



# Application of Alum Fixator for Eco Print Batik Making Using a Pounding Technique in Fine Arts Learning in Junior High School

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## ABSTRACT

Art learning activities in schools are learning that must be done in practice, but currently many art educators do not provide maximum learning for students, and free students to be creative without giving directions. So that in this study it is hoped that students can understand the importance of art practice to develop students' creativity and explore the potential in students. In addition, this study aims to provide insight to junior high school students to understand that the application of an alum fixator in the process of making eco print batik can provide a new experience in the practice of fine arts at school. The method used is using quantitative methods by making 2 sessions of distributing questions, namely pretest and posttest after distributing the material delivered through PowerPoint and videos of the eco print batik making process which are analyzed in the form of statistical diagram tables. The results of the study produced a fairly good impact on the learning process, almost the entire sample of students who joined this study understood it well and wanted to apply it one day.

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## 1. INTRODUCTION

Learning art in schools is an effort to develop the creativity that exists in students, to achieve this goal it is the task of an art educator to create interesting learning methods to increase students' enthusiasm in learning activities (Tusliawati, 2017). In Yeyen's opinion, fine art is a subject that must create works directly, because basically creativity is a process of expressing ideas, creativity and imagination. It can build an effective idea, process, and method (Fatmala & Hartati, 2020). But it is very unfortunate that currently there are still many art educators who only free students to be creative without providing direction, so that it affects student achievement in exploring their potential.

Learning art is always related to a work process, so the most appropriate way is to use the practical method (Tusliawati, 2017). The results of Yeyen's we explain that practical activities that can increase creativity in art learning are one of them in the process of batik, so that students know the process of making batik itself (Fatmala & Hartati, 2020). Currently there are various types of batik that exist in Indonesia, but there is one batik that is easy to apply to art learning activities in junior high school, namely the ecoprint batik type, besides being easy to apply, ecoprint batik also uses materials found around the house. , and did not spend a long time. In addition, making ecoprint batik with the pounding technique can make it easier for students to experiment in making ecoprint batik just by pressing or hitting the leaves (Arif *et al.*, 2019). But not all types of plants can be used because each type of leaf has a different level of humidity, and the right plant is a type of plant that has color pigments and high humidity (Arif *et al.*, 2019). According to Endah Ecoprint is a process of transferring the color and shape of plants to the fabric through direct contact (Saptutyingsih & Wardani, 2019). After the dyeing process, it takes a color bonding process from natural dyes to the fabric so as to produce good fastness which is called fixation. Substances that can help the absorption of color is one of them using alum fixator. Reinforced by Bayu's opinion that the process of making ecoprint batik is the process of making batik by direct contact between plants and the main material which is the main working principle of ecodyeing and printing methods (Fatmala & Hartati, 2020). It is also strengthened by the results of Wardatul's we which is the result of an interview with one of the Culture Arts Teachers of SMA Sunan Giri Manganti Gresik, Mr. Huri, who is in the field of ecoprinting, saying that not all natural sources, especially leaves, can show good results on fabric, depending on the character of the plant. substance content, and the position of the leaves on the stem to be used (Arif *et al.*, 2019). Reinforced by Bayu's opinion that the process of making ecoprint batik is the process of making batik by direct contact between plants and the main material which is the main working principle of ecodyeing and printing methods (Fatmala & Hartati, 2020). It is also strengthened by the results of Wardatul's we which is the result of an interview with one of the Culture Arts Teachers of SMA Sunan Giri Manganti Gresik, Mr. Huri, who is in the field of ecoprinting, saying that not all natural sources, especially leaves, can show good results on fabric, depending on the character of the plant. substance content, and the position of the leaves on the stem to be used (Arif *et al.*, 2019). Reinforced by Bayu's opinion that the process of making ecoprint batik is the process of making batik by direct contact between plants and the main material which is the main working principle of ecodyeing and printing methods (Fatmala & Hartati, 2020). It is also strengthened by the results of Wardatul's we which is the result of an interview with one of the Culture Arts Teachers of SMA Sunan Giri Manganti Gresik, Mr. Huri, who is in the field of ecoprinting, saying that not all natural sources, especially leaves, can show good results on fabric, depending on the character of the plant. substance content, and the position of the leaves on the stem to be used (Arif *et al.*, 2019).

