

Improving Fine Motor Skills through Collage Activities in Group B Children in TKIT Azzahira

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Abstract: This study aims to determine the effectiveness of collage activities in improving the fine motor skills of group B children in TKIT Azzahira. Through the Classroom Action Research (PTK) approach with two intervention cycles, the results showed a significant increase in children's fine motor skills from 26.7% in the initial condition to 86.7% in the second cycle. Collage activities that involve tearing, scissors, and gluing various materials have succeeded in improving eye and hand coordination, as well as children's basic fine motor skills. In addition, children become more active, confident, and enjoy the learning process. These findings confirm that collage activities are an effective and enjoyable method to develop fine motor skills in early childhood, while supporting their cognitive and social-emotional aspects. The implications of this study encourage the use of collage as an integral part of learning in early childhood education to improve children's overall learning readiness.

Keywords: Fine motor, Collage activities, Early childhood development

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INTRODUCTION

Early childhood is a very crucial phase in human development, often referred to as the golden age. During this period, various aspects of children's development, especially fine motor development, undergo significant growth and will greatly determine their abilities in the future (Gabbard, 2012). Fine motor refers to the ability to control the movement of small muscles found in the hands and wrists, such as precise finger movements and fine hand-eye coordination (Case-Smith & O'Brien, 2014). This ability is very important because it is the basis for various essential skills of children, such as writing, drawing, commemorating, and doing other activities that require precision and good coordination (Piek et al., 2008).

In early childhood, fine motor development contributes not only to the child's academic abilities, but also to the psychosocial aspect. Good fine motor skills can increase children's confidence because they are able to perform independent tasks that demand precision and concentration (Gallahue & Ozmun, 2006). On the other hand, delays or difficulties in fine motor development can affect a child's ability to learn and interact socially, and even have the potential to cause frustration and decrease motivation to learn (Cameron et al., 2012). Therefore, it is important for educators and parents to pay attention to the child's fine motor development and provide appropriate stimulation.

Based on initial observations at TKIT Azzahira on group B children, it was found that most children had difficulty in performing activities that required fine motor skills, such as cutting, gluing, or tearing paper with precision. These findings show that fine motor development in these children is not optimal and requires effective and engaging learning interventions to make children more motivated to practice and develop these skills (Case-Smith, 2000). This is in line with the opinion of a number of experts who emphasize the need for a creative and fun learning approach to optimize early childhood fine motor development (Berger, 2013).

One effective strategy to develop children's fine motor skills is through art activities, especially collage. Collage is a sticky art technique that involves various physical activities such as cutting, tearing, and gluing various materials such as colored paper, dry leaves, patchwork, and so on (Wilson & Wilson, 2016). Through collage activities, children not only learn to hone precision and hand-eye coordination, but also develop their creativity and self-expression skills (Eckhoff, 2012). This activity is considered very fun and able to provide the right stimulus for the development of small muscles in children's hands (Pica, 2013).

In addition to motor benefits, collage can also support children's cognitive and social development. In the process of creating collages, children learn to recognize the colors, shapes, and textures of the materials they use, thus helping them in the development of basic concepts such as grouping and observation (Malchiodi, 2005). Socially, collage activities that are often done in groups can improve communication skills, cooperation, and appreciation for the work of peers (Wilson & Wilson, 2016). Therefore, collage is not only a means of fine motor development, but also a comprehensive and fun learning medium.

This kind of fun learning approach is very important to be implemented in an early childhood education environment. According to Santrock (2011), fun learning can increase children's motivation and involvement, so that learning becomes more effective and memorable. Collage activities can be an alternative learning method that is in accordance with the characteristics of early childhood who are active and tend to learn through play and direct exploration (Saracho & Spodek, 2007). Thus, learning that uses collage art is expected to help children at TKIT Azzahira in overcoming the fine motor difficulties they experience.

In addition to collages, various studies have also shown that fine motor stimulation can be done with various activities that contain elements of play and art, such as forming plasticine, folding origami paper, or writing and drawing activities (Piek et al., 2010). However, collage offers uniqueness because it involves a variety of materials and diverse techniques so that it can provide a rich sensory experience for children (Malchiodi, 2005). This experience is essential for stimulating the nervous system and strengthening connections between neurons related to fine motor coordination (Gabbard, 2012).

