

The Effectiveness of Clay Media to Enhance Creativity in Early Childhood: A Literature Review



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ABSTRACT: At an early age, education is conducted through a play while learning approach, using educational play tools to stimulate and develop children's intelligence. Children's creativity, which involves the ability to generate new ideas and products, is considered important for their development and is part of the innovation that brings positive change. This research uses the literature review method to evaluate the effectiveness of clay media in improving early childhood creativity. The results of the literature review showed that playing with clay has significant benefits in developing children's creativity, improving their logical and imaginative thinking skills. Clay shaping activities allow children to experiment with different shapes and colours, increasing their sensitivity and flexibility of thinking. Environmental support and effective learning strategies are also important in developing children's creativity, preparing them to face future challenges with creative and adaptive thinking skills.

KEYWORDS: Creativity, Clay Media, Early Childhood

I. INTRODUCTION

At an early age, children are in the play stage, so education at this stage is carried out with a learning-by-play approach. According to Fauziah (2013), using educational toys is one effective way to stimulate and develop children's intelligence. This learning occurs through play activities. Sit, M., Khadijah, K., Nasution, F., & Sitorus, (2016) also explained that children's ability to work and create creative works is an important aspect in improving their abilities. This creativity involves the ability to generate new ideas and products through imagination or previous experience.

The process of creativity involves children's ability to produce new things, both in the form of works and ideas (Rapiatunnisa, 2022). Žarnauskaitė (2023) states that creativity is a type of innovation that has an effect and brings positive changes. Creativity is very important in early childhood development (Hurlock, 1991) and has been defined in various literatures (Oppert et al., 2023; Pires & Varajão, 2024). Various methods can be used to develop creativity, both by parents and teachers (Devi, 2023).

To be ready for the challenges of the future, children need to become more skilful and creative in solving problems, so that they can play an active role and be ready to handle major issues in society. Creativity is an important life skill because the ability to think creatively allows a person to adapt to various situations and environments.

(Sit, M., Khadijah, K., Nasution, F., & Sitorus, 2016) stated that creativity involves the ability to see things in a new and unique way, and to come up with special solutions to problems. The process of developing children's creativity is influenced by various factors, including internal factors from individual children and external factors from their environment. For example, external factors such as educational institutions, especially at the early childhood education stage, have an important role in supporting the development of children's creativity through the implementation of effective learning strategies.

According to Dayani, N. E., Budiarti, L. Y., & Lestari (2015) one type of handicraft is using clay media, which is called clay in Indonesian. The phrase 'clay media' in Indonesia is often associated with handicrafts that are unique. This material can be moulded into a variety of artworks with various purposes. Making crafts using clay is an activity that is easy to learn and suitable for all age groups, from children to adults. Moreover, it helps children hone their creativity by easily creating different shapes of their choice.

Despite being known as 'clay', clay has similar properties to clay. However, some types of clay can be made from other materials such as flour, bread, wax, and other ingredients. An in-depth study of the learning media process in improving creativity through clay media allows researchers to get a value from the learning environment that applies it. So the researcher wants to examine more deeply the patterns and concepts of clay media in the literature review process. This research aims to provide an overview of whether a clay media concept is able to build children's creativity.

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II. RESEARCH METHODS

This research uses the literature review method, an approach to identify, evaluate, and interpret research results related to the phenomenon that is the focus of the research (Kitchenham, 2004). The literature review process involved collecting data from various sources such as books, journals, and news articles. To find references, searches were conducted through databases such as Google Scholar, Researchgate.net, and Microsoft Academic using the keywords 'Media Clay', 'Creativity', and 'Early Childhood'.

In general, the process of conducting a literature review involves several steps (Zhu et al., 2018):

1. Planning Stage

Researchers should consider the research questions to be used and develop a protocol as a framework to structure the literature review.

2. Implementation Stage

Researchers need to evaluate the relevance of the literature, selection methods, data extraction process, analysis, exploration, and synthesis to obtain a comprehensive literature review article.

3. Reporting Stage

The results of the literature review should be structured in the form of a scientific paper or report.

III. RESULTS AND DISCUSSION

Based on the literature review regarding the application of clay media to enhance creativity in childhood, which includes several research articles found in journals, the research themes identified from reading, recording, and processing data from previous articles include: 1) Early childhood creativity, 2) The use of clay media, 3) The importance of clay media in enhancing creativity.

Early Childhood Creativity

According to (Sit, M., Khadijah, K., Nasution, F., & Sitorus, 2016). creativity is a person's ability to produce new and unique solutions in overcoming challenges. Creativity involves the ability to create something useful and original for oneself or others. On the other hand, according to Maulana & Mayar (2019), it explains that creativity arises from the interaction of individuals with their environment, where individuals can create new things based on pre-existing information or components. Individuals' knowledge and experience, gained from their family, school, or neighbourhood, have a significant role in the development of creativity.

