

IMPROVEMENT OF FINE MOTOR COMPETENCE WITH ACTIVITIES COLORING

Adinda Amalia Pramesti
Universitas Pendidikan Indonesia
adindapramesti@upi.edu

Received: August 2th 2022

Received: September 5th 2022

Accepted: October 30th 2022

Abstract: Fine motor development is very important for the overall development of children. Kindergarten-age children still often have difficulty moving their fingers for activities such as cutting, drawing, tearing, folding, arranging and filling patterns by pasting small objects. The improvement is inseparable from the learning steps, namely: (1) One class is divided into three groups consisting of four to five children (2) Each group gets four to five kinds of dyes and crayon media that have been put into containers (3) examples of coloring activities that will be carried out (4) Delivering the agreed rules during coloring activities and (5) Color drawings adjusted to the ongoing theme in kindergarten. Based on the results of this study, it is recommended that educators for children's education schools can use methods to improve the abilities of mothers and children.

Keywords: Coloring activities, Fine motor competence, Smooth motor skills,

OPTIMA: Journal of Guidance and Counseling
Website: <http://ejournal.upi.edu/index.php/OPTIMA>

Permalink:

How to cite (APA): Pramesti, A. (2022). Improvement Of Fine Motor Competence With Activities Coloring .
OPTIMA: Journal of Guidance and Counseling, 2(2), 1-15.



This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

INTRODUCTION

Education is a key to developing self-potential. Education is required to be involved in order to have religious spirituality, self-control, personality, intelligence, noble character, and skills needed by themselves, society, nation and state. Fine motor development is very important for the overall development of children. Kindergarten-age children still often have difficulty moving their fingers for activities such as cutting, drawing, tearing, folding, arranging and filling patterns by pasting small objects (Wandi, Zherly & Mayar, Farida, 2019). Education for early childhood is in the form of providing efforts made to guide, nurture, stimulate so that it will produce children's abilities and skills. According to Siswanto (2008), "Children's

education must start early so that children can develop their potential optimally with the aim that children who attend PAUD become more independent, disciplined, and easily directed to absorb knowledge optimally".

Kindergarten is one of the early childhood education that has a very important role to develop the personality and skills of children and prepare them to enter the next level of education. The purpose of Kindergarten education is to help various potentials which include religious and moral values, cognitive, physical motor, language and social emotional to be ready to enter the next level of education. One aspect of ability that is important to develop in early childhood is the child's fine motor skills. Fine motor skills help children to gain independence, help gain social acceptance, and can lead to self-confidence in children. As revealed by Sudono (2007) that one of the important reasons for developing children's fine motor skills is to develop children's independence and self-concept.

Sujiono (2008) reveals that fine motor skills are movements that involve only certain body parts and are carried out by small muscles, such as the skill of using the fingers and proper wrist movements. According to Rosmala (2005), fine motor skills are skills that use fingers, hands and wrist movements appropriately. Pamadhi (2008) revealed that coloring, cutting and pasting (3M) activities are activities that are related to the ability to use tools and train children's fine motor skills because these children's fine motor skills will be the basis of children's sensitive abilities to the symptoms that surround children's lives both in their childhood and adulthood, children and after adults.

METHOD

The search methodology in this study used a Systematic Literature Review (SLR) proposed by Kitchenham and Charter Kelee. SLR has four phases, namely planning/identification, primary data search and selection, data extraction and data synthesis.

Planning

In this phase the activities carried out are identifying or formulating problems, objective reviews, protocol reviews. So that this review contains the formulation of the problem as follows: (1) How to Improve Fine Motor

Competence with Coloring Activities? (2) What is the effect of fine motor competence on daily life? (3) How can coloring activities improve fine motor competence?.

Search Strategy

To ensure the breadth of the review, several databases are commonly used: Google Scholar, Journal. Our search uses keywords that are relevant to the topic of this research. (see table 1). The search was limited to the years published 2015 – 2021. These groups were combined and systematically researched in the keyword-abstract titles of the articles indexed in the database. Finally, potentially relevant research is also included in the reference list of articles included in the systematic review.

