchers held discussions with teaching colleagues to determine the next step, namely agreeing to carry out research through collage activities using natural materials. The description of the research results is described in stages in the form of cycles.

The stages in this research are planning, implementation, analysis and reflection. The action planning stage in the first cycle of the first meeting includes: (1) Daily Learning Program Plan; (2) Preparing learning media that is used to support the learning process with natural material media for collage. (3) Compile observation sheets on fine motor skills activities for children aged 5-6 years with natural materials which include an assessment grid which includes children being able to use their fingers in collage activities.

The first meeting was held on Tuesday, 20 September 2022 from 07.30-10.30 WIB with the theme Animals with the sub-theme Water Animals and the sub-theme Fish. Learning begins with welcoming children, marching, muroja'ah, reading iqro' and then continuing with the morning journal. Before entering the core activities the children take a break to eat, drink and play. Today's theme is getting to know animals that live in water by discussing gold fish. The teacher explains today's collage activity, namely using colored paper and the image pattern used is an image of a gold fish. Then the teacher explains what other materials are used to make a collage out of colored paper. The children pay attention to what the teacher says, the teacher explains how to make a collage out of colored paper. The teacher practices how to make a collage out of colored paper, starting from tearing up the colored paper and applying glue to the gold fish image pattern, then how to attach the torn colored paper to the image pattern, and the children watch the teacher make a collage out of colored paper.

The step in making a collage that is done by the child is that the child is introduced to the materials that will be used to make the collage. Then the child makes a collage starting from the child taking the glue and applying the glue to the existing picture pattern, then the child tears the colored paper into small pieces and then attaches the pieces of color paper one by one to the image pattern that has been given glue. When the child gives glue to the picture pattern, there are some children who give too much glue to the picture pattern so that the picture pattern becomes dirty and almost torn. When making collages, many children ask the teacher's help to make collages. The next activity is for the children to imitate the letters in the word gold fish. After that, the next activity is the child tells about his experience while playing and after playing and continues with a discussion about the activities that have been carried out in a day and then conveys the activities to be carried out for tomorrow. Furthermore, calming activities in the form of stories and songs, then continued with prayers and greetings.

Meeting 2 was held on Tuesday 27 September 2022 from 07.30-10.30 WIB. The theme used was animals, with the sub-theme of air animals, the sub-theme of butterflies. Before entering the main activities the teacher conducts questions and answers about the transformation of butterfly animals, the benefits and colors of butterflies. The teacher practices how to make a collage from dry leaves starting from applying glue to the picture pattern, then how to attach the dried leaf pieces to the butterfly picture pattern. Then the child makes a collage starting from the child taking the glue and applying it to the existing picture pattern, then the child takes the dry leaves that have been prepared and then sticks them on the picture pattern that has been given glue. The next activity is the child bolding the letters of the butterfly. After that the activity continued with question and answer activities carried out today, singing and praying home, after praying the teacher said hello and the children answered greetings, the children left the class while saying goodbye and kissing the teacher's hand.

Meeting 3 in cycle I was held on Tuesday 04 October 2022 from 07.30-10.30 WIB. With the animal theme, the pet sub-theme and the cat sub-theme. The main activity begins with the

teacher explaining the activities that will be carried out today. The teacher explains today's collage activity, namely using cotton and the image pattern used is a picture of a cat, then the teacher explains what other materials are used to make collages from cotton. Then the child makes a collage starting from taking glue and applying glue to the existing picture pattern, then the child takes the cotton that has been prepared and then the child attaches the cotton pieces one by one to the picture pattern that has been given glue. The next activity is for the children to count the number of various animals and write down the number symbols. After that, the activity is continued with questions and answers on today's activities, singing and praying home.

