



Improving Early Childhood Fine Motor Development Through Weaving Activities

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Abstract

Early childhood fine motor development can be obtained through supportive learning media. One of them is with paper media. Children can crumple the paper and make patterns on paper with paper media. In this study, the use of writing as a medium is used for weaving activities from articles. In addition to utilizing form as a learning medium, weaving activities are an Indonesian cultural heritage that must be introduced to the next generation early. This research is a class action research, while the object is carried out on 25 RA children in Lampung. The results of this study indicate that most children's motor skills can develop as expected (BSH) through weaving activities with paper in children. Weaving activities can train children's skills in coordinating their eyes and hands, especially finger movements, to stimulate skills in controlling actions involving small or delicate muscles.

Keywords: *Fine Motor Development, Weaving Activities, Early Childhood*



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INTRODUCTION

Early age is a golden opportunity for children to learn, so it is called the golden age. At this age children have the ability to learn extraordinary, especially in early childhood, during the golden age children will experience a very drastic level of development starting from the development of thinking, emotional growth, motor development, physical development and social development, this development occurs when the child is 0-8 years old, and this development will not occur again in the next period. (Yudha Febrianta, 2017). This opportunity is a critical sensitive period for children to get age-appropriate education. Experiences gained from the environment, including the stimulation provided, will have a significant influence on the child's life in the future. (Utama & Tanfidiyah, 2019). Therefore, appropriate efforts are needed so that children's growth and development can take place optimally by providing educational and learning activities that are appropriate to the age, needs and interests of children. (Permatasari, Keguruan, & Pendidikan, 2021).

Early Childhood Education (ECED) is education aimed at children aged 3-6 years (Government Regulation No. 27/1990 Article 6). (Pendidikan, Kebudayaan, & Indonesia, 2016). PAUD is a preschool activity organized by the government to support creating a superior generation in the Indonesian Nation. In the law on the national education system, it is stated that early childhood education is a coaching effort aimed at children from birth to six years of age which is carried out by providing educational stimuli to help physical and spiritual growth and development so that children have the readiness to enter further education (Law Number 20 of 2003 Chapter I Article 1 Paragraph 14). (Depdiknas, 2003).

Early childhood is the most rapid stage of growth and development, both physically and mentally. In addition to physical growth and development, motor, moral, socio-emotional, cognitive, and language development occurs rapidly. These aspects of development do not develop independently but are intertwined (Gunarsa, 2008).

Child development will accelerate when children have the opportunity to practice newly acquired skills and when children experience challenges above their mastery level. All aspects of child development must be stimulated, including fine motor development (Virawanti & Sugiarto, 2022). The achievement of ability in each child can vary. However, there are age benchmarks for a child's abilities to achieve at a certain age (Utama, 2018). The existence of this benchmark is intended so that children who have not been trained in various abilities can achieve optimal development. Fundamental movement skills start from the womb until birth (Tulasih, Yussof, & Kristiawan, 2022). Children who have not developed their fine motor skills need a lot of stimulation so that they do not have difficulty in coordinating the movements of their hands and fingers flexibly (Jumiyati, Priyantoro, Metro, & Hasanah, 2023). Children need these fine motor skills in preparation for doing tasks at school because almost all day, children at school use fine motor skills for academic activities.

Fine motor skills of children aged 5-6 years based on the level of developmental achievement at the age of 5-6 years in the Regulation of the Minister of National Education of the Republic of Indonesia No. 58 of 2009, namely drawing according to their ideas, imitating shapes, exploring with various media and

activities, using stationery correctly, cutting according to patterns, sticking pictures appropriately, and expressing themselves through detailed drawing movements.

Every child is able to reach the optimal stage of fine motor development if they get the proper stimulation. In each development phase, children need stimulation to develop their mental and fine motor skills. The more stimulation given to the child, the child's development will develop rapidly. Experiences and exercises given to children can optimize children's motor development. Apart from experiences and exercises carried out repeatedly, children's development will increase when supported by various useful facilities for their fine motor development (Riyadi et al., 2023).

Based on the observations, researchers show that group B children's fine motor skills still need a lot of stimulation. This is evident from most group B children having difficulty when given the task of coloring. There are 12 children coloring pictures out of line, the direction of their hand movements is not yet regular and children are quickly bored in coloring pictures.