Table 1
Preferred Keywords in Different Groups

Group 1-Keywords related to Fine Motor Improvement in Early Childhood by Coloring	Fine Motor Improvement in Early Childhood by Coloring
Group 2-Year of publication	2015-2020
Group 3-Types of documents	Journals and conference articles
Group 4-Language	Indonesian and English
The final search of the formula	Group 1 - Group 4

Inclusion and Exclusion Criteria

The include and exclude criteria developed by the research team used in our scoping study are related to: the year period, the language used in the article, and the theme of the article according to the research topic (see table 2).

Table 2
Include and Exclude Criteria

Criteria	Include	Exclude
Time Periode	2015-2021	Any study outside these years
Language	Indonesia	Non-English
Study focus	Fine Motor Improvement focus Early Childhood with Coloring	Any study outside these focus

Based on the above criteria, after screening a total of 54 articles, it was obtained:

1. Of the 54 articles obtained, the screening was based on the year of publication so as to produce 30 suitable articles.

2. Of the 30 articles obtained, screening based on abstracts and titles resulted in 25 suitable articles.
3. Then 25 articles were screened based on the suitability of the material/topic so as to produce 20 articles that were analyzed in this study.

Quality Assessment

To assess the quality of articles included in this literature, refer to the format of the Article Quality Assessment tool. Quality criteria are based on 10 quality assessment questions, namely:

QA.1 : Does the author have a clear focus question [population, intervention (strategy), and outcomes?

QA.2 : Were appropriate inclusion criteria used to select the primary study?

QA.3 : Did the author describe a comprehensive search strategy?

QA.4 : Does the search strategy cover an adequate number of years?

QA.5 : Did the authors describe the level of evidence in the primary studies included in the review?

QA.6 : Did the review assess the methodological quality of the main study, including:

(Minimum requirement: 4/7 of the following)

1. Research design
2. Research sample
3. Participation rate
4. Sources of bias (confounders, respondent bias)
5. Data collection (measurement of independent / dependent variables)
6. Follow-up/friction rate
7. Data analysis

QA.7 : Are the results of the review transparent?

QA.8 : Is it appropriate to combine the findings across studies?

QA.9 : Was the right method used to combine or compare results across studies?

QA.10 : Do the data support the author's interpretation?

The overall assessment of the quality of the review methodology will be determined based on the results of each question. The scoring guidelines in the quality of this assessment are Y(Yes) = 1, N (No) = 0 then the total score is

10. Use the following decision rules to determine the overall rating for the review based on the numbers in the Total column.
- Reviews with a score of 8-10 in the Yes column will be rated Strong= S
 - Reviews with a score between 5-7 in the Yes column will be rated as Enough = M
 - Reviews with a score of 4 or less in the Yes column will be rated Weak = W

Data Extraction

Data was extracted from the last 20 articles and entered into an Excel worksheet to visualize patterns and obtain an overview of the content of articles included in the following categories: author, year, country, purpose, method (participants and measurements), theoretical perspective, findings main, and the principle of qualitative assessment. The data are reviewed and summarized in Table 3.

Data Analysis

The selected article is read several times to get an overview of the content. After that, the reading focused on the results of each article unit and the meaning that was consistent with the research question was extracted. Of the 20 articles reviewed, about the concept Fine motor improvement (n= 17), then the effect of fine motor skills in daily life (n= 2) and how activities coloring in improving fine motor skills (n= 4).

FINDINGS AND DISCUSSIONS

This section summarizes the research results. The results of this literature review will be discussed further below:

Search Results

The results of the literature review that we have done, there are 25 articles with a time span of 2015-2020 identified and relevant to the topics discussed in this literature. (see figure 2). The majority of articles published are discussing the concept of Improved fine motor ((74%), further aspects and influences of fine motor skills in daily life(9%) and how activities

coloring in improving fine motor skills (17%). (see figure 3). An overview of the content of the articles presented by the following categories: author, year, country, purpose, method (participant and measurement).