Observations are carried out simultaneously with assistance in learning. In the learning process of cycle I for 3 meetings from the initial activity to the end it went well and smoothly as planned. At first the children were curious about the activities prepared, after being given an explanation the children carried out collage activities with enthusiasm and were happy because these activities were rarely done by children. The first day of doing collages some children still depended on the teacher and asked the teacher to do it, but the teacher still guided and motivated so that children want to do it even without the help of the teacher. Based on observations during the observation process of collage activities in the first cycle of the first meeting the children were in the adjustment stage with activities that they rarely did so that there were children who quickly adjusted and there were children who adjusted for a long time. From the results of observations during the first cycle, the following data were obtained:

**Table. 2** Recapitulation of Fine Motor Skills Data for Children Cycle I

No	Rated aspect	Undeveloped		Start Growing		Growing As Expected		Very Well Developed	
		N	P	N	P	N	P	N	P
1	Skilled in using the fingers of the right and left hands in the collage activity to glue the picture pattern	0	0	5	41,6	5	41,6	2	16,6
2	Skilled in using the fingers of the hand and left in the collage activity to tear the collage material on the picture pattern	0	0	4	33,3	6	50,0	2	16,2
3	Skilled in using the fingers of the hand and left in collage activities in pasting and arranging collage materials on image patterns	0	0	5	41,6	5	41,6	2	16,6

Based on the table above, it can be explained that the fine motor skills of children at TKIT Cendekia during cycle I are as follows: The first aspect, the child's ability to use the fingers of the right and left hands in the collage activity to give glue to the picture pattern, namely, 2 out of 12 or 16,6% of children are at Very Good Developmental ability, 5 out of 12 or 41.6% of children are at Expected Developmental ability, 5 out of 12 or 41.6% of children are at Beginning to Develop ability and out of 12 children there are no undeveloped children. The second aspect is the child's ability to use the fingers of the right and left hands in the collage activity to arrange collage material in image patterns, that is, 2 out of 12 or 16.6% of children are at Very Good Developmental ability, 6 out of 12 or 50% of children are at the Appropriate Developmental ability. Expectations, 4 out of 12 or 33.3% of children are at the Beginning to Develop ability and out of 12 children are not found at the Undeveloped stage. The third aspect, the ability of children to use the fingers of the right and left hands in gluing collage material, that is, children who are at the Very Good Development level have 2 children out of 12 children or 16.6%, at the Developing As Expected level there are 5 out of 12 children or 41.6%, at the Beginning to Develop level there are 5 out of 12 children or 41.6% and out of 12 children not found to be at Undeveloped abilities. The results of this reflection in cycle I are expected to provide better changes to the learning process and research results in cycle II. In this activity the researcher and his teaching partners held discussions about the implementation of the learning that had been carried out, the obstacles that appeared

could affect the achievement of fine motor skills optimally. Based on the results of observations and reflections on cycle 1, the researcher prepared a plan for conducting research on cycle 2. The planning included: (1) coordinate with teaching partners as research collaborators; (2) preparing a Daily Learning Implementation Plan; (3) preparing media and tools; and (4) preparing cameras for documentation.

The first cycle II meeting was held on Tuesday 11 October 2022 from 07.30-10.30 WIB. With the theme of animals, the sub-theme of wild animals, the sub-theme of leopards. The step in making a collage that is done by the child is that the child is introduced to the materials that will be used to make the collage. Then the child makes a collage starting with the child taking glue and applying glue to the existing image pattern, then the child takes the prepared charcoal powder then sprinkles the charcoal and then attaches it using the child's fingers. The following activity is for children to count the number of polka dots in a leopard picture. After that, the activity continued with questions and answers on the activities that had been carried out today, singing and praying home. After praying the teacher said hello and the children answered greetings. The child leaves the classroom while saying goodbye and kissing the teacher's hand. Meeting 2 in cycle 2 was held on Saturday, 18 October 2022 from 07.30-10.30 WIB. With the theme of animals, the sub-theme of Khososul Qur'an, the sub-theme of al fiil (elephant). The teacher explains the collage activity today, namely using soybean seeds and the image pattern used is a picture of an elephant. Then the teacher explains what other materials will be used to make a collage from soybean seeds. The teacher practices how to make a collage from soybean seeds, starting from applying glue to a picture of an elephant, then how to attach soybean seeds to a picture pattern, and the children watch the teacher make a collage from soybean seeds. The step in making a collage that is done by the child is that the child is introduced to the materials that will be used to make the collage. Then the child makes a collage starting with the child taking glue and applying glue to the existing picture pattern, then the child takes the soybean seeds that have been prepared and then sticks the soybean seeds one by one on the elephant picture pattern that has been given glue. When children made collages using soybean seeds, there were children who applied too little glue so the soybean seeds could not stick properly and fell on the existing picture patterns. Then the next activity was for the children to listen to the elephant trunk bubble experiment from soap water and used bottles. After that, the activity continued with questions and answers with today's activities, singing, praying and going home.

