



## The Influence of Ecoprint Batik Iron Blanket Technique on Increasing Early Childhood Creativity

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### Abstract

Early creativity is important to stimulate because it contributes to various aspects of development, including cognitive skills, adaptability, self-expression, social skills, motor skills and children's imagination. The study in the research intends to review the effectiveness of the *iron blanket* technique in the application of *ecoprinting* using natural materials as media on the creativity of children aged 5-6 years. The *posttest only nonequivalent control group design* was used in this type of quantitative research with data collection techniques in the form of tests and observations. The sample amounted to 28 early childhood students. Descriptive statistical analysis and inferential analysis are the data analysis techniques chosen. The conclusion of this study based on the data shows that ecoprint with *iron blanket* technique can improve children's creativity, but the *ecopounding* or steam technique is more effective, this result is supported by the data  $T_{hitung} (3.279) > T_{tabel} (2.055)$  which shows that there is a difference between the two applications of *ecoprint* techniques with a Sig value.  $.003 < 0,05$ .

**Keywords:** *ecoprint, iron blanket, children's creativity.*

### Introduction

The type of formal education for children aged 4 to 6 years is kindergarten. Its mission is to lay the foundation for children to develop the character, knowledge and creative skills they need to adapt to their environment. In accordance with the mandate in Indonesian law No. 20 of 2003 concerning the development of the entire aspect growth development child and the development of as the foundation of human life.

The phase of human life and development that begins early is crucial. This indicates that educational institutions related to children are very important to fortify various aspects of the progress of children's development as educational activities that are able to instill the importance of educational.

quality, perspective, and good character. This stage requires educational efforts and strategies to optimize all aspects of development, known as the "Golden Age". Brain development and children's potential will develop rapidly during this period through proper stimulation and in accordance with their developmental age. This crucial age is the basis for the child's success in the next stage or phase.

Basic rationale the rationale directs schools to take a crucial role through quality activities designed by teachers in developing children's potential, talent interests and intelligence. One of them is creative power which is related to creativity. That is why children's creativity must be honed so that children have a broad imagination and are quick to respond to every problem. Children will be responsive to utilize anything that is contextual and familiar to them. Being a person who dares to determine attitudes, responds actively to positive things and dares to try something new because they have great curiosity. Well-developed creativity will give birth to a thinking patron that leads to the ability of children to identify problems and be able to simply look for and find solutions to these problems.

The form of creativity displayed by children is realized in various processes, performances, results or products whether in crossing out, painting, drawing, telling stories, singing, role playing or various play activities that children like. Various ways can be done by teachers in developing and stimulating children's creativity, including bringing children closer to the real world with the use of natural materials in the classroom.

The environment around and close to the child is a rich source of learning. The environment Around contributes an abundance of rich learning resources so that children can imagine, work, create, express, explore and utilize natural materials as learning media to support their development process.

Increasing creativity in early childhood is not only seen from the ability to create something new, but also the strategies used by teachers. Teachers have a strategic role in honing children's creativity, teachers must innovate in determining materials, learning resources that are interesting and of interest to children both indoor and outdoor so that children's creativity can be optimized for development. The role of the teacher in providing and designing an appropriate learning environment is absolute, especially with the implementation of the independent curriculum, the main orientation is meaningful and child-centered learning. Setting a conducive learning environment will provide opportunities for children to show their creative ideas.

Ecoprint, a batik activity, stimulates children's senses by bringing them into direct contact with the texture of organic materials. This process stimulates children's senses and helps them understand and appreciate the diversity of nature. Children can feel the texture of stems, leaves, observe the patterns created during printing, and see the diversity of colors and natural color gradations that appear during the process.

The fact that *ecoprint* activities allow children to freely express their creativity by letting them choose stems, roots, leaves, flowers, and other parts of the plant.

plants they love will be an exciting activity. Children create unique and unexpected patterns by designing and arranging materials according to their preferences. This allows children to freely express themselves and gives them the opportunity to imagine, express, investigate, and generate new concepts or thoughts for creative work.

In relation to batik, Winarsih (2019) says that batik is the process of painting a pattern or shape on certain fabrics or materials. If children use it, teachers must ensure the materials are safe and non-toxic. Fatmala et al. said that (2018) the use of contextual materials in ecoprinting exercises provides direct insight to children in interacting with natural materials so that children can explore materials with each child's creative mind. In addition, ecoprint batik activities using natural materials commonly used in ecoprint techniques provide opportunities for them to develop critical thinking attitudes according to their stages of thinking and in accordance with the real world of children.

According to Nuryanti (2019), children's creative abilities include fluency, flexibility, originality and elaboration. Given the consequences of initial perceptions at Kinder'N Huiz Kindergarten in Makassar City, it appears that children's imaginative capacity is not optimal. This is based on the daily assessment of children's work. From Of the 28 children, only 11 children reached the Developing As Expected (BSH) assessment category, while the other 10 children were still in the Starting to Develop (MB) category and seven children had not yet developed (BB).

Various factors influence the development of children's creativity, lack of opportunities to work according to what children are interested in. Limited play environment, lack of motivation and play facilities so that learning is more dominantly directed by the teacher, children tend to only follow directions.