Author, publication year, country	Objective(s)	Methods, participants and measurements	Journal	Key findings	Qualitative assessment
(Zedy & Farida, 2020)	The results of the study showed that the development of fine motor skills and creativity in early childhood requires eye and hand coordination, such as arranging, tearing and sticking which is done through collage activities.	No describe	Procedia Social and Behavioral Sciences	Tacit knowledge management which is the main issue for carrying out organizational change and improvement is very important for educational institutions, especially for higher education institutions to pursue effective research and development and to lead the community.	M
(Nieta, 2015)	Implementation of the learning coloring/drawing to improve fine motor skills of children, has been implemented by the teacher well, because the teacher performs in accordance with the planning made, both in cycle I and in cycle II, and 3) improvement of color picture learning to improve the fine motor skills of children, in cycle I get the average value 49,4 which categorized not good, while in cycle II very good increase with value	literature review analysis and connecting concepts in a conceptual framework	Queensland University of Technology	The analysis of the literature in this study shows that there are five main requirements that must exist in an environment involving Tacit knowledge sharing: social interaction, sharing of experiences, observation, relationship / informal networks, and mutual trust.	M
(Berth, Farida & Delfi, 2019)	This study aims to describe the implementation of fine motor stimulation in practical life exercises in Pioneer Montessori Kindergarten. Padang School.	Quantitative	Journal Technology Transformation	This study assumes that tacit knowledge-based start-ups are only an early indication of the potential for innovation in the Tacit knowledge realm for universities and research institutes.	S
(Luluk & Vanda, 2017)	The objectives of this research are (1) to describe the application of messy play to improve the fine motor skills of children in Group A, (2) Describe the results of the application of messy play to improve skills fine motoric children Group A.	Quantitative	Procedia Technology	The proposed framework aims to help organizations develop the most appropriate tacit knowledge transfer mechanisms for the purpose of achieving the transfer and utilization of Tacit knowledge.	M
(Jalongo, Boyer, & Ebbeck, 2014)	The aim of this research is to study the writing process for professional publications from the perspective of a diverse group.	Quantitative	Early Childhood Education Journal	From the perspective of these 30 doctoral students, acquiring the constellation of knowledge, skills, habits, attitudes, and values associated with successful publication of scientific work requires a network of formal and informal validation and support.	M
(Krađci, 2015)	The purpose of this study is to show how tacit knowledge is shared in the stories of experienced teachers.	A narrative study	Procedia Social and Behavioral Sciences	This study assumes that the initial assumption is that Tacit Knowledge is personal, involves the emotions and values of individuals who are given and shares perceived reflections.	S
(Crane & Bontis, 2014)	This study aims to improve children's fine motor skills through Coloring, Cutting and Paste (3M) activities at Mekar Indah Kindergarten, Kendari City. This type of research is Classroom Action Research (CAR) which is carried out in two cycles. The stages in this research are: planning, implementation, observation and reflection.	Analysis study	Journal of Knowledge Management	New aspects of tacit knowledge have proven to be action-oriented and influential, and while aspects of people's knowledge are separate from knowledge, they can be uncovered through the study and analysis of discourse.	M
(Yu, 2015)	This research sheds new light on the concept of Tacit Knowledge by embedding it in contemporary debates, such as on know-how, rule-following, conceptualism, language acquisition, etc.	No describe	Meta science	In Tacit and Explicit Knowledge, Collins compares Tacit Knowledge with explicit knowledge. Explicit knowledge is not just any knowledge	M