Meeting 3 of Cycle II was held on Tuesday, 01 November 2022 from 07.30-10.30 WIB. With the theme of plants, sub-theme of fruit plants, sub-sub-theme of watermelon. The teacher practices how to make collages from colored paper and starts by applying glue to the picture patterns and then pasting the torn colored paper on the watermelon picture patterns. The step in making a collage that is done by the child is that the child is introduced to the materials that will be used to make the collage. Then the children make a collage starting with the child taking glue and applying glue to the existing picture patterns, then the children take colored paper that has been torn into pieces and then attaches it to the picture patterns that have been given glue. The following activity is for children to eat watermelons and count watermelon seeds. After that the activity continued with questions and answers on activities that had been carried out today, singing and praying home.

Cycle II l;p was carried out for 3 meetings from the initial activity to the final activity that went well as planned. The children were getting used to the collage activity and following the lesson well. This is because the teacher demonstrates the steps in making a collage and also the teacher provides guidance and motivation so that children make collages without the help of the teacher. The results of observations in cycle 2 showed a significant increase in fine motor skills. From the results of observations during cycle 2, the following data were obtained:

**Table. 3** Recapitulation of Data on Fine Motor Skills for Children Cycle II

No	Rated aspect	Undevel oped		Start Growing		Growing As Expected		Very Well Developed	
		N	P	N	P	N	P	N	P
1	Skilled in using the fingers of the right and left hands in the collage activity to	0	0	2	16,6	5	41,6	5	41,6

	glue the picture pattern								
2	Skilled in using the fingers of the hand and left in the collage activity to tear the collage material on the picture pattern	0	0	2	16,6	6	50	4	33,3
3	Skilled in using the fingers of the hand and left in collage activities in pasting and arranging collage materials on image patterns	0	0	2	16,6	4	41,6	6	41,6

Based on the table above, it can be explained that fine motor skills in children at TKIT Cendekia during cycle II, namely the first aspect, the child's ability to use the fingers of the right and left hands in the collage activity to give glue to the picture pattern, that is, 5 out of 12 or 41.6% of the children were at Very Good Developing ability, 5 out of 12 or 41.6% of children were at Expected Developing ability, 2 out of 12 or 16.6% of children were at Beginning to Develop ability and out of 12 children there were no undeveloped children. The second aspect, the ability of children to use the fingers of the right and left hands in collage activities to arrange collage material in image patterns, that is, 4 out of 12 or 33.3% of children are at Very Good Developing ability, 6 out of 12 or 50% of children are at the ability Developing According to Expectations, 2 out of 12 or 16.6% of children are at the Beginning to Develop ability and out of 12 children there are no children who are at the Undeveloped level. The third aspect, the ability of children to use the fingers of the right and left hands in gluing collage material, that is, 6 out of 12 or 50% of children who are at the Very Good Developed level 5 out of 12 or 41.6% at the Developing According to Expectations level there are 2 of 12 children or 16.6%, at the Beginning to Develop level, out of 12 children there were no children who were at the Undeveloped ability. In the implementation of this second cycle, three meetings were held, showing that the children's fine motor skills had increased according to predetermined success indicators. The success of this increase was known from the comparison of the results of Pre-Action, Cycle I and Cycle II.

From the results of pre-action observations it was shown that 16.6% were in the Very Good Developing ability, the results of Cycle I observations showed that 33.3% were in the Very Well Developed criteria. Whereas in cycle II it shows that 50% are in the Very Good Developing criteria, so that success indicators have been achieved.

## CONCLUSION

Collage activities using natural materials can improve fine motor skills in children, thus the teacher must increase various kinds of collage activities with various kinds of materials to make collages so that learning is more interesting and fun in order to improve fine motor skills in children. With this research it is hoped that teachers will improve fine motor skills in early childhood in providing learning understanding to children, especially instilling play while learning, so that children do not feel burdened with boring learning activities. For each teacher this research can be used as input to improve the quality of students through collage activities so that children's fine motor skills can improve. It can be seen that through the collage activities carried out by the researchers, the results of the pre-action observations showed that 16.6% were in Very Good Developing abilities, the results of Cycle I observations showed that 33.3% were in the Very Well Developed criteria. Whereas in cycle II it showed that 50% were in the Very Well Developed criteria, that collage activities could increase the achievement of fine motor indicators.

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