The definition of creativity found from the literature review includes the child's ability to create new things (Rapiatunnisa, 2022). Devi (2023) stated that creativity is the ability to develop imagination naturally without imitation. Fitriyani et al., (2024) considered creativity as the ability to think in new and unexpected ways, producing innovative solutions to challenges. Dau & Santosa (2023) argued that creativity is characterised by curiosity and openness to new experiences, as well as the ability to be determined, think flexibly, original and dynamically. According to Sadler-Smith (2015) there are four steps in the creative process to achieve creativity: preparation, incubation, illumination, and verification, which involve information gathering, problem solving, inspiration, and application of ideas into real life.

Rahmawati (2012) revealed that creativity involves individual experiences in expressing and realising their identity comprehensively, both in relationships with themselves, nature, and others. The general definition of creativity is often expressed in four dimensions: the personal aspect (person), process, product, and environmental influence (press), as stated by Rhodes in 'Four P's of Creativity: Person, Process, Press, Product.' These four dimensions are interrelated: creative individuals engage in creative processes, supported and influenced by the surrounding environment, which ultimately results in creative products. In addition, Rahmawati (2010) emphasises that creativity is also the art of creating new forms or methods that can overcome various problems.

Each phase of child development involves factors that support and hinder, including aspects of creativity. According to Aisyah (2018), creative encouragement given to children and the creation of a stimulating environment are supporting factors for the development of children's creativity. However, lack of support and encouragement from parents, teachers, and the surrounding environment can be a barrier to the development of children's creativity (Sriti Mayang Sari, 2005).

According to Rahmawati (2012), the characteristics of creativity can be divided into two main categories: cognitive and non-cognitive. Cognitive aspects include originality, flexibility, fluency, and elaboration, while non-cognitive aspects include motivation, attitude, and creative personality. Both categories are considered equally important as intelligence without having a creative personality will not produce significant results. Therefore, creativity traits are categorised into cognitive and noncognitive as both are closely related to individuals who have creativity.

Creativity in childhood will be enhanced by a supportive environment, with the important role of adults such as teachers and parents who provide direction, support and encouragement to develop children's creativity. According to Imamah (2020), there are five creative behaviours that facilitate the creative process in children: a) Fluency, where children can generate ideas and thoughts to solve problems; b) Flexibility, the ability to create various plans to deal with problems outside of conventional thought patterns; c) Originality, the ability to provide unusual or alternative responses; d) Detail, the ability to develop and explore ideas in depth to develop them; and e) Sensitivity, the awareness to recognise and respond to problems in response to a situation.

Children's creativity reaches its peak when they successfully produce concrete works. Rohani (2017) states that children show their creativity when they are able to create concrete products and engage in stimulating play activities, such as fine arts, that help

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them develop their imagination. Aisyah (2018) confirmed that developing children's creativity through creating artworks is an important part of their development, where each child uses their imagination to create an outcome that matches their vision. Through this activity, children have the opportunity to create works that they have never made before.

By outlining the aforementioned characteristics, parents, teachers or educators can identify the needs of children or students, ensure that all their potential and creativity is developed to the fullest, and achieve the best results in the educational process.

Clay Media Concept

According to Aryanti (2017) playing with clay provides many benefits in developing children's creativity from an early age. In addition to increasing self-confidence and providing fun for children, this activity also encourages them to think logically. Playing with clay can arouse children's interest and concentration, increase their curiosity and involvement in the learning process, and support the development of traits such as curiosity, perseverance, openness, critical thinking, responsibility, cooperation, and independence. In addition, playing with clay also teaches children how to use objects around them to solve everyday problems.

According to Aryanti (2017) playing with clay has significant benefits in increasing right brain activity while being creative, inspiring imagination, and activating children's nerve cells. Meanwhile, according to Aryanti (2017), play is a means that allows children to release energy, prepare for the future, and stimulate the development of personality and individual character. In addition, playing with clay provides a number of other benefits, such as improvements in children's knowledge, attitudes, behaviour, interests, and skills.

Shaping is a process that aims to transform, build, and realise an object or idea. According to Nurfajria (2017) shaping activities are part of three-dimensional fine art used to create works of art, both of which have practical and artistic functions. (Aryanti, 2019) emphasises that children's creative abilities can be improved through shaping activities that are tailored to their developmental stages, including the use of clay as a medium.

Shaping involves the process of creating shapes. This activity is considered very important in children's comprehensive development. According to (Pamadhi, 2018) shaping activities provide various benefits for children, such as introducing them to natural objects around and developing children's brain function and sensation, as well as improving their skills in facing daily challenges. Research conducted by Nurfajria (2017) showed that shaping activities play an important role in supporting the development of children's brain function and sensation, which allows them to create various works.

These activities also help to improve children's ability to create art and strengthen social interaction and the learning process in the classroom. Based on observations made by teachers and researchers, it was concluded that participation in clay play activities has a positive influence on the development of children's creativity.

