

Implementation of Visual Learning Media to Improve Early Childhood Fine Motor in Tk PGRI Among Siwi, Adipuro Village, Kaliangkrik

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ABSTRACT

Fine motor skills play a crucial role in early childhood development, involving coordination between eyes and hands. This article explores the significance of early childhood education in nurturing these skills, particularly focusing on kindergarten-aged children. Drawing on various studies and educational theories, it emphasizes the importance of providing adequate stimulation and learning opportunities during the formative years of 0-6. The research highlights the need for innovative approaches in teaching methods, especially considering the tendency of young children to become easily bored. Utilizing the Asset-Based Community Development (ABCD) method, the study conducted community service activities aimed at enhancing fine motor skills in early childhood within a specific village. Through observation, interviews, and collaboration with teachers, the research identified weaknesses in fine motor skills among children and developed visual learning media to address these issues. The study implemented various activities such as puzzles, coloring, and crafting, which proved to be engaging and effective in improving children's motor skills. Additionally, it discusses the theoretical framework of cognitive development, particularly Piaget's stages, emphasizing the role of play and hands-on experiences in facilitating learning. Ultimately, the article underscores the importance of utilizing available resources and integrating innovative learning media to create enjoyable and effective learning experiences for young children, thereby promoting their holistic development.

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INTRODUCTION

Fine motor skills are known as one aspect of early childhood development (Kholila & Khadijah, 2023), although there are still many who do not know how to provide proper learning to advance it. This fine motor ability is related to children's skills and also the nervous system that requires coordination between the eyes and hands (Crowley, 2014). The child will have the skills to use a spoon and fork when they are allowed to feed themselves. They can also put on and undress themselves. All these activities are a form of education for children to have responsible behavior (Paudia, 2011).

Early childhood education is an effort aimed at children aged 0-6 years (Paudia, 2011). Law No. 23 of 2003 concerning the national education system explains that early childhood education is a coaching effort given to children from 0-6 years old which is carried out through educational stimulation through education to help children's growth and development both physically and spiritually so that children are better prepared to enter further education. This is similar to the research conveyed by Dita Primashanti Koesmadi (Care, 2019) that early childhood education as an effort to stimulate and stimulate children from the age of 0-6 years is carried out by providing educational stimuli to help children's growth and development, both physical and spiritual so that children are better prepared to enter further education.

In this case, early childhood is the golden age of children (golden age), which is a development that must be optimized and a period when early childhood receives a lot of educational and environmental knowledge (Friedrich, 2017). Early childhood development can be optimal if given adequate nutrition so that the body becomes healthy and gets good learning knowledge. Child development can be seen from various aspects, namely cognitive, physical, motor, social, language, and moral (Barrouillet, 2015).

In developing early childhood potential, researchers focus on developing early childhood fine motor skills in Tk PGRI Among Siwi. In contrast to gross motor, gross motor itself is an ability related to body movements that use large muscles or most, all limbs that are affected by the maturity of the child itself, such as walking, jumping, climbing, tiptoeing, running, catching and throwing a ball, concurrently and creeping. Fine motor is the development of motion which includes small muscles with eye-hand coordination. Examples such as drawing, writing, cutting, arranging puzzles, or inserting blocks according to their shape.

Fine motor development activities in kindergarten PGRI Among Siwi children are very useful for training the ability to coordinate children's motor skills such as coordination between eyes and hands which can be developed by learning and playing methods. Fine motor development in children themselves aims to, train small muscles, such as hand and finger movements, and coordinate eye speed with hands. Other benefits of fine motor development include language, social, and cognitive development. Because every aspect of learning is not separated from one another.

There are several that can affect fine motor development, namely the development of the nervous system, the ability of the child's body to move his body, the surrounding environment, the age of the child, heredity, differences in child sex, and chromosan abnormalities in children. Fine motor skills in children certainly differ from one child to another, it can be caused by children's habits of playing and also the education provided by their parents.

There are various ways to develop fine motor skills for early childhood including drawing, assembling puzzles, coloring, making shapes of objects with night or clay, arranging color blocks, and others. Fine motor development activities such as the example above aim to train children's skills and coordination such as eye coordination with hands that can be done with games.

Based on observations made by researchers in the field fine motor learning in kindergarten among Siwi children still focuses on magazines in kindergarten among Siwi, so children feel bored if there are no other variations in learning. And children also become less skilled at moving their fingers.

Of the various ways to develop fine motor skills in early childhood, researchers will apply learning by using learning media that can attract children's attention to be more enthusiastic about learning. Early childhood is the age of play, so researchers make interesting learning media and can improve skills in moving fingers for early childhood. Therefore, researchers apply visual learning media to improve fine motor skills in early childhood at Tk PGRI Among Siwi.

Some previous studies have underscored the importance of fine motor skills in early childhood development (Wandi & Mayar, 2019). Naufal and Ardiani (2023) highlight the need to provide appropriate learning to advance these skills (Naufal & Ardiani, 2022), while Maya and Sriandila emphasize the correlation between fine motor skills with children's abilities and the nervous system that requires coordination between eyes and hands (Mayar & Sriandila, 2021). Ariyanti (2016) emphasized that early childhood education plays an important role in preparing children for further education (Ariyanti, 2016).

