

UTILIZATION OF NATURAL MATERIALS OR USED MATERIALS FOR FINE MOTOR STIMULATION AND CHILDREN'S CREATIVITY AT AL-BERKAH PANGIRKIRAN DOLOK KINDERGARTEN

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Abstract

This research is based on the limitations of creative learning media and the low ability of children to cut, paste, fold, and arrange simple shapes. This service activity aims to utilize used materials as a learning medium in stimulating children's fine motor development and creativity at Al-Berkah Pangirkiran Dolok Kindergarten. The method used in this activity is a participatory approach by involving teachers and children through direct practice, mentoring, and evaluation of the work. The results of the activity show that the use of used materials has a positive impact on children's development. As many as 80–83.4% of children showed improved fine motor skills, characterized by the skill of sticking leaf collage, as well as making pencil cases out of aqua and straws creatively. However, there are still around 15-20% of children who need further assistance, especially in collage activities that require high concentration and more fine coordination. Thus, it can be concluded that the use of natural materials and used materials can be an alternative learning medium that is cheap, environmentally friendly, and effective to improve children's fine motor and creativity from an early age. This activity also has a positive impact on teachers and parents to be more creative in utilizing the surrounding environment as a source of children's learning.

Keywords: natural materials, used materials, fine motors, creativity,

Abstrak

Penelitian ini dilatarbelakangi oleh keterbatasan media pembelajaran kreatif dan kemampuan anak yang masih rendah untuk memotong, menempel, mengikat, melipat, dan merakit bentuk sederhana. Kegiatan pengabdian masyarakat ini bertujuan untuk memanfaatkan bahan daur ulang sebagai media pembelajaran untuk merangsang motorik halus dan kreativitas anak-anak di TK Al-Berkah Pangirkiran Dolok. Metode yang digunakan dalam kegiatan ini adalah pendekatan partisipatif yang melibatkan guru dan anak melalui praktik langsung, bimbingan, dan evaluasi karya yang dihasilkan. Hasil kegiatan menunjukkan bahwa penggunaan bahan daur ulang berdampak positif bagi perkembangan anak. Antara 80-83,4% anak-anak menunjukkan peningkatan keterampilan motorik halus, ditandai dengan kemampuan mereka untuk memotong sesuai pola, menempelkan kolase, dan melipat kertas dengan baik. Kreativitas anak-anak juga meningkat, terbukti dari beragam ide dan jenis karya yang dihasilkan, seperti kolase warna-warni, bentuk lipat sederhana, dan bangunan. Kreativitas anak juga meningkat, terbukti dengan beragam ide dan karya yang dihasilkan, seperti kolase warna-warni, bentuk lipat sederhana, dan bangunan mini yang terbuat dari karton bekas. Namun demikian, sekitar 15-20% anak-anak masih membutuhkan bantuan lebih lanjut, terutama dalam kegiatan seperti manik-manik yang menuntut konsentrasi tinggi dan koordinasi yang lebih halus. Dengan demikian, dapat disimpulkan bahwa pemanfaatan bahan daur ulang dapat berfungsi sebagai media pembelajaran alternatif, murah, ramah lingkungan, dan efektif untuk meningkatkan keterampilan motorik halus dan kreativitas pada anak sejak dini. Kegiatan ini juga berdampak positif bagi guru dan orang tua untuk lebih kreatif dalam memanfaatkan lingkungan sekitar sebagai sumber belajar bagi anak.

Kata kunci: Bahan Alami, Bahan Daur Ulang, Keterampilan Motorik Halus, Kreativitas

1. Introduction

Education is something that takes place continuously and uninterrupted from generation to generation which is intended for every citizen in shaping character and developing the abilities that exist in children through the learning process. Through quality education, it will be able to produce a young generation who have the necessary competencies for the progress and independence of the Indonesian nation in the future (Syafriyanto, 2019). In addition, the rapid development of science and technology, including information technology, teachers are no longer the only source of learning. The function of learning also shifts from just inheriting the culture of the past to reconstructing the culture based on the characteristics of the child (Asriana Harahap & Harahap, 2023).