Overcoming this requires learning innovations that can increase children's creativity. Activities that give children the freedom to exploit the world around them that can stimulate children's creativity through play activities that are in accordance with child development. Ecoprint batik activities were chosen and became an alternative with consideration of the results of theoretical studies and other previous research.

According to Flint, *ecoprint* batik (Alvin, 2019), is the process of transferring colors and shapes by directly adhering plant materials, such as leaves and stems, which contain color pigments, to fibrous fabrics. The choice of plant species is very important in the pigmentation process of transferring the color of the material until it adheres to the media. Children will love the activity of sticking and playing with different colors. Ecoprinting on the other hand, is a method of directly transferring designs from plant components including leaves, stems, roots, and flowers onto the surface of fabric. Printing with natural materials, such as plant pieces, on a white fabric surface without the use of chemical dyes or inks, to produce colors that match the theme or design is distinctive and beautiful (Irianingsih, 2018).

Furthermore, it was also revealed that *ecoprint* is a way to color and make beautiful fabrics/materials using natural dyes obtained from the surrounding nature known as

with natural materials that follow the pattern of the shape of the natural material. It is also defined that *ecoprint* activities are the transfer of designs/patterns along with the color composition found in natural materials (flowers, leaves, stems, roots etc.) to the surface of decorated materials such as fabrics, paper, walls and others (Klarissa et al., 2018 & Saraswati & Sulandjari 2018).

Previously, teachers in batik and printing activities have used materials and techniques with other tools, but new innovations are needed to design learning activities more interesting. Through *ecoprint* activities, it is expected that children will really want to create interesting works using contextual media of natural materials or materials they usually find and allow them to develop their creativity.

This exposure underlies the researcher's decision to examine the effect of the application of *ecoprint* batik with iron blanket technique on increasing the creativity of children aged five to six years. Through *ecoprint* batik activities, it is expected that children can make interesting works from natural materials with various flower and leaf motifs that can be easily found in the children's environment. Developing children's imagination through *ecoprint* batik activities is considered effective with children's freedom to explore (Fatmala and Hartati, 2020). Even the implications of fun activities and freedom in expressing ideas are thought to be factors in increasing children's creativity after *ecoprint* batik. Adriani (2018) also conducted additional supporting research, the results showed that the use of *ecoprint* batik techniques increased children's creativity by more than half the number of children.

**Methods**

The study in this study uses a quantitative method of *quasi-experimental design* type with *posttest only nonequivalent control group design*. The study was conducted from September 2022 to January 2023. The population was all 37 students at Kinder'N Huiz Kindergarten. Purposive sampling was used to select the research samples for the experimental and control groups. Observation and tests were selected as methods to collect data. Inferential and statistical analysis were the data analysis methods used, the instruments used can be examined in table

1.

Table.1

Aspects	Indicator
<i>Fluency</i>	a) Children generate many ideas and thoughts quickly b) The child is able to work faster and do more activities
<i>Flexibility (flexibility)</i>	a) Children have ideas in problem solving and varied answers The child presents a concept in a different way b) Able to come up with new and
<i>Authenticity (originality)</i>	a) unique expressions Adding or detailing the details
<i>Elaboration (elaboration)</i>	a) of an object, so that it becomes more interesting.

Hurlock (Susanto, 2017)

**Results and Discussion**

Research indicators of early childhood creativity aged 5-6 years conducted at Kinder'N Kindergarten Makassar City, South Sulawesi Province, namely: 1) the fluency of thinking of children who can generate many ideas from thinking quickly, work faster and do more activities and activities than other children, 2) the flexibility of children, namely the ability to generate ideas, solve problems, answer questions with varied responses, have the ability to generate ideas, solve problems, answer questions with varied responses, have the ability to solve problems, have the ability to answer

to recognize problems in different ways and perspectives, and the ability to understand and perform ideas in different ways, 3) creativity (novelty and uniqueness of ideas) and 4) elaboration (adding/completing in detail and depth/contributing thoughts or situations so that they become very interesting).

Recapitulation of Data on the Range of Children's Creativity Development Values at Kinder'N Huiz Kindergarten Makassar City explained that the percentage of the development of children's creativity abilities for the control class using *ecoprint* through *ecopounding* techniques in the Very Well Developed value range as many as 2 children or 14.29%, the Developed As Expected value range of 9 children or 64.29%, the Starting to Develop value range of 3 children or 21.43% and the Undeveloped value range of 0 children or 0%. Furthermore, the percentage of children's creativity in classes that use the *iron blanket* technique using which also uses natural materials in the Very Well Developed value range is 1 child or 7.14%, the Developing As Expected value range is 6 children or 42.86%, the Starting to Develop value range is 6 children or 42.86% and the undeveloped value range is 1 child or 7.14%.

Based on the results data shown when compared with the child's score data before and after the *ecoprint* technique treatment, it shows that in the Very Well Developed value range before treatment there were 0 children or 0% and after treatment there were 3 children or 10, 71%. The range of values Developing as expected before treatment was 11 children or 39.29% and after treatment was 15 children or 53.57%. The range of values Starting to Develop before treatment amounted to 10 children or 35.71% and after treatment amounted to 9 children or 32.14%. The range of values has not developed before treatment

by 7 children or 25% and after treatment by 1 child or 3.57%.