In collage activities with pieces of paper, out of 25 children, there are 15 whose collage results are not neat. In addition, in the activity of folding clothes from origami paper, there were 16 children whose folds were not neat and still needed teacher assistance. When given the task of cutting out rectangular pattern shapes, there were 17 children whose cutout patterns were not neat and even torn. Weaving activities in group B are still rarely done. Almost every day learning activities in group B use LKA, so that these learning activities make children look bored and less interested. In the group B class, there are two teachers and indoor game tools that can stimulate children's motor skills, many of which are stored in the cupboard and many of the game tools are damaged and the colors are less attractive, so most children play in the school yard during recess.

Based on these problems, teachers need to develop creative and innovative forms of learning activities to improve fine motor skills following the developmental characteristics of PAUD children. As an alternative to solving the problem, an appropriate activity is needed so that later children's fine motor skills can improve well and do not forget the concept of playing while learning in their learning. One form of activity that can be done is weaving.

Menganyam adalah suatu kegiatan keterampilan yang bertujuan untuk menghasilkan aneka benda/barang pakai dan seni yang dilakukan dengan cara menumpang tindihkan bagian-bagian bahan anyaman secara bergantian (Az-Zahra, Fauzi, & Andriani, 2022). Menganyam untuk anak usia dini tidak dilakukan dengan teknik yang kompleks, namun masih dalam tahap teknik dasar menganyam yang sederhana. Kemampuan menganyam dapat mengasah keterampilan motorik halus anak karena menggunakan tangan dan jari-jari demikian juga dengan koordinasi mata. Kegiatan menganyam bermanfaat juga untuk memperkenalkan anak terhadap budaya yaitu melalui seni kerajinan yang ada di seluruh Indonesia.

METHODOLOGY

This study used classroom action research methodology. In this study uses the research model revealed by Kemmis and Taggart which is a development of the Kurt Lewin model. This model can include several cycles, and in each process has stages, namely:

1. Planning or planning

2. Acting and observing or implementation and observation
3. Reflecting or reflection (Kunandar, 2001).

The steps mentioned above are called a cycle of activities. Suppose one cycle of activities has not been successful in improving children's fine motor skills. In that case, classroom action research activities are continued in the next cycle of activities until the achievement of the activity objectives. The subjects in the research to be carried out are group B students of RA in Lampung, Group B consists of 25 students with 14 boys and 11 girls. Research subjects according to Suharsimi Arikunto are objects, things or people where data for research variables are attached and in question (Suharsimi Arikunto, n.d.).

Each cycle in the research is carried out in 4 stages. The stages of research that will be carried out are the Planning Stage, in this stage, it is carried out by means of observation.

Planning / Observation

Observation is the observation and recording of subjects or events carried out in a systematic way. In this observation, the researcher or observer is directly involved in learning so that they can find out more intensely. The researcher/observer, together with the teacher records all events or activities that take place in the classroom. Researchers can also record videos and images to analyze problems more deeply.

Implementation Stage

In this stage, the learning process is carried out according to the Daily Activity Plan that has been prepared. Researchers are involved in activities and record everything during exercises through observation notes, photos/videos and children's work. Then carry out learning evaluations that have been carried out by children during the activity program and analyze the developments that occur in children.

Reflection Stage

At the reflection stage, researchers use all the data obtained during the activity. Researchers together with teachers evaluate children's development, whether there is an increase or not. If there is no improvement or improvement, the researcher evaluates from the beginning of planning and implementation whether something was missed so that the desired results were not achieved. Researchers and teachers make improvements if there are known deficiencies in planning and implementation.

If deficiencies or mistakes are found, the researcher makes improvements to the planning. Improvements are made to the media or other deficiencies that occur. The improved plan will then be implemented in the next cycle.

RESULTS AND DISCUSSION

There are two types of motor development: gross motor and fine motor. The gross motor requires coordination of certain groups of children's muscles while fine motor requires hand and eye coordination. Fine motor is a subtle movement that involves certain parts of the small muscles because it does not require energy (Lolita Indraswari, 2012). Fine movements are movements that require accuracy and coordination of small muscle movements and do not require energy. According to Magill fine motor is a movement that requires control of small size muscles to achieve certain goals which include hand-eye coordination and movements that

require hand or finger movements for high-accuracy work. So fine motor includes the use and control of small muscles such as cutting, drawing, coloring, and others. Better fine motor movements allow children to be creative.