Based on the discussion above, we wants to conduct we with the aim of providing an

understanding that art is also related to science which is applied to ecoprint batik. In addition, we hope that students can understand the importance of practice by experimenting with making ecoprint batik to develop students' creativity in art learning activities. This study uses a quantitative approach in the form of pre-test and post-test which is analyzed in a statistical descriptive table after giving material in the form of power points and videos of making ecoprint batik to 10 junior high school students.

## 2. THEORITICAL FRAMEWORK

### 2.1 Fixator

The fixator is a natural color locking agent for the mordant group and serves to give different color effects according to the fixation agent. Alum is one of the binding materials made of environmentally friendly and non-toxic materials so that it will not pollute the environment (Fatmala & Hartati, 2020). The application of alum fixator in fabric dyeing techniques can be a shortcut to reduce textile dye waste in Indonesia, of course it must be encouraged by the creativity of the textile industry in Indonesia to use natural materials as fabric dyes. Some natural dyes quickly fade color on the fabric, the resulting color intensity is weak. According to Ulil Fakriyah, the use of natural dyes tends to use natural fibers. One of the natural fibers is *primmisima mori* cloth or batik *mori* cloth.

### 2.2 Ecoprint

Eco comes from the word ecosystem (nature) and print which means printing, colored cloth using natural dyes and printing motifs from leaves, plants or roots manually by sticking to the surface of the fabric with pounding or steam techniques until the leaf motif moves to the surface. cloth (Ds & Alvin, 2019). According to Flint in Wardatul's, the character of a plant leaf used as a dye will affect the final result. Fresh leaves, dry leaves or leaves that have just fallen will give different results. Naturally, leaves with different conditions have different substances contained as well. Several factors related to natural leaf color include the substances contained, the character of the leaf, the position of the leaf on the leaf stem, solar lighting and season (rainy or hot) (Arif *et al.*, 2019). In the process of making eco prints, not all types of plants can be used because in the manufacturing process, good plants are used, namely plants that have color pigments and high humidity (Dewi *et al.*, 2021).

## 3. METHODS

The method used in this study is a quantitative method, the analysis of which is in the form of a statistical descriptive table. The samples used were students of SMPN 11 Sukabumi, Indonesia. The students who were recorded were 10 students, with a population of 4 students in class IX, and 6 students in class VIII. There are 6 female students and 4 male students. The data collection technique was carried out online by filling out a questionnaire through a google form. This data collection is in the form of 10 pre-test questions which then provides material in the form of power points and videos of making ecoprint batik through Whats App Group, then distributing post-test questions to determine students' understanding of the application of alum fixator for ecoprint batik making using the pounding technique in learning. fine arts in junior high school.

## 4. RESULTS AND DISCUSSION

### 4.1 Demography

This demographic shows that the ability of junior high school students to understand the application of alum fixator for making ecoprint batik using a pounding technique in learning fine arts. The aspects studied include knowledge of ecoprint batik, the process of making ecoprint batik with the pounding technique, and the function of alum fixator as a color locking agent. To achieve student success in understanding this knowledge, the student is shown through a video of the process of making ecoprint batik.

Until finally the results of the student's analysis of understanding ecoprint batik got quite good results, from 10 students there were 2 students with the initials MR and MFM who had practiced batik before, but the type of batik studied was not ecoprint batik. And other students with the initials AN, ZL, MMF, TSP, AL, ADL, RS, and R have no experience in making batik. And from all the students felt that the practice of learning art was indeed very useful and all students had a high curiosity about ecoprint batik and wanted to learn batik in the future.

### 4.2 Phenomena in the learning process

Art learning activities in schools are still not evenly distributed, from the way of learning, and the field of art it teaches. This is common in elementary to high school / vocational school. To increase students' creativity, in art learning activities students really need a practice, so wants students to be able to explore art from the craft field.

The pretest and post-test methods by providing materials and videos of the ecoprint batik making process aim to increase the knowledge and creativity of junior high school students.