Early childhood education is a form of education that focuses on laying the foundation for growth and development, both motor coordination (fine and rough), emotional intelligence, and spiritual intelligence. Early childhood is a group of children aged 0-6 years old which is often referred to as *golden age* and age which is the strongest foundation in building future generations (Sakinah Siregar & Niken Farida, 2022). Experts call it a period that occurs only once in the development of human life. Early childhood growth and development need to be directed at a balanced physical, cognitive, socio-emotional, language, and creativity as the right foundation for the formation of a whole personality (Sakinah & Dewi Shara Dalimunthe, 2022). At this time, the child is going through an extraordinary process of growth and development. Children have not had many negative influences from outside or their environment (Saputra, 2018). In other words, parents and educators will find it easier to direct children to be better. Early childhood is a unique phase of life with distinctive characteristics, both physically, psychologically, and morally."

The purpose of early childhood education is to help them develop various potentials, both psychological and physical, which include morals and values of religion, social-emotional, cognitive, language, physical/motor, independence and art to be ready to enter basic education (Irjua Indrawan Hadion Wijoyo, 2020). The importance of education for early childhood, because it was the beginning of the formation of an individual's mental and character before entering school at the first level in elementary school (SD) (Popon Nurhayati, 2021). Early Childhood Education (PAUD) is a child-centered school, often referred to as preschool, that aims to develop children's potential (Sakinah Siregar, 2021). So that PAUD institutions are required to provide several aspects of developmental activities such as cognitive, language, emotional, physical and motor.

One of the aspects of child development that must be stimulated is the motor and creativity aspects. Fine motor skills are the ability of children to coordinate the movements of small muscles in the fingers and hands. Fine motor skills are the basis for children's skills to write, draw, fold, compose, and perform various daily activities. Without proper stimulation, children's fine motor development can be inhibited, resulting in difficulties for children to participate in learning activities at the next level.

Al-Berkah Pangirkiran Dolok Kindergarten is one of the early childhood education institutions located in Pangirkiran District. The presence of this institution is very important because it is the main forum for children around it to obtain early education before continuing to the elementary school level. The conditions of children in this kindergarten are quite diverse, but most of them come from families with a modest economic level. This has implications for the limited provision of learning facilities and infrastructure, including educational media and game tools that are generally needed to stimulate children's development.

In daily learning practices, teachers have tried to facilitate various activities to train children's fine motor skills, such as drawing, coloring, scissors, or gluing. However, the media used is still limited and tends to be monotonous, so children often feel bored easily. The limitations of the manufacturer's educational game tools, which are relatively expensive, are also an obstacle in itself. In fact, at an early age, children really need varied, interesting, and fun media so that they are motivated to be actively involved in the learning process.

One alternative solution that can be applied is the use of natural materials and used materials as learning media. Used materials such as Aqua, straws, and bottle caps are objects that are easy to find in the surrounding environment, cheap, and often even considered to have no use value. Through the creativity of teachers, these used materials can be processed into useful media, for example made into educational toys, collage tools, or meronce media. With such activities, children are not only trained in fine motor skills, but also directed to develop creativity, imagination, problem-solving skills, and caring for the environment.

Despite its great potential, the results of observations show that the use of used materials at Al-Berkah Pangirkiran Dolok Kindergarten is still rare. Teachers tend to use existing media in a limited way without much innovation in processing surrounding materials. As a result, children's fine motor development has not been

maximized, and children's creativity in producing simple works has also not been honed properly. This shows the need for a more innovative learning strategy based on the use of environmental potential.

A number of previous studies also support that the use of used materials is effective in improving early childhood development. As researched by Reza Nur Kholifah and Nuzsep Almigo (2024) shows that the use of collage as a learning medium at State Elementary School 25 Pemmouthan, Muara Baru Village, Ogan Ilir Regency, South Sumatra shows that the fine motor development of students is quite good according to their developmental age. This is seen by the results of observation and treatment in combining eye movements, hands, hand flexibility, and dredging origami paper. The use of collage materials also encourages students to try new things such as learning while playing with image media and temples. Collages that balance the lessons also serve as entertainment for students. Students are more open to trying new concepts, materials and methods to create different collage works. Likewise, research conducted by Marwati proves that the use of bottle waste encourages an increase in the creativity of group A students. In addition to being cheap, it is also easy to foster the process of creativity and innovation for teachers to carry out the process of teaching and learning activities in the classroom.

