

**THE UTILIZATION MODEL OF NATURAL MEDIA BASED ON MERONCE IN THE  
DEVELOPMENT OF FINE MOTORCYCLE IN PAUD, BANGGAI SELATAN DISTRICT  
DISTRICT BANGGAI LAUT**

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**ABSTRACT:**

The purpose of this study was to determine the initial conditions of the utilization model of the development of natural shellfish media to develop the fine motor skills of children in PAUD, Banggai Selatan District, Banggai Laut Regency. 2) To know the design of the model for the use of natural shellfish based on meronce in developing fine motor skills of children in PAUD, Banggai Selatan District, Banggai Laut Regency, 3) To find out the application of the development of shellfish based natural material media development in developing children's fine motor skills in PAUD, Banggai District Selatan, Banggai Laut Regency, 4) To determine the effectiveness of the natural material media of shellfish based on meronce in developing fine motor skills of children in PAUD, Banggai Selatan Sub-district, Banggai Laut Regency. The research method used is the development research with the Borg and Gall Model. Borg and Gall models. Data collection techniques in this

study were: 1) observation sheets, 2) expert validation. The results showed that the minimum score for the motor aspect pretest was 75, the maximum score was 100, the average score was 78.85 and the standard deviation was 8.83. While the minimum score for the posttest on motoric aspects is 70, the maximum score is 95, the average score is 83.63 and the standard deviation is 5.99. Based on the statistical test in the table. It can be interpreted that the Asymp.Sig value is 0.000 or  $<0.05$ . In other words, reject  $H_0$  or accept  $H_1$ . This means that there is a significant difference in scores between the post-test and pretest on the fine motor aspect.

**Keywords:** Fine Motor, Natural Material Media of Shells

**INTRODUCTION:**

Early childhood has high energy. This high energy is needed to perform various activities in order to improve physical skills related to fine motor skills, such as shaping or manipulating

clay / wax / dough, drawing, coloring, sticking, cutting, cutting, stringing flowers with threads (meronce). These activities function to train coordination. This function is to train the coordination between the eyes and hands which can be developed through play activities (Sumatri, 2005: 145).

The proper use of natural media as a learning medium by the teacher will assist children in developing various aspects of child development, including cognitive, social emotional, language, moral and religious values as well as life skills and motor skills, namely gross and fine motor skills.

Meronce is an activity to arrange objects into a unit based on certain criteria, such as based on color, shape, or number. The learning process in children on meronce activities can train children to concentrate more. The advantages of meronce are able to hone cognitive and thoroughness. Based on the type and shape, the meronce material can be grouped into two, namely natural materials and artificial materials. Materials that are often used in school use purchased beads, using straws that are cut out, while natural materials using natural materials are rarely used, rarely used because the teacher doesn't want to bother using existing materials that can be used. Buy. Natural ingredients for Meronce that can be used are natural ingredients, natural ingredients are very effective and can improve children's fine motor skills.

Based on the results of preliminary observations on February 12, 2020, the fine motor skills in Group B were not fully developed. From the results of observations, several children showed delays in their fine motor skills, especially on babbling. As for the indicators of achieving the development of fine motor skills in children taken from candy number 146 of 2014, including 1) the skill of using fingers, 2) exploring with various media,

3) eye and hand coordination, 4) accuracy in work, 5) being able to assemble 12 shells, 6) tying ropes, cutting.

In daily activities, the teacher often develops fine motor skills in children in writing, drawing, coloring, memonce, cutting, collage, drawing, and so on. Besides learning to use magazines, this is because magazines cannot explore aspects of development so that it makes children bored with these activities. Learning activities should be carried out more varied so that children can more easily absorb the learning being taught and if the media taught is in accordance with the theme, the child will explore more with various kinds of activities.

The media used by children, children's fine motor development is still monotonous. In addition, in kindergarten, there have never been any learning media from shells either in collage activities or in meronce activities which can improve fine motor skills in group B children. Seeing the previous conditions in motor learning teachers rarely use natural materials, teachers prefer media for finished materials by Therefore, researchers made innovations using existing natural media that can be developed, namely the natural media for sea shells, namely small shells that are on the seabed and used as a meronce medium to develop their fine motor skills.