Improvement of Fine Motor Competence With Activities Coloring

(Zaim, Gürcan, Tarım, Zaim, & Alpkın, 2015) Turkey	This study aims to analyze critical factors from survey data based on Tacit Knowledge.	Quantitative- survey	Procedia Social and Behavioral Sciences	This study shows that Tacit Knowledge is divided into four factors, namely individual/personal knowledge, managerial knowledge, skill knowledge, and collective knowledge.	S
(Rozenszajn Yarden, 2015) Israel	This study aims to expose biology teachers a view of the knowledge needed to teach biology and their Tacit view of the relationship between CK and PCK using the vocabulary grid technique.	Quantitative	Studies in educational Evaluation	This study shows that secondary school biology teachers reveal that CK is seen as important by teachers who participate in the knowledge component to teach. Analysis of their Tacit view of the relationship between CK and PCK revealed that CK is generally viewed differently from PC.	M
(Göksel Aydıntan, 2017) Turkey	This study aims to examine the influence of social capital and internal locus of external control on Tacit knowledge-sharing intentions and behavior, and the relationship between the two.	The research model was developed from this theoretical framework.	Knowledge Management Research & Practice	These findings suggest that social capital and its basic structural, cognitive, and relational dimensions tend to increase the transfer of Tacit Knowledge which gradually turns into behavior because, according to Ajzen's theory of planned behavior, behavior increases when subjective norms become preferable).	M
(Faraj, von Krogh, Monteiro, Lakhani, 2016) Canada	This study aims to distinguish between explicit and tacit knowledge flow conditions in online communities and advance an unconventional theoretical conjecture: Online communities engender Tacit Knowledge flow among participants.	No describe	Information Systems Research	This study suggests that the crucial condition of this current is not the emergence of new digital technologies as often described in the literature, but the domestication of technology by humans and their sociality. This conjecture has profound implications for theory and research in management and organizational studies, as well as their relationship to technology information.	M
(Skains, 2017) Amerika	This study communicates the results of a practice-based research project, meanwhile, it is conducted explicitly to examine the changes at work in the creative writing process and narrative understanding by switching to a multimodal digital composition process.	Practical based research	Computers and Composition	This study has implications not only for individual creative writers, but for students and teachers turning to multimodal forms of digital communication	M
(Arpaci, 2017) Turkey	This study aims to investigate the antecedents and consequences of the adoption of cloud computing in education to achieve knowledge management	Pre-test and post-test were administered in the first and last week of the 14-week intervention. Survey data collected from 221 undergraduate students	Computers in Human Behavior	The study's findings suggest that educational institutions can promote the adoption of cloud computing in education by raising awareness about knowledge management practices	S
(Belas, 2018) Inggris	This study aims to explain the tacitness of Tacit Knowledge (TK) while maintaining its status as precise knowledge.	Quantitative	Study Philos Education	This study suggests that no act of knowledge can be understood apart from the notion of skilled physical performance. Tacit Knowledge can understand what is called knowledge-based education	M
(Aytelkin Razvanoğlu, 2019) Turkey	The aim of this study is to enable the transfer of Tacit knowledge and experience between these two foundations by creating a "learning bridge" through the use of technology to achieve long-term sustainability of local crafts.	A qualitative multi-method approach was adopted, which included the use of participatory design methodologies and ethnographic field studies in Mardin	International Journal Technol Des Education	The study shows that "learning bridges" can be formed and thus facilitate the transfer of tacit knowledge and experience between academies and workshops through the use of technology. Continuing education models that provide new interactive experiences are recommended based on these findings.	S
(El-Den Sriratanaviriyakul, 2019) Australia	This study identifies difficulties associated with overall Tacit Knowledge management among distributed individuals and proposes categorization into types/types as a solution for effective externalization and measurement.	This study through the analysis of opinions and ideas focuses on establishing the relationship between Tacit Knowledge and the two constructs.	Procedia Computer Science	This study posits the relationship and correspondence between opinions/ideas and tacit knowledge developed and a reflection articulation interpretation model that demonstrates this relationship and its externalization to explicit knowledge. Practical implications: Introduced relationships between Knowledge Examples Tacit, Opinions and Ideas.	S