The results of the two classes show that the control class with teacher treatment in the form of *ecoprinting* with the *ecopounding* technique has more influence on the development of students' creativity abilities, the data shows that more children have scores in the BSB and BSH categories, and there are no more children in the underdeveloped category (BB). While one child is still in the underdeveloped category (BB) in the experimental class that applies *ecoprinting* with the *iron blanket* method.

After conducting descriptive statistical analysis on the *posttest* data of the control class and the experimental class, it shows that from the results of the analysis, the control class using *ecoprinting* through the *ecopounding* technique has more influence on the *posttest* data.

to increasing the creativity ability of students at Kinder'N Huiz Kindergarten Makassar City. However, the experimental class that used *ecoprinting* through the *iron blanket* technique still had an effect when compared to the previous data collected from teacher interviews and observations of children's creativity.

The independent sample t test used to test the hypothesis the result is a sig value of  $0.03 < 0.05$  which shows that *the ecopounding* method of *ecoprint* batik with natural materials has a greater effect on children's creativity than the *iron blanket* method. Children at Kinder'N Huiz, who are five to six years old.

The ability to think critically, quickly, precisely, and work faster and more activities, as well as the ability to generate problem-solving ideas or answer various questions,

Being able to present concepts in different ways, being able to produce new and unique expressions, and being able to add or detail the details of an object, idea, or situation so that it becomes more interesting, are all examples of the impact of ecoprint batik activities on children's creativity when used with *ecopounding* and *iron blankets*.

The fact that despite having more stages, *iron blanket* batik activities do not necessarily result in the development of children's creativity is what makes this study interesting. The *ecopounding* activity gives children more space to develop their creativity by allowing them to experiment with new colors and combine them to create different and interesting color gradations. This statement is in line with the opinion of Zhafirah (2020), *ecoprint* batik activities with *ecopounding/blowing* techniques allow children to develop their motor skills through a variety of hand movements and cognitive abilities by choosing various patterns, producing designs, images using branches, stems, twigs, flowers and leaves.

What is also stimulated is the ability to find and recognize new colors from various color combinations of materials, as well as the ability to study which can help children create works with imaginative value according to children's creativity. It is also seen that fun activities without fear of making mistakes can give children confidence in innovating, creating and producing products (Halimah et al., 2021; Holis, 2016; Miskawati, 2019);

Prahesti et al., 2020). Experience in *ecoprint* activities with various processes that are passed and meaningful to children starting from preparation, design, to the final product, children's creativity can be stimulated through various interesting activities (Handayani et al., 2017; Marwiyati & Istiningsih, 2021). *Ecoprint* activities also provide opportunities and spaces for children to interact, cooperate with students and teachers. The experience of interacting in designing and producing works can develop children's creativity by interacting and processing directly (Mustika & Nur Widaningsih, 2018). The ability to negotiate, convey suggestions and ideas also develops with fun activities so that children can produce work and solve problems well (Saraswati & Sulandjari, 2018). Other research also states that *ecoprint* activities also have an effect in increasing children's creativity (Fatmala & Hartati, 2020). Because playing with *ecoprint* activities is a centered and meaningful learning for children. Several aspects of child development can be stimulated due to interaction, collaboration and communication with other children which are packaged in an interesting and fun way for children (Susanti et al., 2021).

*Ecoprint* activities also not only stimulate children's creativity but can develop other aspects of development. other developmental aspects namely motor skills. This is in line with Almi & Yeni's research (2021) that simple batik helps develop children's fine motor skills in flexing their fingers,

holding materials in various shapes and sizes, arranging materials according to the child's ideas or imagination as well as being creative in mixing and creating various colors from the gradation of the colors of the materials used.

Therefore, based on the results of the study, the underlying theory, the support of previous research, it is considered important to make *ecoprint* activities with various techniques as a way and alternative in improving children's creativity. Children's creativity can be further developed through the use of additional methods that can be chosen by the teacher. The contribution of the results of this study can be utilized as a study, especially in fostering creativity in children. Although the data shows that *ecopounding* has a greater impact on children's creativity, the implication of this study is that researchers want to show that *ecoprinting* activities using *iron blanket* and *ecopounding* techniques have an effect on increasing children's creativity. It is suggested that future researchers can design and create *ecoprinting* exercises with various procedures that will produce stunning, effective works and foster different aspects of learning outcomes.

### Summary

Children aged 5 to 6 years at Kinder'N Huiz Kindergarten Makassar City are more creative when applying *ecoprint* with *ecopounding* technique compared to using *iron blanket*. Action in *ecoprint* activities, children's imagination is created. Children have greater freedom to convey and express their ideas, are able to develop their creativity.

be creative, take more initiative, and think faster, be able to generate ideas for problem solving or answering various questions, be able to present concepts in various ways, and be able to produce a variety of expressions. expressions complement, add various complements, or illustrate the distinctiveness of an object, concept, idea, or situation to make it more interesting and meaningful.

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