Of the 20 children, there were 6 children who were still not precise in meronce, children who could only string 3-4 or only up to 6 pieces of shells, There were 4 who could not assemble at all, There were 2 children who quickly finished meronce but the results were still lacking maximal, carelessly and when tying the teacher still helps, but there are 8 children who do it able and skillfully so that the results are as expected. This makes children get less than optimal results in fine motoric activities at PAUD Harapan Bangsa, Tolokibit Village, Banggai Selatan District, Banggai Laut Regency. One thing that can be done to develop the fine

motoric development aspects of early childhood is by utilizing natural media as a learning medium, such as using shellfish. The use of natural media as a learning medium can provide real experiences to children, learning becomes more concrete, more interesting so that it is easier for children to absorb knowledge. Natural media for shells have so many benefits for children, not only improving motor skills but cognitive abilities such as being able to use counting, grasping the surface of the shells, social skills can be used to play using a ball and so on.

#### **LITERATURE REVIEW:**

Ibrahim, et al (2005: 4) "that learning media are anything that can be used to transmit messages (learning materials), so as to stimulate children's attention, interests, thoughts and feelings in learning activities to achieve certain learning objectives". Media plays an important role in the teaching and learning process. Using the media as a channel for messages that are tailored to learning activities that can stimulate thoughts, attract children's attention, interest, and motivation to learn so that lessons can be meaningful for children and learning objectives can be achieved. The use of instructional media in the teaching and learning process can generate new desires and interests, generate motivation and stimulation of learning activities, and even bring psychological influences on children.

According to the Encyclopedia of educational research (in Arsyad, 2002: 25) details the benefits of educational media as follows. 1. Laying concrete groundwork for thinking, thereby reducing verbalism. 2. Enlarge student attention, 3. Lay out the basics that are important for learning development, therefore the lesson is more stable. 4. Provide real experiences that can foster self-employed activities among students, 5. Foster regular and

continuous thinking, especially through pictures. 6. Helping the growth of understanding that can foster language skills, 7. Providing experiences that are not easily obtained by other means, and fostering greater efficiency and diversity in learning.

Sudjana (2011: 11) which states that "Natural materials are materials obtained from nature that can be used to make a product or work. Natural materials can be used as a medium for learning". Natural Materials are all materials that originate from nature and are taken naturally (without going through the sitensa process) and are used as craft raw materials. According to Lighthart (in Sujiono 2009: 101) reveals that learning materials from the environment are grouped into three categories, namely: (1) Natural environment, as raw material, (2) environment of producers or environment of craftsmen, as management and producer of raw materials into finished materials, (3) the community who uses the finished material, namely as consumers. As for what is meant by 'material' this can be in the form of plants, soil, rocks, gardens, rivers and fields, wood craftsmen, rattan and markets or shops as the center for buying and selling these finished materials.

According to Sumanto (2005: 159) that meronce is a way of making decorative objects or used objects which is done by arranging parts of the material with holes or those that are deliberately perforated using rope threads and the like. Meronce is a work that reflects an appreciation for the beauty of natural objects

#### **BENEFITS OF MERONCE:**

Meronce is able to stimulate creativity and imagination. So by learning to make meronce, students in kindergarten can make various models of marine shapes. To produce a ocean requires a higher level of patience. (Ministry of National Education, 2010: 16) according to

Sumanto (2006: 141) the benefits of meronce include: 1) Improving children's fine motor skills. In this case, children's fine motor skills can develop which is related to the skill of moving the hands of the two hands. In addition, it is able to move the limbs associated with the movement of the fingers. Another thing related to fine motor skills is the child's ability to coordinate eye senses and hand activity. In fine motor skills, especially babbling activities, children can show the ability to move their limbs and especially the occurrence of eye and hand coordination as preparation for writing recognition. 2). Increase children's concentration 3). Recognizing the various colors 4). Recognizing various shapes and textures 5). Hone children's patience to solve problems from beads to kalu through a series of processes. 6) Practicing eye coordination and hands basically, beading beadwork is expected to help improve children's concentration, creativity and fine motor skills.

#### **TYPES OF MERONCE:**

Meronce in schools is carried out in various types according to the needs and conditions of the region as well as the creativity of the teacher. According to Sumanto (2005: 159) there are several types of meronce including:

- 1) Meronce from natural ingredients. Roncean can be obtained from the natural environment directly such as, leaf, fresh flowers, fruits, dried flowers, leaves, wood, branches and seeds. Natural materials bring natural color and texture, nice shape and almost uniform, easy to find. Around the environment. In this study, researchers used clay which is included in natural ingredients,
- 2) Meronce from artificial materials. Artificial materials are materials processed from existing materials or man-made products in the form of finished, semi-finished or used materials such

as monte, synthetic ribbons, colored paper, drinking straws, and plastics. In addition to the basic material, complementary materials or auxiliary materials are needed which are useful for assembling the basic materials that have been selected to increase the beauty results of the series made of these materials such as glue, rope, thread.