Growth in every child is not always the same, some experience rapid growth and some are slow. Fine motor is a skill that requires the ability to coordinate or regulate small/fine muscles and requires careful coordination, which is related to efficient, precise, and adaptive eye and hand movements, examples of fine motor activities are the ability to scan objects from the hand, cross out, arrange blocks, cut, write, weave, etc. Fine motor skills can be seen at the age of 3 years, where the child's ability is still related to the baby's ability to place and hold objects. By the age of 4, the child's fine motor coordination has improved and become more precise, while by the age of 5, they already have good eye coordination by combining hands, arms, and other limbs to move (Rahman, 2009). The ability to see is also another fine motor skill activity that trains children's ability to see left and right, up and down which is important for early reading preparation. This skill involves neuromuscular coordination which requires a high degree of accuracy for success. Accuracy is the child's ability to determine hand movements in the right direction.

Based on some of the above understanding, improving fine motor skills can be done with finger exercises and eye-hand coordination. Stimulation is needed to develop these fine motor skills. Stimulating children and making children comfortable with their environment and consistent habituation of everything from an early age will develop all the potential that children have. Stimulating means that adults encourage children to do basic exercises repeatedly and continuously so that they will become habituated. Meanwhile, being consistent means that they are serious about doing it with all their power and efforts to make children grow and develop optimally. Based on this concept, the researchers used paper weaving activities because this weaving activity involves finger activities, concentration, accuracy, precision, and eye-hand coordination.

There are several characteristics of early childhood fine motor development as follows:

- a. By the time the child is three years old, the child's fine motor skills are not too different from the fine motor skills of infancy, although the child is now able to grasp objects using the thumb and index finger.
- b. At the age of four, the coordination of the child's fine motor movements is highly developed and the movements are faster and even tend to be almost perfect.
- c. At age five, the child's fine motor coordination is perfect. Hand, arm, and body movements move under eye coordination.
- d. By the end of six years of childhood, the child has learned how to use his fingers and wrist to move the tip of his pencil. As well as in weaving activities, they also use their fingers to arrange the lungsi and weft (Yudha Febrianta, 2017).

From the above opinion, it can be concluded that the characteristics of children aged 5-6 years of fine motor coordination are more perfect, and have learned to use their fingers and wrists. From this concept, this study aims to improve the fine motor skills of group B children through weaving activities so that children's fine motor coordination develops optimally and can increase. Weaving is a skill activity that aims to produce various art objects, carried out by infiltrating or

overlapping the woven parts alternately so that bonds are arranged according to specific directions and motifs. Weaving learning activities in this study will use media materials; origami paper cut into lengths approximately 1 cm wide and other origami paper sheets cut into lengths approximately 1 cm wide which are formed according to the theme. Weaving is part of the weaving that extends upward (vertical) and the weft as the part that extends sideways (horizontal) that will infiltrate the lungsi. Weaving is also defined as a technique of intertwining lungsi with pakan.

Lungsi is a woven ribbon/string that is located perpendicular to the weaver. Weft is a ribbon or string that is inserted in the warp and its direction is opposite or transverse to the warp. Weaving for early childhood is not done with complex techniques but is still in the stage of basic simple weaving techniques. Weaving is taught very simply to children. Weaving can hone children's fine motor skills because it uses hands and fingers and eye coordination. In addition to the fine motor skills developed, weaving can also be used to train children's logic, learn math, and train concentration.

Based on the description above, it can be concluded that weaving is an activity of arranging lungsi and is taken by overlapping the woven parts alternately to form a particular motif. Lungsi is part of the weaving that extends upward (vertical), and the weft is the part that extends sideways (horizontal) which will infiltrate the lungsi.

Several types of woven materials can be used in skill practice activities in RA, among others:

a. Paper

The paper used for weaving practice in RA is a type of paper that is thick enough so that it will be easier to use and can produce an excellent woven shape. The types of writing are drawing paper, manila paper, buffalo paper, Astro paper, colored/decorated paper, origami paper and calendar paper.

b. Banana Leaves

Banana leaves in weaving practice activities are used to create temporary weaving motifs/shapes. Use banana leaves that are old enough and the sheets are wide enough. The steps in making weaving from banana leaves are that the banana leaves are torn following the leaf fibers with a size between 1 cm - 2 cm, then woven according to the desired motif. In addition to children's skill in weaving, this activity can practice the characteristics of leaves in children.

c. Coconut Leaves (Janur)

The use of coconut leaves (janur) in skill practice activities in kindergarten can be done, among others, to train children to make ribbon-shaped plaits, plaits in the form of single woven sheets/motifs and double plaits.

d. Other woven materials

Other woven materials can be adjusted to the availability in the surrounding environment and the level of ease of use. For example, natural materials such as pandanus leaves, water hyacinth, bamboo strips, and pitrit (rattan strips).