Similarly, research by Dita Primashanti Koesmadi (Care, 2019) emphasizes the importance of stimulating education in early childhood to facilitate their growth and development. These studies demonstrate the relevance and urgency to continue exploring innovative learning methods and approaches to improving fine motor skills in early childhood.

This study aimed to explore the important role of early education in strengthening fine motor skills in early childhood, with a particular focus on kindergarten-aged children. Through an innovative approach and using Asset-Based Community Development (ABCD) methods, this study aims to identify weaknesses in children's fine motor skills and develop effective visual learning media to improve those skills. The contribution of this research lies in the practical application of educational theories and cognitive development in real contexts, as well as highlighting the importance of the integration of available resources and the innovative use of learning media to create fun and effective learning experiences for early childhood, thus supporting their holistic development.

METHOD

Our service approach uses ABCD (*Asset Based Community Development*) (Ennis & West, 2010). The ABCD method is a model of the community development approach.

This community service activity was carried out in Adipuro Village, Kaliangkrik District, Magelang Regency which is located at the foot of Mount Sumbing with an altitude of approximately 1500 meters above sea level. The implementation of fine motor development in early childhood is focused on Tk PGRI Among Siwi Adipuro Village. By using learning media made by utilizing used paper and cardboard by researchers.

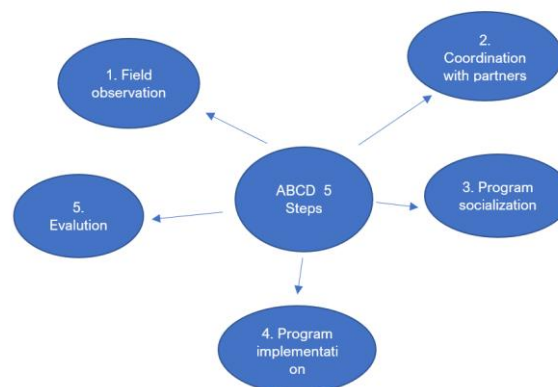


FIGURE 1. Steps Use ABC Method

TABLE 1. Steps to Use the Asset-Based Community Development (ABCD) Method

Steps	Description
1. Introduction to Community Assets	Identify and acknowledge existing assets within the community, including knowledge, skills, experience, and physical assets such as land, buildings, and equipment.
2. Mapping Aset	Create a map or list all assets identified in the community. Use methods such as group discussions, surveys, or interviews to get more information.
3. Understanding Potential and Needs	Review the identified assets and identify the potential and needs of the community.
4. Network Building and Collaboration	Facilitate meetings between community members, community organizations, and other relevant parties to share information, ideas, and resources.
5. Planning Actions Together	Together with community members, create an action plan to leverage existing assets to meet needs and achieve goals.
6. Implementing an Action Plan	Execute an action plan agreed upon by the community. Work together to optimize the use of existing assets and address issues as they arise.
7. Evaluation and Learning	Evaluate the results of the implementation of the action plan, and identify what worked and what needs to be improved. Use these learnings to improve future ABCD processes.
8. Empowerment and Sustainability	Increase the capacity of community members to engage in asset management and take initiative in solving problems. Ensure the ABCD process is continuous and empowering.

Results and Discussion

Based on research conducted by researchers at Among Siwi Kindergarten during continuous learning, the results obtained from the researchers' observations are that there are still children who have weak fine motor skills, this can be seen from the lack of understanding of children in matching colors and numbers.

After making observations, the next step was for researchers to conduct interviews with teachers in the kindergarten. In learning at Tk Among Siwi using magazines, in these magazines, they are trained to read, count, and write. Therefore, in developing children's ability to recognize colors, letters, and numbers, researchers make a learning medium by utilizing paper and cardboard.

**FIGURE 2.** Learning media

The word media comes from Latin and is the plural form of the word medium meaning intermediary or introduction. In general, media is defined as an intermediary or messenger of messages from the sender to the recipient of the message. Here are some opinions of education experts about the media, namely:

- According to Briggs (1970), media is all physical tools that can present messages and stimulate students to learn (Amalia, 2018).
- According to the National Education Association (NEA), media are both printed and audiovisual forms of communication and their equipment, and they should be able to be circumvented, seen, heard, and read.
- According to Gagne and Reiser (1983), educational or teaching media are the physical devices through which instructional messages are communicated (An, 2020).
- Puspitarini, defines educational media as any tool, both software and hardware used as a communication medium and aims to improve the effectiveness of the teaching and learning process (Puspitarini & Hanif, 2019).

According to the class teacher, we interviewed, "the obstacle in the learning process at Tk Among Siwi is that educators must continue to be innovative in teaching because children are easily bored with learning or games". Because early childhood is still the age of play, therefore learning while playing is the right solution to increasing the spirit of learning in children.

