Fine Motor Stimulation of Children Through Coloring Activities in Early Childhood

Besse Marhaeni¹, Idha Seprtriana², Sovia Wahyuning Suci³
¹TK Dharma wanita Unit Kec. Majauleng, Wajo, Sulawesi Selatan
²TK Asiyiyah Ganjar Asri Kota Metro, Lampung
³TK Trisula 02 Pati, Jawa Tengah
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Abstract:
This study examines the stimulation of children’s fine motor skills through image coloring activities in group B of Dharma Wanita Majauleng Kindergarten, Wajo Regency. This research uses a quantitative approach with the type of research, the one-group pretest-posttest design. The sample in this study was 11 children. The data collection technique uses Pretest–Posttest Design, and the results are analyzed using descriptive quantitative. The results of the image coloring activity on the improvement of children’s delicate motor stimulation showed that the measurement data from the pretest, the fine motor ability of students in the learning completion value of the low category. The results of post-test scores show that the average value of students’ fine motor skills is very high, with classical learning completion scores achieved by all children. This study shows that the activity of coloring children’s drawings can train children’s strength in holding writing stationery so that students are trained to develop their fine motor skills.

Keywords: coloring pictures; fine motor; early childhood.

Abstrak:
Penelitian ini untuk mengkaji stimulasi motorik halus anak melalui kegiatan mewarnai gambar pada kelompok B Taman Kanak-kanak Dharma Wanita Majauleng Kabupaten Wajo. Penelitian ini menggunakan pendekatan kuantitatif dengan jenis penelitian the one group pretest-posttest design. Sampel dalam penelitian ini sebanyak 11 orang anak. Teknik pengumpulan data menggunakan Pretest–Posttest Design dan hasilnya dianalisis dengan menggunakan kuantitatif deksriptif. Hasil kegiatan mewarnai gambar terhadap peningkatan stimulasi motorik halus anak terlihat bahwa data pengukuran dari pretest, kemampuan motorik halus anak didik pada nilai ketuntasan belajar kategori rendah. Hasil pengukuran nilai posttest menunjukkan nilai rata-rata kemampuan motorik halus anak didik berada pada kategori sangat tinggi dengan nilai ketuntasan belajar klasikal dicapai oleh semua anak. Penelitian ini menunjukkan egiata mewarnai gambar anak dapat melatih kekuatan anak dalam memegang alat tulis menulis sehingga anak didik terlatih mengembangkan motorik halus mereka.

Kata Kunci: Mewarnai gambar; motorik halus; anak usia dini.
INTRODUCTION

One aspect of development in early childhood that has a significant influence on the development of the child is the motor physique. Motor physical ability, in general, is the ability of a child to perform motor physical activity typically without incurring injuries. The development of early childhood motor physical abilities is an aspect of essential ability development consisting of gross motor and fine motor abilities (Camellia, 2019). The physical motor in early childhood is a person's ability to perform activities related to physical aspects, such as running, jumping, dancing, drawing, coloring, climbing, and threshing field (Aghnaita, 2017). Children's learning activities must be principled in fun learning where learning is carried out while playing (Hasanah, 2016). Meanwhile, according to Rahmatawati et al. (2020: 103), the fine motor is a coordinated movement between the nervous system and muscles, one of which is the movement of the fingers and hands, a similar thing conveyed by Hasanah (2016), mentioned fine motor is the ability to coordinate the eyes to form basic skills to draw lines from various shapes and sides. Sumantri et al. (2020) also explained the principles in developing children's fine motor abilities, namely: 1) Muscle and nerve maturity; 2) Does not occur before the child reaches maturity; 3) Motor development is adjusted to developmental patterns; 4) Determine the norms of motor development; 5) Each child has differences in the process of motor development.

Early active childhood needs to be accompanied by a fun learning process such as play so that children can explore their environment and make play activities a learning process (Oktavia et al., 2019). Aspects of early childhood development are interconnected so that they support each other. Likewise, motor development needs attention as well, both gross motor and fine motor. Fine motor development develops rapidly when the child is three years old; at this time, the child begins to be interested in holding a pencil and doing writing movements, although this movement seems stiff (Nugroho et al., 2021). Coloring pictures is an activity that can form fine motor activities; many techniques and materials that can be selected in drawing coloring activities, such as colored pencils, crayons, ink brushes, and markers, can be an option (Fitrianingsih et al., 2019).