- (i) In the first process, we find out the media used by art teachers in the learning activities of junior high school students.
- (ii) The second process, the art teacher gave a sample of students to participate in we activities, there were 10 students, which included 6 students in grade 9 and 4 students sitting in grade 8.
- (iii) The third process, giving pretest questions first before providing learning materials regarding the application of alum fixator for eco print batik making using a pounding technique in fine arts learning with media filling out a questionnaire via google form. This is a reference for students' understanding of ecoprint batik.
- (iv) After filling out the pretest questions, we gave lectures on ecoprint batik along with a video of the ecoprint batik making process. This is a stimulus for students to better understand the material.
- (v) After students get material on ecoprint batik, students fill out post-test questions according to students' understanding
- (vi) The use of the pretest and post-test methods has a positive influence on students, students can understand the material that has been delivered and students give positive responses to the situation of learning activities at school.

### 4.3 Pre-test and post-test results

There are 2 sessions of questions in the form of pretest and post-test as a method to determine students' understanding of the application of alum fixator for making ecoprint batik using the pounding technique in art learning in junior high school.

**Table 1** describes the results of the pre-test and post-test of junior high school students which were distributed online through whats app groups with students, and distributed a

questionnaire in the form of a google form to find out students' understanding after receiving material and videos of making ecoprint batik.

In the table it can be explained that the knowledge of junior high school students has increased after receiving material in the form of power points and videos of the ecoprint batik making process regarding the application of alum fixator for ecoprint batik making using the pounding technique in learning fine arts in junior high schools.

**Table 1.** Pre-test and post-test results of junior high school students.

No	Question	Pre-test score		Post-test score		Results comparison
		Yes	No	Yes	No	
1.	Have you ever heard of batik colors made from plants?	80%	20%	100%	0%	20%
2.	Did you know that leaves and flowers can be used as textile dyes?	80%	20%	90%	10%	10%
3.	Have you ever heard the term Batik Ecoprint?	20%	80%	90%	10%	70%
4.	Have you ever seen the process of making Ecoprint Batik?	0%	100%	90%	10%	90%
5.	Did you know that alum can lock the color on batik?	0%	100%	80%	20%	80%
6.	Have you ever practiced batik making before?	20%	80%	80%	20%	60%
7.	Do you think the practice of making Ecoprint Batik is useful for new knowledge?	100%	0%	100%	0%	0%
8.	Did you know that the pounding technique in the ecoprint batik-making process can produce color on the fabric directly?	20%	80%	90%	10%	70%
9.	Are practical activities useful for art learning activities?	100%	0%	100%	0%	0%
10.	Do you want to explore Ecoprint Batik one day?	100%	0%	100%	0%	0%

#### 4.4 Result discussion

The results of observations of the application of alum fixator for eco print batik making using a pounding technique in fine arts learning in junior high school. Based on the results of the pre-test activity, it can be concluded that almost all students have never heard of ecoprint batik in their environment or at school, besides that students do not know that alum is one of the color locking substances in the ecoprint batik making process. This can be seen from the results of the pretest showing that they have never seen the process of making ecoprint batik and do not know that the fixator of ecoprint batik can use alum, this can be seen in the score as much as 100% of junior high school students do not know this. However, after being given an understanding in the form of power points and videos of the ecoprint batik making process, the students experienced a very significant improvement, it can be seen from the students' post-test results showing that they began to understand everything related to ecoprint batik making. In addition, they realize that the importance of a practice in art learning is in line with Tusliawati's opinion that art education is one of the subjects that students are

interested in. Apart from their interest and potential in art, art education can also stimulate them to be creative and creative. innovating, as well as in art learning activities, a student can be himself by working according to what they want and pouring all the flavors they have (Tusliawati, 2017).

## 5. CONCLUSION

The conclusion of this study is that almost all students understand the application of the alum fixator for ecoprint batik making using a pounding technique in art learning in junior high school after receiving lectures through power points and ecoprint batik making videos, therefore this study can increase students' interest in explore batik at a later date.

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## 7. AUTHORS'NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. Authors confirmed that the paper was free of plagiarism.

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