(Ganguly et al., 2019)	This study aims to concentrate on the role of tacit knowledge sharing in driving organizational innovation capabilities. In particular, the study considers social capital (relational, cognitive and structural) as an important precursor to tacit knowledge sharing which in turn, affects an organization's innovation capability.	Review of the existing literature in the field of knowledge sharing and innovation to derive a set of constructs.	Journal of knowledge management	This study suggests that relational social capital and cognitive social capital are positively related to tacit knowledge sharing, structural social capital does not have a significant effect on the same. In addition, it was also observed that tacit knowledge sharing and knowledge quality are positively related to innovation ability.	S
(Fraser, Beswick, & Crowley, 2019)	This study reports on the Process used in the STEMCrAfT project to explain experienced science and Mathematics teachers use when selecting and using resources, and the resulting framework.	Participant. 26 experienced science and/or math teachers-ematics 18 in Tasmania participates with 11 inexperienced or out-of-field teachers of this subject (two in Tasmania).	Teaching and Teacher Education	The results show that teachers who are inexperienced and often leave the teaching field in this context face difficulties in accessing professional learning and mentoring. While increasing their access to quality resources is useful, these teachers need to decide whether to resources according to their context and can use them with confidence.	M
(Johnson et al., 2019)	This study describes two case studies of British manufacturing applying a systematic analysis method to capture and research tacit knowledge and skills applied in visual inspection of aerospace components.	Data from interviews and observations were analyzed using Hierarchical Task Analysis (HTA)	Applied Ergonomics	The results show that the method is effective in generating knowledge, and indicate that engineering skills are indispensable when visual inspection standards are less specific or tasks require greater subjectiveness. Interpretation The implications of these findings for future research and development of the manufacturing industry will be discussed	S

Figure 1. Summary of All Studies That Meet The Inclusion Criteria

The results of this literature review are presented in the following three focus areas of discussion: about concepts fine motor development, then the influence of fine motor skills in daily life and how activities coloring in improving fine motor skills.

Quality Evaluation

We have assessed the quality of the articles included in this literature based on the format of the 10-question Article Quality Assessment tool. There are 12 articles in the very good category, and 7 articles in the moderate category.

Improvement of Fine Motor Competence With Activities Coloring

Study	QA.1	QA.2	QA.3	QA.4	QA.5	QA.6	QA.7	QA.8	QA.9	QA.10	Total Score	Initial rater agreement
S1	Y	Y	N	Y	N	N	Y	N	N	Y	6	M
S2	Y	Y	N	Y	N	N	Y	Y	Y	Y	7	M
S3	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	9	S
S4	N	Y	N	Y	N	N	Y	N	N	Y	5	M
S5	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	8	S
S6	Y	Y	Y	N	Y	N	Y	N	Y	Y	8	S
S7	Y	Y	N	Y	Y	N	Y	N	N	Y	7	M
S8	N	Y	N	Y	N	Y	Y	Y	N	Y	6	M
S9	Y	Y	Y	N	Y	N	Y	N	Y	Y	8	S
S10	Y	Y	Y	Y	Y	N	Y	N	Y	Y	7	M
S11	N	Y	N	Y	Y	Y	Y	N	N	Y	5	M
S12	N	Y	Y	N	N	N	Y	Y	Y	Y	5	M
S13	Y	Y	N	Y	N	N	Y	N	Y	Y	6	M
S14	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	9	S
S15	Y	Y	N	Y	N	N	Y	N	Y	Y	6	M
S16	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	9	S
S17	Y	Y	N	Y	Y	N	Y	Y	Y	Y	8	S
S18	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	9	S
S19	Y	Y	N	Y	Y	N	Y	N	Y	Y	7	M
S20	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	9	S

Note: S1-S17=Study, QA= Quality Assessment, Y=Yes, N=No, S=Strong, M=Moderate

Figure 2. Quality Evaluation

The Concept of Fine Motor Development

Fine motor skills are movements that involve certain body parts and are carried out by small (smooth) muscles and require careful coordination, such as cutting along lines, writing, squeezing, grasping, drawing, arranging blocks, inserting marbles into holes, opening and close objects easily, pour water into glasses without spilling, use brushes, crayons and markers, and fold. In Indonesian the words "motor" and "movement" are translated as motion or movement without containing any differences in them. In fact, the meaning of these two words is different. "Movement" is motion that is external or from outside and is easily observed, while "motor" is motion that is internal or from within, constant and difficult to observe.