Drawing activities using paper are one of the most frequently used media; in addition to paper, several media can be used, including fabrics, walls, and other media; drawing using digital equipment media can also be done with various existing effects without losing the natural impression (Saparahayuningsih & Badeni, 2019). Based on preliminary observations of learning outcomes, it can be seen that when learning takes place, teachers in developing fine motor skills with drawing activities in children are still very lacking. Learning activities that are by the indicators of making drawings and scribbles (writing) on homemade illustrated stories are not appropriate. It can be seen that children's creativity is still lacking, as can be seen from 1) the ability to produce works initially and independently; children are still hesitant to do drawing activities. There are still many children who are not enthusiastic about these activities. There are still many children who have not been able to draw as desired; only a few can express their ideas on drawing paper; there are also those who are still confused and then imitate the drawings of their friends in groups. 2) the child's ability to draw with different and unique characteristics; in this activity, the teacher will teach how to draw flowers, and the teacher will give examples of how to draw flowers which the child will follow. However, the images taken by the teacher tend to be less varied. Whereas in the previous topic, on the subject of My Environment, the teacher taught me how to draw such flowers. The type of coloring and the composition of the paint are also the same; there is no difference. Even though we know that the shape of flowering plants is different shape, and also have a variety of
colors. Based on this, the author is interested in carrying out stimulation activities for the development of fine motor skills of students with image coloring activities.

Coloring is done by giving color to paper media or other media, using markers, colored pencils, and food coloring as coloring agents (Fadillah, 2014). The activity of coloring pictures makes children learn to apply colors evenly. Children are thrilled to give color through various media, both by drawing and by filling in the drawing fields that ai need to inherit (Pamadhi and Evan, 2011); from the statement, coloring is a fun activity for children. The excitement occurs when the child begins to choose the color they will use and pour it on the still empty image. This is in line with Sumanto (2005) opinion that children's coloring activity creativity is seen in the choice of colors based on children's wishes. In addition, coloring activities can train children's patience, neatness, and skills, expressing desires through color strokes on images and using aids such as cotton buds, banana fronds, and leaves.

Fine motor development in children focuses on the the-ordination of fine motor movements, such as the ability to hold objects using hand fingers. According to Oktavia et al., (2019), the acceptable motor definition is a movement that uses small muscles such as fingers and wrists. Fine motor movements do not require much effort but require hand-eye coordination. At age 4, fine motor movements develop rapidly and almost perfectly. One example is the child's desire to make a perfect block building, but at this age, the child still has difficulty shaping the structure so that the building will collapse.

By the fine motor development that must be achieved, activities carried out in early childhood should be aimed at improving fine motor abilities. This is important because providing opportunities and exercises can improve the child's ability to perform activities that require fine motor movements. Suyadi (2014:69), mentions the notion of fine motor "fine motor is the coordination of gestures involving much smaller muscles and nerves or more detailed movements involving the coordination of hands and eyes."

Meanwhile, Saparhayuningsih & Badeni (2019), defines fine motor as a movement that uses smooth muscles as well as hand flexibility and coordination in performing activities or certain parts of the body that are influenced by the opportunity to learn through learning and practicing for example with the ability to manipulate objects or toys, cutting, writing, throwing, playing blocks, playing puzzles and constructive play activities. Fine motor ability is a child activity involving small muscles; delicate motor stimulation in preschool-aged children needs to be done as a preschool start in writing and drawing. At the age of 5 or 6 years, the coordination of fine motor movements develops rapidly. The whole muscle can be perfectly coordinated and moved simultaneously at this age.

Fine motor is movements involving small muscles such as the use of the fingers of the hand, which in performing such activities requires the coordination of the hands and eyes as well as the flexibility of the hands. According to Moeslicatoen (2004), fine motor skills use fine muscles on the legs and hands; these movements require speed, precision, and the ability to move; fine motor movements can be trained by folding, shaping, drawing freely, and doodling on paper. This fine motor development is the primary capital of children's writing. As with the gross motor skills of schoolchildren, there is also a risk of accidents with fine motor skills. But to do this, the child needs to be calmer, more focused, and control his movements, so the risk tends to be lower. Hildayani et al. (2007) Fine motor development of children at the age of 4-5 years is increasing but requires a stimulus to develop appropriately to develop children's fine motor skills can be done by playing while learning is done indoors and outdoors such as children digging sand and soil, pouring water, collecting and collecting small stones, leaves or other small objects, playing marbles, cutting paper, sewing, weaving. Meanwhile, Aisyah et al. (2009) stated that what
can develop fine motor skills can be done through fixing blocks, cutting, dancing, painting, sticking, and matching. The purpose of the study was to see how much influence the provision of stimulation with image coloring activities in improving children's fine motor skills.