- 2) Used materials such as wood shavings, plastic cups, straws and others.

According to Hurlock (2015: 94), fine motor skills are abilities related to physical skills that involve small muscles and eye, hand coordination. Fine motor nerves can be trained and developed through continuous stimulation with routine such as playing puzzles, arranging blocks, inserting objects into holes, making lines tearing paper, folding paper and so on.

According to Fitri Ariyanti, Lita Edia, & Khamsa Noory (2007: 121-122) the characteristics of fine motoric development of children aged 5-6 years are:

- a. Add one by one twelve green bean seeds within 20 seconds
- b. Use a toothbrush well
- c. Comb the hair.
- d. Human drawing.
- e. Draw a box by looking at the sample image.
- f. Interested in the ability to wash dishes.
- g. Thickens the lines on the rhombus shape image.
- h. Buttoning up clothes is better than the age of four.
- i. Can brush teeth well.
- j. Can take green beans or blocks with two fingers (thumb or index finger) and place it on the palm like an adult.
- k. Put a match in the box.

#### **RESEARCH METHODS:**

Development research methods with the Borg and Gall Model. The Borg and Gall model (in Sukmadinata 2006: 169-170) consists of ten

implementation steps including (1) research and data collection (research and information collecting), (2) planning, (3) product draft development (develop preliminary form of product), (4) field trials (preliminary field testing), (5) refinement of the initial product (main product revision), (6) field trials (main field testing), (7) perfecting products from field tests (operational product revision), (8) field implementation test (operational field testing), (9) final product revision, and (10) dissemination and implementation (dissemination and implementation).

#### Design validation

Design validation is an activity process to assess whether the design made is more effective or not. In this validation stage, it can be done by a team of experts (Expert judgment). The validation sheet can be: 1). Validation of fine motor results, 2). Observation sheet validation 3). Learning media assessment results data by kindergarten teachers, 4) Data for assessing the quality of learning by children and children's responses to reveal the development of natural media.

Product revisions need to be carried out if there are shortcomings and weaknesses in the trial implementation. After the product is revised, an evaluation stage is carried out. This is intended for the perfection of the product being made so as to produce good media and assessment instruments that are ready to use.

Data analysis is the process of systematically searching and compiling data obtained from interviews, field notes, and other materials, so that they can be easily understood, and the findings can be shared with others. Data analysis is carried out by organizing data, describing it into units, synthesizing it, arranging it into patterns, choosing which ones are important and what will be studied, and making conclusions that can be shared with others.

## RESULTS OF RESEARCH AND DISCUSSION:

### a. Observation Results

The observation data are presented below:

- 1) Natural shellfish-based media helps children to focus more on learning. This can be seen from the child's attention when the teacher is delivering the material.
- 2) The shellfish-based natural media media helps children to be active in participating in learning this can be seen by the involvement of the children in answering the questions presented by the shellfish-based natural material media.
- 3) Natural shellfish based media can arouse children's interest.
- 4) Natural shell-based media helps children to be creative. This can be seen from the children's comments and responses regarding the material presented.
- 5) Children understand the material presented using the media. This can be seen from the child's ability to answer questions raised by the teacher regarding the material presented.
- 6) Teachers can use media easily. This can be seen from the absence of obstacles when the teacher uses the media in learning activities.
- 7) The use of media facilitates the teacher's task in presenting the material.

### b. Teacher Interview Results

The results of the interview with the teacher can be concluded as follows:

- 1) The natural shellfish-based media that has been developed have used communicative language.
- 2) The shell-based natural material media developed can assist teachers in delivering material. This can minimize misperceptions about what the teacher says.
- 3) Natural shell-based media presents the material clearly and attractively so that it is easy to understand. In addition, the material is also presented with easy-to-understand sentences and terms.

4) The use of shellfish-based natural media creates a fun and varied learning atmosphere. Children are more interested in learning.

5) The use of shellfish-based natural media can help children to think creatively.