Overall, early childhood is a golden period that must be used as well as possible to develop children's potential, especially in terms of fine motor skills. The findings from observations at TKIT Azzahira show the real need for the development of these skills through creative and fun learning methods. Collage activities can be an effective solution because they not only improve fine motor skills, but also support the cognitive and social aspects of children. With the right approach, it is hoped that children can achieve optimal development which is the main capital in their readiness to enter further education and a more independent and productive daily life.

METHODS

This study uses the Classroom Action Research (PTK) approach with the Kemmis and McTaggart models that have been widely used in educational research to address learning problems systematically and reflexively (Kemmis & McTaggart, 1988). PTK is an approach that focuses on improving learning practices through an action cycle that includes

planning, implementing actions, observation, and reflection. This approach allows researchers and teachers to collaborate to make changes that can be directly applied in the context of real learning, so that the results can have a positive impact on the development of students (Mills, 2011). The Kemmis and McTaggart model also provides space for continuous evaluation and adaptation of more effective learning strategies in the next cycle (Ary et al., 2010).

The research subjects in this study were group B children of TKIT Azzahira consisting of 15 children, with a composition of 8 boys and 7 girls. The selection of these subjects was based on preliminary observations that showed difficulties in fine motor skills in the group, so special intervention through collage activities was needed (Creswell, 2012). The object of the research is the child's fine motor skills developed through collage activities, which are skills that involve using the small muscles of the hand to cut, tear, and glue art materials. A focus on fine motor skills was chosen because these skills are an important foundation in a child's learning readiness, especially in writing and other creative activities (Case-Smith & O'Brien, 2014).

The research was carried out in the odd semester of the 2025/2026 school year, namely from October to November 2025. The location of the research is TKIT Azzahira which is located in the sub-district [complete location filled in as needed]. This timing selection takes into account the learning agenda and optimal conditions for the implementation of actions that support children's fine motor development (Gall et al., 2007). Research placement in a school environment allows for direct observation and continuous intervention by involving teachers as the main implementers of learning activities.

Rancangan penelitian dilakukan dalam dua siklus sesuai dengan model PTK Kemmis dan McTaggart. Setiap siklus terdiri dari empat tahapan utama, yaitu perencanaan, pelaksanaan tindakan, observasi, dan refleksi. Pada tahap perencanaan, peneliti dan guru menyusun Rencana Pelaksanaan Pembelajaran Harian (RPPH) yang disesuaikan dengan kegiatan kolase dan menyusun lembar observasi untuk memantau perkembangan motorik halus anak (Burns, 2010). Selain itu, bahan-bahan yang diperlukan seperti kertas warna, majalah bekas, lem, dan alat potong disiapkan agar kegiatan kolase dapat berjalan dengan lancar. Indikator motorik halus yang akan diamati juga ditetapkan untuk memberikan fokus yang jelas selama observasi.

The stage of implementing actions is a phase where teachers implement collage activities in accordance with the RPPH. Children were asked to create collages either independently or in small groups, giving them the opportunity to practice fine motor skills directly and actively (Cameron et al., 2012). This approach is expected to increase children's involvement and foster interest in learning through fun and creative learning experiences (Saracho & Spodek, 2007).

At the observation stage, teachers and researchers systematically record the activity and development of children's fine motor skills using observation sheets that have been prepared beforehand. In addition to direct observation, documentation in the form of photographs and field notes is also carried out to enrich the data obtained (Merriam & Tisdell, 2015). This documentation is important as visual evidence and reference in analysis and reflection after the implementation of the action.

Reflection is carried out after each cycle is completed to analyze the successful implementation of the action and identify aspects that need to be improved or refined in the next cycle. This reflection is carried out with teachers and researchers collaboratively so that the learning strategies applied are more effective and in accordance with the needs of children (Stringer, 2014). The reflection process also includes an evaluation of the children's involvement and their responses during the collage activity.