**METHOD**

In this study, researchers used a quantitative approach to see the influence of coloring activities on stimulating children's fine motor skills. The type of research is the one-group pretest-posttest design. The subjects in this study were children aged 5-6 years old, consisting of 11 children, three boys, and eight girls.

| No | Data Shapes | Data sources | Data Sources | Instrument Shape |
|----|-------------|--------------|--------------|------------------|
| 1  | Fine Motor  | Child observations | Observation | Checklist observation sheet |
|    |             |              | Initial test and final test | Pretest and posttest worksheets |
| 2  | Coloring    | Giving Treatment with coloring activities | Test | Child treatment worksheet |

The implementation of the researcher goes through several stages, namely planning by determining the number of samples and formulating instruments containing research items, then pretesting, giving treatment (treatment), then post-testing, and analyzing the results. This research uses quantitative descriptive analysis techniques. Quantitative descriptive methods are used to explain all the conclusions of the research results. Likewise, all data in the form of numbers were analyzed using simple statistical formulas.

**RESULTS AND DISCUSSION**

The implementation of planning activities begins with creating a daily learning plan. Prepare media and learning resources for coloring images. Prepare research instrument tools (pretest-posttest sheets). Estimating learning time, the allocation of time during learning activities is approximately 60 minutes. The initial training contains activities carried out at the beginning of the learning process; this activity begins with a morning journal activity consisting of greeting students, followed by walking activities before entering class. Then the teacher checks student hygiene and signals students to enter the room regularly. After the students arrive at their seats, the teacher greets them as a sign of the start of the learning process and then gestures to pray together This activity is filled with activities of catching the ball and moving the body to develop the child's motor skills.

The number of students present is 11 children; this learning activity refers to the learning scenarios that have been made, with activities that focus on stimulating students' fine motor skills with drawing and coloring activities. In this core activity, students are directed to develop their fine motor skills. The learning steps of the teacher convey to the students the activities that will be carried out at this meeting. Then the teacher prepares tools for coloring, the teacher shows colors before carrying out the activity, the teacher explains how to color according to the understanding of the child, the teacher shows the results of coloring to the child, and the child is asked to try coloring, the child shows the results of the work to the teacher to evaluate. The observed fine motor development activities are 1) the ability of students to grasp the stationery used in coloring drawings, 2)
flexibility in moving hands when doing coloring activities, and 3) coloring pictures neatly in carrying out coloring activities.

After all the active processes are carried out, the next step is for the researcher to carry out the pretest. The child's fine motor skills will be observed in the child's ability to do image coloring activities and how students carry out these activities. The indicators that will be kept are 1) the ability of students to grasp the stationery used in coloring pictures, 2) flexibility in moving their hands when doing coloring activities, and 3) the ability to color drawings neatly in coloring activities. From the data above, it can be seen that there are three aspects of assessment, namely the strength of holding the tool, the flexibility of moving the wrist, and the neatness in coloring the image. The data shows that the expected learning objectives were not achieved; namely, at least 11 students are participating in the teaching and learning process.

Figure 1. Data on the results of the pretest of children's fine motor skills

In the indicator of the ability of students to grasp stationery used in coloring pictures, as many as six students are included in the low category or 55%, four students are in the medium category or 36%, and one student is a high category or 9%. In the indicator of flexibility in moving hands when doing coloring activities, as many as six students are in a low variety or 55%, four students are in the medium category or 36%, and one is in the high sort or 9%. In the indicator of children's ability to color pictures neatly in coloring activities, as many as seven students are in a low category or 64%, three students are in the medium category or 27%, and one is in the high sort or 9%. The average score of achievement of student learning outcomes from 11 people was 1.48, and the overall learning completion of students was only 9%.

It can be seen that teachers have advantages and disadvantages in the learning process. The advantage of the first meeting is the teacher's ability to provide explanations to students in drawing and coloring activities. The teacher offers insufficient material for the students so that it becomes a grab in the coloring activities of the picture. The disadvantage of coloring pictures is that children are still stiff in moving their hands flexibly, so the results of the student's drawings become untidy and full. The child becomes bored quickly because the teacher gives too many colored pictures, so the child becomes confused about which picture to color first. In terms of neatness, students are still not very neat in coloring pictures; there are still many pictures of students coming out of the lines and images that are not full. According to Suyanto (2005), activities that can develop children's fine motor skills are making models from plasticine, dancing with musical instruments, practicing drawing with small and colored brushes, playdough, plagiarizing, painting with fingers, tasting, making models (looking for traces), coloring pictures, finger painting, washing hands. When giving the treatment, the researcher prepares the media used in the activity.
Before starting the training, researchers explore children's knowledge first about the theme this time, namely by giving questions to children.