From all aspects of the assessment, after being analyzed, all aspects of the panelist's assessment (validator) were declared valid according to the mean interpretation of the panelists' calculations which obtained an average value between 3.00 and 5.00 which was based on a modification of Gregory's opinion (in Basri in Abbas, 2006: 98) which are concluded as quite appropriate, according to Very Suitable.

Based on the calculation of the panelists' consistency reliability is 0.96, it can be concluded that the panelists' assessment of the shellfish-based natural material media is Reliable.

The difference in pretest and posttest scores in the conceptual test above, if visualized in graphic form, then the difference in scores will be in the following graph.

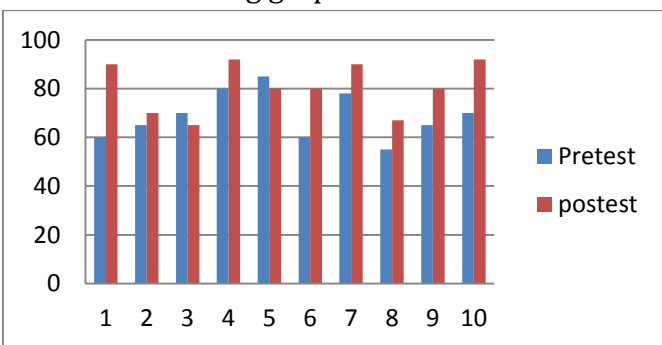


Diagram of the Difference between Motoric Test and Posttest Pretest Scores 1

The statistical test used was the Wilcon Match Pair Test. The test was conducted to determine the difference between two paired data, namely pretest data and posttest data. Use of the Wilcon statistical test using the help of SPSS. With the following test criteria

Ho: there is no difference between the two paired data

H1: there is a difference between the two paired data

With decision making, if Asymp. Sig. <0.05, then Ho reject or accept H1, and if Asymp. Sig. > 0.05, then accept Ho or reject H1.

The test results can be seen in the following table:

Wilcoxon Signed Ranks Test Ranks

	N	Mean Rank	Sum of Ranks
Post Test - Negative Ranks	2 <sup>a</sup>	2.00	4.00
Positive Ranks	8 <sup>b</sup>	6.38	51.00
Ties	0 <sup>c</sup>		
Total	10		

a. Post Test < Pre Test

b. Post Test > Pre Test

c. Post Test = Pre Test

Test Statistics<sup>b</sup>

	Post Test - Pre Test
Z	-2.409 <sup>a</sup>
Asymp. Sig. (2-tailed)	.016

a. Based on negative ranks.

b. Wilcoxon Signed Ranks Test

Based on the statistical test in the table. It can be interpreted that the Asymp.Sig value is 0.016 or <0.005. In other words, reject H0 or accept H1. This means that there is a significant difference in scores between the post-test and pretest on the fine motor aspect.

The difference in the pretest and posttest scores in the conceptual test above, if visualized in graphic form, then the difference in scores will be in the following graph:

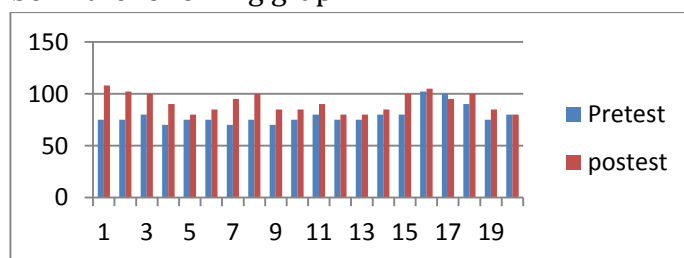


Table 2. Diagram of the Difference between Motoric Pretest and Post-Test Scores 2

The statistical test used was the Wilcon Match Pair Test. The test was conducted to determine the difference between two paired data, namely pretest data and posttest data. Use of the Wilcon statistical test using the help of SPSS. With the following test criteria:

Ho: there is no difference between the two paired data

H1: there is a difference between the two paired data

With decision making, if Asymp. Sig. <0.05, then Ho reject or accept H1, and if Asymp. Sig. > 0.05, then accept Ho or reject H1. The test results can be seen in the following table:

Wilcoxon Signed Ranks Test Ranks

	N	Mean Rank	Sum of Ranks
Post Test - Negative Ranks	1 <sup>a</sup>	4.00	4.00
Positive Ranks	18 <sup>b</sup>	10.33	186.00
Ties	1 <sup>c</sup>		
Total	20		

a. Post Test < Pre Test

b. Post Test > Pre Test

c. Post Test = Pre Test

Test Statistics<sup>b</sup>

	Post Test - Pre Test
Z	-3.679 <sup>a</sup>
Asymp. Sig. (2-tailed)	.000

a. Based on negative ranks.

b. Wilcoxon Signed Ranks Test

c. Expert Test Revision

The first revision was made referring to suggestions, comments, and validation results from material experts and media experts. The revisions made in this first revision are: Experts in the content of learning materials are appointed as examiners, who are lecturers who

are experts in monitoring material at the TK / RA level. The qualifications of the validators in this study are.