According to Gallahue (1998) argues that there are 5 levels in learning movement in early childhood, namely; level of exploration, the level of discovery, the level of integration, the level of selection, the level of refinement. Fine motor movements are movements that only involve certain body parts and are carried out by small muscles. This requires eye and hand coordination to complete such activities as coloring, sewing, combing,

buttoning clothes, writing, weaving and so on. Sudono (2007) revealed that there are three fine motor skills, namely: (1) fine motor movements including hand and finger muscle movements with the eyes, (2) fine motor skills referred to as finger coordination, which is the result of training and learning without neglecting the maturity process, (3) Fine motor skills are defined as movements that involve part of the body's muscles that do not require energy, but require hand-eye coordination.

The development of fine motor movements of children who are at the age of kindergarten is emphasized on the coordination of fine motor movements, in this case related to the activity of putting or holding an object using the fingers, especially the thumb and index finger, so that children are skilled in coordinating eyes and hands. For example, the child holds objects correctly, writes quickly and neatly, is skilled at cutting, folding, coloring, picking up small objects, crouching, and cutting. This ability is called grasping. The grasping ability in children includes palmer grasping and prince grasping (Wiyani, 2013). Palmer grasping is the child grasping an object using the palm of the hand. Usually children under 1.5 years are more likely to use this grip.

From some of the explanations above, it can be concluded that fine motor skills are skills in coordinating the movements of small muscles (hand and finger muscles) which are used to perform various activities that require eye and hand coordination. This includes the ability of the hands to hold, grip, pinch and shape.

Physical Motor Development in Early Childhood

1. A number of motor perception skills to be developed including eye-hand eye-foot coordination such as drawing, writing, manipulating objects, visual tracking, throwing, catching, and kicking.
2. The ability of motor movements (locomotor skills) such as moving body through space, walking, jumping, marching, running, jumping, sprinting, rolling, crawling, moving slowly.
3. Static movement skills such as standing still place, taking turns, turning, reaching, swaying, squatting, sitting, and standing.
4. Management or body control such as body awareness, space awareness, rhythm, balance and the ability to start, stop and change direction.

5. Children's Physical Growth and Development. Fine motor movements have an important role in improving the fine motor arts that only involve certain body parts that are carried out by small muscles.

Therefore, motor movements should not require energy but require careful and thorough coordination.

Influence of Fine Motor in Daily Life

Physical motor skills are very important to support daily life, therefore the physical motor skills of early childhood must be developed from an early age, both gross motor skills and fine motor skills. According to an article written (Lolita Indraswari, 2012) gross motor skills require the coordination of certain muscle groups of children which can make them jump, climb, run, ride a bicycle. Meanwhile, according to an article written by (Marliza, 2012) the development of fine motor movements of kindergarten children is emphasized on the coordination of fine motor movements in this case related to the activity of putting or holding an object using the fingers.

Preschoolers also enjoy participating in light motion activities such as drawing, coloring, painting, cutting, and pasting (Morrison, 2012). Pre-school children here are included in group B, namely ages 5-6 who should like coloring activities using various materials. At the next age, namely the age of 5-6 years, it is very appropriate to improve children's fine motor skills through coloring activities so that children's fine motor skills are more mature. Fine motor maturity of group B children aged 5-6 years is very important as initial capital for writing skills which are needed at the next level of education. The ability to write is closely related to the flexibility of the fingers and wrists as well as good hand eye coordination which is the goal in fine motor development activities for children aged 5-6 years.