Learning media can be adjusted to children's learning styles (Nursasono et al., 2020), considering that each child has a different learning style. Some children have habits of visual, audio-visual, kinesthetic, and multimedia learning styles (Sit, M., Dahlan, Z., & Panjaitan, 2021). Using learning media can make it easier for children to understand what is explained by the teacher and follow learning activities well. This is evident from a researcher, namely (Ratnasari, 2017) he explained that the use of learning media using smart boards in group A children, the application of smart boards can improve fine motor skills in children during animal image laying activities which obtained an average of 75% of the group.

In learning at Tk Among Siwi, researchers create visual learning media to develop fine motor skills in children at Tk Among Siwi (Nurkamto et al., 2024). The development of fine motor skills in Tk Among Siwi using learning media certainly requires discussion to clarify in this study. In this case, improvements are needed in learning and motivating children so that children become happy and enthusiastic in learning. One of them is the creation of learning media "planting sunflowers from used cardboard". The manufacturing method is as follows:

TABLE 2. Planting steps sunflowers from used cardboard

Media name	Sunflower plants
Target	Early childhood
Developed capabilities	1. Pre-mathematics (learn to count 2. Improve fine motor 3. Eye-hand coordination 4. Visual perception 5. pre writing
Materials and tools	Material: -used cardboard size 20cm x 25cm -Color paper -Straw -Cotton bath Tools: scissors/cutter, shooting glue, pencil/dye
How to make	1. cut cardboard to size 2. Cut a straw with a length of 5cm 3. Draw flower pots and sunflowers and then numb the scissors

Media name	Sunflower plants
How to use	<ol style="list-style-type: none">4. Prepare the Cotton Bat5. Then attach the straw and pot to the cardboard, cut the bat with sunflower, and put the bat into the straw.1. Install the sunflower arrangement according to the number and then remove it again2. Reattach the sunflower according to the number given

Figure design



FIGURE 3. Learning media design

The learning media that the author applied at Tk Among Siwi turned out to attract interest in learning from children and they were very happy and enthusiastic in learning. Teachers at Tk Among Siwi are also very happy with the learning media that researchers make. Learning using these learning media can be carried out by learning while playing so that fine motor skills in children by training coordination between eyes and hands have become fun learning.

With the learning media applied at Tk Among Siwi, the children are very happy and more enthusiastic about learning. Because learning can be done while playing and can also develop fine motor skills in early childhood (Siswantini et al., 2023). The teachers at Tk Among Siwi are also happy because they have provided interesting learning for the children. In learning at Tk Among Siwi, researchers made several learning media such as puzzles, color ice cream, rolling ball games, sunflower plants, and fish counting (Eka Febriyanti et al., 2023). As shown below:



FIGURE 4. Learning media



FIGURE 5. Learning media



FIGURE 6. Learning media



FIGURE 7. Learning media

On the other hand, based on the results of research in early childhood in Tk mong Siwi some children have weak fine motor skills, this can be seen from the child's comprehension and eye coordination with hands that children do in learning. Small movements such as puzzle games, putting numbers together, and scissors can improve fine motor skills in early childhood(Wandi & Mayar, 2019). All fine motor activities such as the example above will train concentration and eye coordination with hands. By having fine motor skills, it can help in children's daily activities and help children to avoid difficulties and accidents.

This is following the theory presented by Jean William Fritz Piaget a Swiss psychologist known for his work on child development. Piaget's theory of cognitive development and epistemological view are together called genetic epistemology. Piaget placed great importance on the education of children"Cognitive Development in Children: Piaget's Development and Learning" is a work that elaborates the theory of cognitive development introduced by Jean Piaget.

Jean Piaget introduced a model of cognitive development consisting of four main stages: sensorimotor, preoperational, concrete operational, and formal operational, each of which marks the achievement of various cognitive abilities that develop gradually in the child. He also introduced the concepts of assimilation and accommodation, where assimilation is the process by which the child perceives new experiences based on existing schemes, while accommodation is the adjustment of schemes for new experiences.

Piaget emphasized the important role of schemas in a child's cognitive development, where children actively build and change their schemas through interaction with the environment. He also highlights the concept of permanent objects as the understanding that objects remain present even though they are not directly visible, and points out that children go through the sensorimotor stage when they begin to understand this concept. Piaget conducted experiments to show how children at the concrete stage of operations begin to understand the concept of conservation, that is, the idea that the amount of matter does not change even though its form changes. In addition, Piaget emphasized the role of play in a child's cognitive development, believing that play provides opportunities for children to experiment, develop creativity, and deepen their understanding of the world(Friedrich, 2017).

CONCLUSION

In its conclusion, this study confirms the importance of early education in strengthening fine motor skills in early childhood. By integrating Asset-Based Community Development (ABCD) methods and innovative approaches to learning, the study successfully identified weaknesses in children's fine motor skills and developed effective visual learning media to enhance those skills.

His contribution not only lies in the practical understanding of educational theories and cognitive development but also highlights the urgency of using available resources and the application of innovative learning media to create fun and effective learning experiences for early childhood, thus supporting their holistic development optimally. As such, this research provides an important foundation for the development of early education that focuses on fine motor skills and confirms that innovative approaches to learning can enrich the learning experience of early childhood and support their overall development.

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