The data collection techniques in this study include direct observation, documentation, and field notes. Direct observation provides information about children's behavior and fine motor skills when participating in collage activities in real-time (Fraenkel et al., 2012). Documentation in the form of photos of activities helps to

strengthen observation data and becomes a tool for verifying research results. Field notes made by teachers during the learning process provide additional insights into classroom dynamics and child responses that may not be reached by formal observation.

The instruments used consisted of fine motor skills observation sheets, collage assessment formats, photo documentation of activities, and teacher notes. The observation sheet is focused on pre-defined fine motor indicators, such as the ability to cut, tear, and stick with precision. The format of the assessment of the collage results provides an overview of the quality of the children's work and their ability to apply fine motor skills in concrete form. Photo documentation and teacher notes are an important source of supporting data for the analysis and evaluation of learning outcomes (Creswell, 2012).

The collected data were analyzed using a simple qualitative and quantitative descriptive approach. The first step is to count the number of children who achieve the fine motor ability indicator in each cycle. Furthermore, a percentage increase in fine motor skills was calculated with the formula of percentage = $(\text{Number of Completed Children} / \text{Number of Children}) \times 100\%$. This formula is used to provide a quantitative picture of the child's fine motor development after intervention through collage activities (Ary et al., 2010). Finally, the researcher concluded the results of the improvement based on a comparison between the initial condition, cycle I, and cycle II, so that the effectiveness of the learning applied could be known.

The indicators of research success are set by several important criteria. The study is considered successful if at least 80% of children show an improvement in fine motor skills. In addition, children are expected to be able to do rithing, scissors, and gluing activities independently without much help. Another aspect that is an indicator of success is the emergence of children's interest and active involvement in collage activities, which is a sign that the learning method is not only technically effective but also interesting for students (Santrock, 2011). With this systematic and collaborative research design, it is hoped that collage activities can be an effective learning strategy to improve the fine motor skills of group B children of TKIT Azzahira. In addition to having a positive impact on fine motor skills, this study also aims to create a fun learning atmosphere and increase early childhood learning motivation.

RESULTS

Based on the results of initial observations made on group B children at TKIT Azzahira, it was found that most of the children have not shown optimal fine motor skills. Of the 15 children observed, only 4 children or about 26.7% were able to cut and stick neatly. Meanwhile, 6 children (40%) still had difficulty holding the scissors correctly, and 5 children (33.3%) were less able to tear and stick collage material in a directional manner. This condition indicates that the fine motor development of most children is not up to expectations, so it requires structured and systematic interventions in order for their abilities to be significantly improved (Case-Smith & O'Brien, 2014; Piek et al., 2008).

This initial condition reflects a fairly common challenge faced by early childhood, where fine motor skills are still in the formation stage and require intensive stimulation. Poorly developed fine motor skills can have an impact on children's difficulties in carrying out daily activities as well as learning readiness, especially in writing activities and other manipulative skills (Gabbard, 2012). Therefore, there is a need for a creative and fun learning approach to facilitate children's fine motor development.

The implementation of this research was carried out in two cycles with each cycle consisting of four stages: planning, implementation, observation, and reflection, in accordance with the Class Action Research model proposed by Kemmis and McTaggart (1988). In the first cycle, the planning stage involves the preparation of a Daily Learning Implementation Plan (RPPH) and the design of collage activities using simple materials such as colored paper and used newspapers. The assessment indicators are focused on the ability to tear, scis, and stick which are the main components of fine motor (Mills, 2011).

The implementation of the first cycle was carried out during three meetings, where children were asked to make simple shapes such as houses and flowers from pieces of paper. Teachers actively guide and set examples so that children can understand the basic techniques of collage activities. According to Santrock (2011), providing direct examples and intensive guidance is very important in the fine motor learning process because it can optimally increase children's motivation and involvement.

The results of observations in the first cycle showed that there was quite good progress, where 7 children (46.7%) began to show better hand-eye coordination and neater scissors and gluing skills. However, as many as 5 children (33.3%) still felt doubtful and needed the help of teachers in carrying out tasks, while 3 children (20%) lacked focus and were less interested in participating in activities. This shows that despite development, these achievements have not met the success indicators set by at least 80% of children are able to perform fine motor activities independently (Burns, 2010; Cameron et al., 2012).