Clay has a texture similar to cookie dough, facilitating the easy formation of creative objects such as toy cars, dolls, cakes, and miniature humans. Night clay is commonly used as a toy for children, which does not harden and can be found in a wide selection of colours in various stores. The different types of clay available include: Night clay, Plasticine Clay, Paper Clay, Flour clay, Bread clay, Jumping Clay, Air Dry Clay, Polymer Clay, Real Clay, Imitation Clay and Cast.

To encourage the development of children's creativity, polymer clay is used in teaching and learning activities. Polymer clay is a type of artificial clay that is colourful and easy to shape due to its softness. Chairat et al., (2023) explained that polymer clay is made of plastic with a clay-like texture and has been mixed with various colours, which keeps the colour variation stable and can be shaped as desired. Meanwhile, according to Aditya & Honita (2016) Polymer Clay is a type of clay made from a plastic material called Polyvinyl Chloride (PVC) mixed with dyes and other materials. The use of polymer clay is an interesting play option for children because of its flexibility and ease of shaping, allowing them to explore various shapes according to their imagination and desires.

Through engaging in activities using polymer clay, children can express their personal ideas and concepts and enhance their creativity by creating a variety of works according to their imagination. This gives them the opportunity to create works that are new and reflect their own unique style.

According to Supriatna (2014) clay is a natural material formed through the weathering process of feldspar rock, a component found in granite and igneous rocks. Clay is considered a creative medium and provides opportunities for children to learn. According to Nurfajria (2017) clay has flexibility and is easy to mould, allowing children to mould it to their liking.

Maisarah et al. (2020) showed that clay building activities become interesting and entertaining activities for children, so it does not make them bored. Fauziah (2013) highlights the importance of using natural materials as learning tools that allow children to interact with their surrounding environment, creating concrete learning experiences.

Clay shaping activities have significant goals and benefits for children's growth. (Wahyuni, 2019) states that the purpose of this activity is to train children's imagination and creativity in creating works of art. On the other hand, (Rahayu, D. I., & Khaironi, 2018) emphasises that clay acts as a medium that supports the development of various aspects of children's development, including their creative abilities in creating works that have value.

There are various types of clay, including one called flour clay, which is often used. To reduce the relatively high cost and difficulty of finding the product, this powdery clay dough can be made by yourself. The manufacturing process involves a mixture of different types of flour and white glue, using basic ingredients that are affordable and easily available.

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At 4-5 years old, children are eager for learning, as seen by their enthusiasm in creating different shapes and colours of clay that vary according to their personal expression. Children use a variety of shape-making techniques when playing with clay, including massaging, twisting, making balls, hitting, and adding and subtracting the flour clay they use. In addition, extra attention is paid to expanding children's skills and knowledge as they use the flour clay, as well as to encouraging their level of creativity by creating shapes according to their wishes.

The Importance of Clay Media to Enhance Creativity

Learning media with clay is very useful for improving children's creativity, because clay is an educational game tool that has a soft texture and is easy to shape. In play activities, children can squeeze, press, shape and create clay. This gives children the opportunity and freedom to express and create with clay according to their ideas.

The use of clay media for 4-6 year old children in the classroom has produced positive effects during the teaching process. This is reflected in the level of participation and enthusiasm shown by the children during the learning process. They are very interested in this clay, starting from the process of mixing colours in the clay to the formation of the shape. Through the use of this clay, children's ability to create shapes according to their ideas can be improved. Each child showed a different level of imagination and was able to produce unique and original creations. Every creative step in making various creative products is the result of the creativity process. As mentioned by Aryanti (2017) playing clay helps to increase the sharpness of thinking when doing creative activities, increase the level of imagination, and stimulate children's brain nerve cells.

Starting from the early stages of forming an object or basic shape to stimulate children's creativity, it can be done with various methods, such as imitating objects or prints to create the desired shape, or mixing basic colours in clay to produce a variety of colours. Children can also channel their creative expression by creating works using various objects to form objects, either based on moulds or based on their own imagination. In this activity, coordination between the use of eyes and hands is required to perform various activities such as squeezing, stirring, mixing, pressing, and so on.

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The children showed a very high level of enthusiasm when engaged in activities using clay media. All the activities were designed with the main purpose of enhancing children's creativity, so they became more innovative and enthusiastic in participating in the activities. This view is in line with the perspective presented by Aryanti, (2017), which states that the use of clay provides significant benefits in enriching children's creativity in a fun way and stimulating rational thinking.

CONCLUSIONS

The learning process in children through clay media is very effective in developing creativity. Clay as a soft and malleable educational play tool allows children to experiment with different shapes and colours according to their expression. The use of clay is not only entertaining but also improves children's logical and imaginative thinking skills. Various techniques such as massaging, twisting and ball-shaping help in this shaping process. Support from the environment and effective learning strategies are essential in developing children's creativity, which in turn prepares them to face future challenges with creative and adaptive thinking skills.

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