Coloring Activities in Improving Motor Skills

One of the routine activities carried out in Kindergarten is coloring. Coloring activities usually have become part of children's lives, not only as an activity to fill children's empty time, but also as a child's self-actualization in the field of art. According to Hajar Pamadhi and Evan Sukardi S. "Coloring activities will invite children how to direct children's habits of spontaneous coloring into habits of pouring colors that have educational value. In coloring

activities, each child has different abilities in terms of coloring, there are children who can color with various color combinations, some can color one object with only one color.

Preschoolers also like to participate in light movement activities such as drawing, coloring, painting, cutting, and pasting (Morrison, 2012: 221). Pre-school children here include group B children aged 5-6 years who should like coloring activities using various materials. variety. Coloring activities are coloring activities carried out using various media such as crayons, markers, colored pencils and food coloring. According to the research of "Sully" and "Kersehen Steiner" in Imam Effendi (2004), there are several stages of drawing and coloring for children through several periods, including: 1) Scratch period: until the age of 3 years the child scratches something, but at the initial stage there is no specific purpose, then he is something with a scratch. A curved line, for example, is sufficient for ropes, snakes, and flags. 2) Schematic period (chart) for 3-4 years old, a child is something with a shape/scheme, it is his imagination/based on the object he sees. 3) The line form period for ages 7-9 years, children are able to place line shapes into object shapes. 4) Silhvet period (shadow picture) for ages 9-10 years. Images are no longer limited by shapes and lines but can contain shadows and three-dimensional images. 5) Perspective period at the age of 10-14 years, where children already understand the terms of perspective.

According to "Sir Cyril Burt" in Imam Effendi (2004:7) the picture/coloring based on age development is as follows: 1) At the age of 2-5 years it is called the scribble age or also chicken claw. 2) At the age of 4 years referred to as the line period 3) At the age of 5-6 years referred to as the descriptive period of symbolism. 4) At the age of 7-8 years is referred to as the descriptive period of realism. 5) At the age of 9-10 years is referred to as the period of visual realism. 6) At the age of 11-14 years is referred to as the repressive period

In his progress, a child generally experiences 4 stages of development, namely as follows: 1. The level of scratching, which is in the form of streaks of lines without a specific purpose and the child does not understand what he is doing. 2. The level of refinement, namely what is painted is slightly oriented to the objects around it or what is painted based on observations of its environment. 3. The level of reasoning, namely when the child is scratching he

finds understanding of what he is making, then continues to color the half or half made according to the intentions that suddenly arise when he is working. This is where aesthetic values begin to emerge. 4. Logical level, where the child can determine what will be made. He was able to find the initial concept of the work of creation.

Coloring activities are very appropriate for developing children's fine motor skills because through coloring activities children learn about early writing skills, namely the ability to hold coloring tools, move wrists and very hand eye coordination useful for further education. Therefore, applying coloring activities to early childhood is very appropriate. This is in accordance with the opinion of Pamadhi (2011) that children really like to color through various media, either very drawing or putting colors when filling in the image fields that must be colored. When children are happy or like to do activities, the purpose of providing stimulation can be maximally achieved. Based on the discussion and data obtained, it shows that the fine motor skills of children are increasing, especially in the aspect of holding coloring tools. Therefore, the overall results can be concluded that the activity of coloring pictures has an effect on children's fine motor skills.

CONCLUSION AND RECOMMENDATION

From the explanation above, it can be concluded that through drawing and coloring activities can improve the fine motor skills of early childhood. Coloring activities are alternative learning activities to stimulate children's fine motor skills so that they can develop optimally and references and motivation to provide learning activities that are not boring for children. Based on the results of the activity of coloring pictures with watercolor media that has been carried out using two cycles and based on all the discussions and analyzes that have been carried out, it can be concluded that learning through coloring pictures with watercolor media has a positive impact on improving fine motor skills in early childhood

ACKNOWLEDGEMENTS

The author would like to thank the team members in writing this article, for their guidance and support so that this article can be written properly.