Reflections conducted after the first cycle concluded that despite the improvement, the approach and materials used still need to be modified to be more attractive and varied so as to increase children's interest and involvement more optimally (Saracho & Spodek, 2007). Therefore, the second cycle planning is focused on providing more diverse collage materials, such as dried leaves, patchwork fabrics, and grains with more interesting themes, such as animals and nature. This approach is based on the theory that media variety and creative freedom can increase children's sensorimotor stimulation and provide a more meaningful learning experience (Malchiodi, 2005).

The second cycle was also carried out for three meetings with teachers to provide motivation and praise intensively for children's work. Children are invited to discuss to express their ideas and collages so that they not only hone fine motor skills, but also communication skills and creativity (Eckhoff, 2012). This approach is in accordance with the principles of constructivist learning that prioritize the active involvement of students in the learning process (Piaget, 1972).

The results of the observation of cycle II showed a significant increase. A total of 13 children or 86.7% were able to carry out collage activities independently and neatly, while only 2 children (13.3%) still needed small assistance in tidying up the pieces of paper. All children showed a high interest in participating in collage activities, as seen from their enthusiasm when creating and discussing the work. This shows that modification of learning materials and methods has succeeded in substantially increasing children's involvement and fine motor skills (Gallahue & Ozmun, 2006; Pica, 2013).

The final reflection of the second cycle confirms that more interesting and varied collage activities are able to have a positive impact not only on children's fine motor development, but also on the aspects of motivation and their active involvement in the learning process. The teacher concluded that the use of collage art media is an effective learning strategy and is feasible to continue to be applied in TKIT Azzahira as one of the methods of fine motor stimulation in early childhood (Wilson & Wilson, 2016).

The recapitulation of the results showed a significant improvement in children's fine motor skills from the initial condition to the second cycle. In the initial condition, only 4 children (26.7%) were completed, increasing to 7 children (46.7%) in the first cycle, and reaching 13 children (86.7%) in the second cycle. This increase shows the effectiveness of learning interventions with collage activities in developing children's fine motor skills (Creswell, 2012; Ary et al., 2010).

This improvement is also consistent with previous studies that have shown that fine motor stimulation through arts and crafts activities can provide optimal results, especially when supported by an engaging and diverse learning approach (Case-Smith, 2000; Saracho & Spodek, 2007). In addition, children's active involvement in fun activities also strengthens fine motor development and improves emotional and social aspects that play a role in learning readiness (Gabbard, 2012).

Thus, this study provides empirical evidence that the use of collage activities as a learning medium can effectively improve fine motor skills in early childhood. These findings have important implications for early childhood education educators and practitioners to integrate art in the learning process to support children's holistic development (Malchiodi, 2005). In addition, the active involvement of teachers and motivation during the activity are also key factors in the success of this intervention (Mills, 2011).

DISCUSSION

The results of this study clearly show that collage activities play an effective role in improving the fine motor skills of group B children in TKIT Azzahira. Through collage activities, children not only learn to cut, tear, and glue, but also experience improvements in terms of active engagement, creativity, and perseverance. This active involvement is an important indicator because fine motor skills are not only related to physical abilities, but also require good concentration and coordination between the eyes and hands (Gabbard, 2012). Art activities such as collage offer multisensory stimulation that is able to activate various brain areas that play a role in fine motor coordination and the development of children's creativity (Malchiodi, 2005).

Collage activities involving a variety of materials and techniques allow children to explore textures, shapes, and colors, thus not only improving motor skills, but also enriching sensory experiences that are very important in early childhood development (Case-Smith & O'Brien, 2014). This is in line with the opinion of Sudjana and Rivai (2013) who stated that art activities provide a positive and effective stimulus for children's motor development because they demand complex manipulative skills and repetitive use of small muscles. This activity also fosters patience and thoroughness, two important aspects that support children's learning readiness (Santrock, 2011). This study also corroborates the findings of Fitriyah (2019) who concluded that collage is an effective learning medium in improving fine motor skills in early childhood. In line with this, Cameron et al. (2012) show that proper fine motor stimulation can contribute significantly to children's academic readiness, especially in writing skills that rely heavily on hand-eye coordination and finger movement accuracy. Thus, collage activities not only have an impact on the development of fine motor physicality, but also prepare children for the next learning challenge.