The action plan for the implementation of the posttest that is carried out is, in principle, the same as the implementation of the pretest. Only a few parts that are weaknesses in the pretest will be corrected in the performance, then refined at the posttest time. The obstacles occurred in the aspect of students where the child still did not want to follow the teacher's instructions. Learning activities refer to learning scenarios created with image coloring activities. The following steps: The teacher prepares a tool for coloring pattern drawings as the primary material of crayons and drawing paper. Then the teacher shows the color before carrying out the activity. The teacher will explain how to paint based on the child's understanding, showing the child the results of coloring and encouraging the child during the learning process in the form of praise and guiding the child to do his work. Children are asked to try colors. The children showed their work to the teacher to be validated.

![Figure 2. Data on the results of the posttest of children's fine motor skills](image)

Data posttest three aspects of the assessment that can be explained as follows: 1) In the indicator of the student's ability to grasp the stationery used in coloring the picture, as many as four students are in the high category or 36%, seven students are in the very high category or 64%. 2) In the indicator of flexibility in moving hands when doing coloring activities, as many as six students are included in the high category or 55%, and five students are included in the very high category or 45% 3) In the indicators of children's ability to color pictures neatly in carrying out coloring activities as many as two students are in the high category or 2%, eight students are in the very high category or 73%.

The average score of student learning outcomes is 3.61, and the overall completion of students is 100%, as shown in the table below. The results of achievement in the second cycle are caused by teachers who have guided students in carrying out image coloring activities. Teachers have also rewarded students who can make something new and exciting. There is an improvement in the ability of students. The average score of students is in the high category of 3.61 out of 11 students. This is because children are getting used to coloring and drawing activities and the teacher's ability to manage to learn, especially guiding students individually in each learning implementation.

Fine motor development is students' ability to carry out activities involving small and smooth muscles with the application of drawing and coloring activities to develop fine motor skills in children. The drawing coloring activity provides an opportunity for students to explore by coloring the image the child can form according to the student's wishes and other shapes. The strength of holding the coloring tool in the pretest showed that only one protégé out of 11 students was present, or 9% showed learning completion. In the posttest, there was a significant increase. Namely, four children were in the high category or 36%, and seven students were in the very high class or 64%, with the learning completion rate being 100% of the 11 students who followed the learning process.
In the aspect of flexibility indicators, students in coloring activities and using stationery when coloring, such as the child's ability to move colored pencils and crayons. The description above shows that the existing wrist moving flexibility indicators can be explained as follows. In the pretest implementation, it showed that only 1 or 9% of students out of 11 students were present with a learning completion of 9% with an average score of 1.55 students. In the post-test, there was an increase, namely from 11 students who participated in the learning process, six students were in the high category or 55%, and five students in the very high class or 45%, with a learning completion score of students on average 100% of students the score was 3.45.

For children's ability to color pictures neatly, out of 11 students present, only 1 or 9% of students are in the high category, with learning completion with the average score of students at 1.36. Three students, or 27%, were in the high class in the posttest. Eight students, or 73%, were in the very high category, with a learning completion rate of 100%, and the average score of students was 3.7. Image coloring activities to improve children's fine motor skills through image coloring activities in group B of Dharma Wanita Majauleng Kindergarten. From the data above, it can be seen that in the cycle of increasing the value of students' fine motor abilities, the average value of fine motor ability is only 1.48. The learning completion value is only 9%. in cycle 2, the average value of students' fine motor ability is at 3.61, and the learning completion value is 100%. Based on the picture carried out in the improvement of learning. Through drawing and coloring activities, children can train their strength in holding writing stationery so that students are trained to have which can automatically be a means of teaching fine motor skills. In addition, through coloring activities, children's drawings develop fine motor skills where children teach hand and eye coordination; children's imagination is also designed with original works.

CONCLUSION

Based on the results of the study, it is known that stimulation through image coloring activities is very appropriate for improving the fine motor ability of students; in particular, this study can be concluded that image coloring activities can improve students' fine motor skills with indicators of the strength of holding tools, the flexibility of moving wrists and neatness of coloring images. This is shown from the data analysis of students in group B of Dharma Wanita Majauleng Kindergarten, with the number of students 11 people. The results of data analysis showed that the increase in the value of fine motor ability of students, the average value of fine motor ability before treatment was in a low category and the post-test results showed power in the very high class.

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