REFERENCES

- Alawiyah, N., & Attamim, N. (2020). The Development Of Fine Motor And Visual Motor Skills Of Children 4-5 Years Old To Get Ready Write. *JECIES: Journal of Early Childhood Islamic Education Study*, 1(1), 15-33.
- Basa, F. L., Sutarto, J., & Setiawan, D. (2020). Finger Painting Learning to Stimulate Motor Development in Early Childhood. *Journal of Primary Education*, 9(2), 193-200.
- Fitrianingsih, N., & Sari, N. S. N. I. (2019). The Influence Of Picture Coloring On Fine Motor Development In Children Aged 4-5 Years. *Journal of Science Innovare*, 2(01), 19-22.
- Haryati, L. Pengaruh Kegiatan Mewarnai Gambar Terhadap Kemampuan Motorik Halus Anak Di Kelompok B2 Tk Bustanul Athfal Aisyiyah III Palu. *Bungamputi*, 4(1).
- Lisdarlia, L., & Salwiah, S. (2018). Meningkatkan Kemampuan Motorik Halus Anak Melalui Kegiatan Mewarnai, Menggunting Dan Menempel (3m) Di TK Mekar Indah Kota Kendari. *Jurnal Riset Golden Age PAUD UHO*, 1(1), 48-52.
- Mariati, M., & Puteri, I. A. W. (2016). Meningkatkan Kemampuan Motorik Halus Melalui Kegiatan Mewarnai Pada Anak Kelompok B Di TK Ar-Rahma Muara Badak Pada Tahun Ajaran 2015/2016. *Jurnal Warna: Pendidikan dan Pembelajaran Anak Usia Dini*, 1(1), 19-32.
- Meylinie, N., Astuti, I., & Marmawi, M. (2009). Pembelajaran Mewarnai Gambar untuk Meningkatkan Kemampuan Motorik Halus pada Anak Usia 5-6 Tahun (Doctoral dissertation, Tanjungpura University).
- Ningsih, B. S., Mayar, F., & Eliza, D. Pelaksanaan Stimulasi Motorik Halus Pada Latihan Kehidupan Praktis Di Tk Pioneer Montessori School Padang. *Cakrawala Dini: Jurnal Pendidikan Anak Usia Dini*, 10(1), 1-10.
- Nirwana, C., Hasmalena, H., & Syafdaningsih, S. (2019). *Peningkatan Kemampuan Motorik Halus Anak Melalui Kegiatan Menggambar Bebas Pada Kelompok A Di Paud Karunia*. ILAHI PRABUMULIH (Doctoral dissertation, Sriwijaya University).
- Rocmah, L. I., & Rezania, V. (2017). Penerapan Bermain Messy Play dalam Meningkatkan Kemampuan Motorik Halus Anak Tk Kelompok A. *EDUCHILD Jurnal: Pendidikan, Sosial dan Budaya*, 6(1), 1-78.
- Sari, T. I., Evia Darmawani, M. P., Kons, R. N., & Sos, S. *Meningkatkan Kemampuan Motorik Halus Anak Melalui Kegiatan Mewarnai Pada Anak Kelompok B Di Tk Aisyiyah 2 Palembang*.

- Sitorus, A. S. (2016). Perkembangan Motorik Halus Pada Anak Usia Dini. *JURNAL RAUDHAH*, 4(2). Syakroni, A., & Widat, F. (2019). Exploration of Fine Motor Skills through the Application of Paint. Wandu, Zherly & Mayar, Farida. (2019). Analisis Kemampuan Motorik Halus dan Kreativitas pada Anak Usia Dini melalui Kegiatan Kolase. *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini*. 4. 363. 10.31004/obsesi.v4i1.347.
- Warnida, W. (2019). Upaya Meningkatkan Kemampuan Motorik Halus Melalui Kegiatan Mewarnai di Kelompok B1 TK Berkah Kota Jambi Tahun 2016/2017. *Jurnal Ilmiah Dikdaya*, 9(1), 132-140.