In addition, the use of varied materials in the second cycle, such as dried leaves, patchwork, and grains, provides a different experience that adds to the child's motivation to learn and create. Gallahue and Ozmun (2006) emphasized that stimulation variations during the golden age are very important to optimize children's motor development, because the early childhood brain is very plastic and responsive to new stimuli. A creative and fun approach like this can minimize boredom and increase children's active involvement during the learning process (Saracho & Spodek, 2007).

From a psychological point of view, collage activities that provide creative freedom also have a positive impact on children's social and emotional development. Praise and positive reinforcement carried out by teachers during activities fosters children's confidence and enthusiasm for learning. This is supported by Vygotsky's theory which emphasizes the importance of social interaction and teacher support in the child's proximal development zone (Vygotsky, 1978). When children feel supported and valued, they tend to be more motivated to actively participate and hone new skills.

Collage activities also teach children to work independently or in small groups, which in turn improves social skills such as sharing, taking turns, and communication. According to Berk (2013), social interaction in the context of learning can strengthen children's cognitive and motor skills, as well as develop a positive attitude towards the learning process. In the context of this study, the use of the collage method involving the discussion of works strengthens children's communication skills and self-expression, so

that fine motor development is not only limited to physical, but also related to cognitive and social aspects.

Furthermore, these findings support the idea that a holistic and art-based learning approach is an effective strategy in supporting children's overall growth and development (Malchiodi, 2005). Creativity and innovation in learning methods are needed to overcome the problem of fine motor difficulties that often arise in early childhood, as also reported by Piek et al. (2008). This research is empirical evidence that art-based learning interventions not only improve motor aspects, but also increase children's motivation and interest in learning. The importance of teachers' involvement in providing guidance, motivation, and positive reinforcement during the collage learning process also cannot be ignored. Mills (2011) emphasized that the success of learning programs is highly dependent on the active role of teachers in creating a conducive and enjoyable learning atmosphere. With the right guidance, children can explore fine motor skills optimally, as well as develop confidence that supports further learning.

In addition, the results of this study also have implications for curriculum development at the early childhood education level. The integration of art activities such as collage in the curriculum is considered very important to provide a comprehensive stimulus of fine motor development, in line with the concept of holistic education that prioritizes the development of physical, cognitive, and social aspects in a balanced manner (Creswell, 2012). This opens up opportunities for educators to continue to develop other creative methods that can stimulate fine motor skills as well as other developmental aspects in children.

However, it should also be noted that this success is greatly influenced by environmental factors and individual characteristics of the child. Not all children respond equally to the collage method, so a flexible approach and personalized learning are needed (Santrock, 2011). Teachers must be able to recognize the needs and potential of each child in order to provide appropriate interventions, and continue to reflect and improve the methods used. Collage activities as a learning medium have proven to be effective in improving the fine motor skills of early childhood at TKIT Azzahira. This approach not only improves technical skills such as cutting and gluing, but also fosters the child's creativity, perseverance, and active engagement. This research supports various theories and previous findings that affirm the importance of art stimulation in fine motor development and other aspects in early childhood. Therefore, collage can be used as one of the main methods in fine motor learning in early childhood education.

CONCLUSION

Based on the results of the study at TKIT Azzahira, it can be concluded that collage activities are very effective in improving the fine motor skills of group B children, as seen from the significant increase in the percentage of children who achieve fine motor development indicators, namely from 26.7% in the initial condition to 86.7% after two intervention cycles. In addition to improving technical skills such as tearing, scissors, and gluing, children also show active engagement, confidence, and enjoy the learning process through the collage activities. The variety of materials and themes used in collage activities provide diverse sensory stimuli, so that it can improve optimal eye and hand coordination and support the development of children's overall cognitive and social-emotional aspects. Therefore, collage activities not only play an important role in fine motor development, but can also be a fun and effective learning method in early childhood education, which can be implemented consistently to support children's overall learning readiness and development.

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