Based on this description, it can be concluded that the use of used materials is the right step to overcome the limitations of learning media at Al-Berkah Pangirkiran Dolok Kindergarten. This effort is expected not only to stimulate fine motor development, but also to encourage children's creativity to be more active, independent, and innovative. Therefore, this study aims to find out how the use of used materials can stimulate children's fine motor development, as well as how the use of used materials can increase children's creativity in Al-Berkah Pangirkiran Dolok Kindergarten.

2. Research Methods

Community service activities regarding the use of used materials for fine motor stimulation and children's creativity at Al-Berkah Pangirkiran Dolok Kindergarten use a participatory approach that involves teachers and students directly. The service method is carried out with the stages of observation, preparation, teacher training, implementation of activities for children, mentoring, and evaluation.

In the initial stage, observations were made to determine the condition of the infrastructure, available learning media, and the needs of teachers and children in developing fine motor skills and creativity. The results of observations are the basis for determining the type of relevant activity. The preparation stage is carried out by preparing natural materials, namely leaves and used materials, namely aqua and straws.

The next stage is teacher training, which is to provide explanations as well as direct practice on the use of natural and used materials as learning media. The training is carried out by interactive lecture methods, demonstrations, and hands-on practice. Teachers are invited to be creative in making educational game tools, such as collages from leaves and making pencil holders from aqua and straws.

After the training, the activity continued with the implementation with the children. Teachers and the service team invite children to practice activities using media from used materials. Children are directed to practice eye and hand coordination through sticking leaves, cutting aqua and straws so that they become pencil holders. This activity not only aims to stimulate fine motor skills, but also hone children's creativity in producing new works from simple materials.

Mentoring is carried out on an ongoing basis by monitoring the involvement of teachers in utilizing natural materials or used materials and children's responses during the activity. This process is also a means to provide motivation and solutions to the obstacles faced by teachers. In the final stage, an evaluation is carried out that includes two aspects, namely process evaluation (teacher and child participation, enthusiasm, and creativity in activities) and evaluation of results (children's products, fine motor development, and children's ability to complete activities diligently).

With this method, it is hoped that service activities will not only provide short-term benefits in the form of fine motor stimulation for children, but also have a long-term impact in the form of increasing teachers' skills in innovating using used materials as a cheap, easy, and environmentally friendly learning medium. Here is a table of activity details:

Table 1. Activity Description

Activity Stage	Form of Activity	Purpose	Output/indicator
Initial Observations	Identifying the conditions of learning media and the needs of teachers and children	Knowing the problems and needs at Al-Berkah Kindergarten	Data on learning media needs
Preparation	Drawing up plans, preparing used materials, making examples of educational media	Prepare materials and activity plans	Ready-to-use used materials, examples of educational media available
Teacher Training	Interactive lectures, demonstrations, media making practices from natural materials and used materials	Providing teacher skills in processing natural materials and used materials	Teachers are able to make simple educational media from natural materials and used materials
Implementation in Children	Teacher and child practice activities (collage, gluing, cutting and composing)	Train children's fine motor skills and creativity	Children produce simple works and are actively involved
Mentoring	Monitoring, guidance, and motivation during activities	Supporting teachers and children in carrying out activities	Teachers and children actively participated, activities went smoothly
Evaluation	Assess the child's involvement, creativity, and fine motor skills	Measuring the success of service activities	Improvement in fine motor and children's creativity can be observed

3. Results And Discussion

Community service activities on the use of natural materials or used materials for fine motor stimulation and children's creativity at Al-Berkah Pangirkiran Dolok Kindergarten are carried out through several stages involving teachers and children directly. The process of the activity can be explained as follows:

1) Observation and Preparation Stage

In the initial stage, observations were made on the condition of learning facilities, available media, and teachers' habits in using teaching materials. The results of observations show that the learning media used is still limited, generally in the form of picture books and stationery. Teachers are not used to using used materials as an alternative medium, while children tend to get bored quickly because of monotonous activities. Preparations are then carried out by preparing various used materials, such as cardboard, plastic bottles, used paper, straws, and bottle caps, as well as examples of simple educational media.