In the assessment aspect, there are up to 4 assessment categories.

1) Media expert advice

Validator Name	Criticism and suggestions
Dr. Pupung Puspa Ardini, M.Pd	<ol style="list-style-type: none"> <li>1) the shells used must be large</li> <li>2) the number of shells is reduced</li> <li>3) using wire rope</li> <li>4) the larger hole in the limiting bead is selected</li> </ol>
Dr. Setiyo Utoyo, M.Pd	<ol style="list-style-type: none"> <li>1) material is clarified</li> <li>2) The cover design is made attractive</li> <li>3) implementation</li> <li>4) indicators, assessments, rubrics, continuous</li> </ol>
Hasmawati Sadam	<p>The ropes used in making meronce are not soft, so they are hard and stiff when they are made. Besides, the appearance of the necklace shows a less attractive shape.</p> <p>Learning experts designated as examiners are people who have competence in the field of learning and at least have formal SI education. So that the person assesses the suitability of the product with the characteristics of early childhood, the teacher who is designated as a test product development tester provides responses and assessments</p>

## DISCUSSION:

Learning using kindergarten magazines cannot fully maximize children's development because kindergarten magazines cannot explore

aspects of child development and children are bored with these activities. Therefore it is necessary to use learning media in learning to improve fine motor skills, namely meronca using natural shellfish.

The design of the natural media model used previously in the sub-district PAUD only used wooden blocks, ready-made media purchased in stores without any innovative learning media used by the teacher. In this study, researchers designed natural media by utilizing materials that are around the child known to the child, namely shellfish.

The implementation of learning uses natural material media through the following steps: a) preparing a place to carry out activities, b) preparing learning media using natural material media (shells). c) Give examples of how to use shell media in activities, d) divide children into groups and children are directed to carry out activities that have been prepared.

Meronca-based shellfish media can develop children's fine motor skills. Natural materials are materials obtained from nature to make a product or work. Examples of natural materials that are often used are rocks, wood, dry leaves, seeds, banana stalks, bamboo and other natural materials.

The effectiveness of natural media for shellfish based on meronca as stated by Asmawati (2014: 31) says that "Natural materials are used to study natural materials such as sand, water, playdough, colors and other natural materials". The benefits of natural ingredients which can help AUD to explore and improve all aspects of his abilities.

Researchers find strengths and weaknesses in the use of natural materials in learning. The advantage that is obtained from natural materials is that it is easy to find in the surrounding environment, namely the shells that the researchers use come from the surrounding environment, so they do not

require a large amount of money. Apart from that, natural materials such as shellfish have various and varied shapes and textures. Teachers can use natural materials in accordance with learning activities.

#### **CONCLUSION:**

- 1) In the first semester in kindergarten the teacher did not provide ironing activities, the teacher more often developed the child's fine motor skills in writing, drawing and coloring activities. For example, resonating, cutting, collage, drawing, writing and so on.
- 2) The design of the natural media model used previously in the sub-district PAUD only used wooden blocks, ready-made media purchased in stores without any innovative learning media used by the teacher. Researchers designed natural material media by utilizing materials that are around the child and known by the child, namely shells.
- 3) The learning process using natural materials goes according to expectations, the child can do the given activities well and the child's fine motoric development is increasing day by day, the children are getting more agile, fast and adept at working on the media used.
- 4) The effectiveness of material media can be seen from the results that using shellfish media can improve children's fine motor skills. In addition to the results of improving fine motor skills, effectiveness can be seen from the learning activities of children who are very enthusiastic about learning activities.

#### **SUGGESTION:**

Learning activities through the use of natural media can be used as an alternative to improve fine motor skills. Activities using natural ingredients are not only used to improve children's fine motor skills but can



Modified in order to teach children to develop other abilities. Furthermore, other researchers can conduct research related to learning activities using media that not only comes from nature, but can use used or recycled items. This media can be used in learning activities in order to improve fine motor skills of early childhood.

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