Based on the description of various weaving materials that can be used for RA children above, in this study the weaving material used in group B children is paper. The material of paper is safe enough for RA children. The paper used is quite thick and colorful so that children are easy to weave and can produce good weaving. In addition, paper can also be shaped according to the theme, so that it

can attract children's interest in weaving activities. The various equipment used for weaving are: Two sheets of color paper, determine different colors so that the grooves in the weaving can be seen. Scissors are used to clean up the remnants of paper on the weaving. Charcoal or razor blade, used to cut small sheets of paper, which will be used as weaving material. Pencil, used to make paper grooves according to the shape of the webbing that will also be made. Paper glue, to attach the webbing to the profile so that it can be made into a wall decoration. A ruler in addition to being a measuring tool can also be used as a tool for cutting paper with a cutter or knife to make it straight and easy to cut.

Based on the various kinds of equipment that can be used for weaving, researchers use scissors, rulers and cutters. This research uses paper as the material in weaving. Before the paper is cut, it is measured using a ruler to determine the desired length and width of the weaving. After the paper is measured, it is cut on the lines that have been calculated using a cutter/scissors. There are 2 ways to cut, namely lungsi and pakan. Of the 2 kinds, it can be divided into lungsi not all cut but weft cut until broken.

In terms of the shape of the webbing is divided into three types as follows: Flat weave, this type of weave is made flat and wide. Flat weaving is usually used as traditional house booths, mats, room dividers and other decorative items. Three-Dimensional Plaiting, this plaiting is a development of the form of traditional plaiting, which has a simple shape but has been further developed and emphasized on its higher artistic value and functionality. Macrame, the art of knotting materials only with hand skills with the help of a hook that functions the same as a needle.

After all the stages, tools and materials have been prepared, the teacher is getting ready to apply them to the learning process in the classroom. Weaving activities are carried out on learning themes in RA. In research on group B children, the weaving technique used is the single weaving technique. The single weaving technique is with one strand of warp overlaying one strand of weft. Researchers use a single weaving technique because this technique tends to be a simple motif technique for PAUD children.

The following are the steps of learning single weaving in this study:

- a. The teacher prepares the lungsi and weft with origami paper that has been cut and shaped.
- b. The teacher divides the children into 3 groups.
- c. The teacher distributes the lungsi and taken to the children. Each child gets 1 lungsi and 4 pakan.
- d. The teacher explains how to weave.
- e. How to weave by inserting the weft into the warp, lift one, then leave one and so on.
- f. Children start working, and the teacher guides children who find it difficult.

The results of this activity show that most children's motor skills can develop as expected (BSH) through weaving activities with paper children. Weaving activities can train children's skills in coordinating with children's cognitive development, eyes, and hands, especially finger movements so that it will stimulate skills in controlling actions involving small/fine muscles (Maftutah, Jannah, & Utama, 2021). In addition, children can learn to remember patterns that must be followed with patience.

CONCLUSSION

Weaving is a very famous part of Indonesian handicrafts, the crafts produced have even been recognized internationally. Weaving activities can be done on various types of materials. This weaving activity is applied to early childhood education in Lampung, weaving is done through paper materials. Weaving activities it is proven to improve the fine motor development of early childhood. This is because weaving activities require coordination between cognitive development and children's motor sensors. Weaving is also helpful for children, among others, children can get to know traditional crafts that are occupied by Indonesian people, train children's emotional attitudes well, can be fostered by expressions that grow from their own personality, not because of the influence of others, can express their feelings that have been settling, can arouse children's interests, can help achieve educational goals in general, can be beneficial for child development and children become skilled and creative. Thus this research can contribute to adding to the scientific repertoire of weaving activities for early childhood fine motor development. There are still some shortcomings, including the need for pattern innovation in utilizing paper weaving activities. This makes a future reference to the next research.

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