2) Teacher Training Stage

Teachers are given training on how to process used materials into learning media. The methods used were interactive lectures, demonstrations, and hands-on practice. The teacher looked enthusiastic because he got new insights about the use of materials that are easy to obtain in the surrounding environment. The results of the training showed that teachers were able to make several simple media, for example media from natural materials, namely dau collages, and from used materials, namely aqua bottles and used straws.

3) Implementation Stage in Children

The implementation of the activity was carried out with children. The teacher invites the children to practice activities such as gluing leaves and scissors, scissors, aqua and straws to make patterns, and arranging the straws into pencil holders. The children showed high enthusiasm, as seen from their enthusiasm for following every instruction. This activity is able to train eye and hand coordination, increase perseverance, and develop imagination.

4) Mentoring Stage

During the activity, the service team provided assistance to teachers and children. Teachers are motivated to continue to develop new ideas from used materials, while children are accompanied to be more thorough in cutting, pasting, or arranging. This assistance went well because teachers actively asked questions and tried various variations of activities.

5) Evaluation Stage

The evaluation was carried out by assessing the involvement of teachers and children, creativity in making works, and children's fine motor development. Teachers are able to produce new learning media and feel more confident using natural materials or used materials. Children are seen to be able to complete tasks more diligently, fine motor coordination increases, and the work made shows the development of creativity.

During the use of used materials at Al-Berkah Pangirkiran Dolok Kindergarten, children were actively involved in various activities such as cutting, gluing, folding, and arranging cardboard. This activity is carried out in stages with the guidance of the teacher so that children not only gain new experiences, but also have the opportunity to hone fine motor skills and express their creative ideas.

The changes that are seen during the activity are the increase in the ability of hand and eye coordination, accuracy, and patience of children when completing tasks. Children who previously had difficulty scissors or scissors are now more skilled and confident. Creativity is also increasingly visible from the works produced; For example, the shape of collages, as well as pencil boxes from aqua bottles and straws that are diverse according to their own imagination. To see more clearly the development of fine motor skills and children's creativity, the following is presented with data on the results of activities in the form of a table:

Table 2. Fine motor development and creativity

Yes	Activity Description	Number of Children	Percentage (%)	Description of Developments
1	Gluing leaves into collage	13 out of 15 children	86,7%	Creativity can be seen from the variety of images, neatness and precision of children in attaching.
2	Arrange used straws and aqua bottles into pencil holders	13 out of 15 children	86,7%	Creativity is evident from the varied pencil case and increased cooperation.

Based on the table, it can be seen that most children experience positive development in fine motor aspects and creativity. The activity of sticking leaves into collage was attended by 13 children with a percentage of 86.7% with quite good results. Children's creativity can be seen from the variety of shapes and colors used, showing that most children are able to express their imagination through simple media. Meanwhile, the activity of arranging used straws and aqua bottles into pencil holders showed high results, namely 13 children with a percentage of 86.7% were able to do it. The children seemed enthusiastic and showed a variety of building shapes, which signified that their creativity was growing.

With demikia, it can be concluded that the average achievement of children in activities reaches 80-86%, which means that most children have shown good development in fine motor and creativity. However, there are still a small number of children (around 15–20%) who need further assistance so that their skills can develop optimally.

4. Conclusion

Based on the results of the service activities, it was shown that the use of used materials as learning media was proven to be effective in stimulating children's fine motor development and creativity at Al-Berkah Pangirkiran Dolok Kindergarten. Children become more skilled in scissors, gluing, and arranging simple objects from used materials. In addition, their creativity is also growing with the emergence of variations of forms and ideas resulting from each activity. However, there are still a small number of children who need more intensive guidance, especially in activities that require high concentration such as making collages. Thus, the use of natural materials or used materials can be an alternative learning media that is cheap, easy to obtain, environmentally friendly, and able to improve children's skills from an early age, both from the aspect of fine motor and creativity development.

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