

# EXPLORATION OF ECO-PRINT PRODUCTS THROUGH PARTICIPATORY RURAL APPRAISAL AND SERVICE-LEARNING METHOD IN BLITAR REGENCY

Heru Dwi Waluyanto<sup>1</sup>, Listia Natadjaja<sup>2</sup> and Ani Wijayanti<sup>3</sup>

<sup>123</sup>Department of Visual Communication Design Department, Petra Christian University, Surabaya, Indonesia  
1 herusagi@petra.ac.id, 2 listia@petra.ac.id, 3 cusan\_80@petra.ac.id

## Abstract

Participatory Rural Appraisal (PRA) is an approach method for studying the conditions and rural life of, with, and by rural communities. It allows village communities to share, improve, and analyze their knowledge of village conditions and life, make plans and activities, and explore or maximize the potential human resources and natural resources in Blitar Regency. So far, the people of Selorejo, Kademangan and Genuk Sub-villages have the skills to make Eco-print using cloth media with steaming and pounding techniques. Even though they are skilled in making eco-prints motif, they do not yet have creative ideas on how to use their skills to create economically valuable eco-print products. The problem in this research is how the mentoring process is carried out starting from the preparation, planning, and implementation stages so that they gain experience making ideas for various kinds of eco-print products. The purpose of this research is to encourage people to develop their potential in making eco-friendly eco-print products to improve their welfare. Community development and empowerment activities through the exploration of eco-print products using the PRA is also supported by Service-Learning (S-L) method that involve students implement the creative socio-preneurship learning.

Keywords: Eco-print Products, Participatory Rural Appraisal (PRA), Service-Learning (S-L), Blitar Regency.

## 1. INTRODUCTION

This applied research was conducted at Selorejo, Kademangan and Genuk sub-village, in the Blitar Regency area. People in this sub-villages tend to have middle to lower economic conditions, seen from the lack of facilities and environmental conditions in the sub-village. One of the contributing factors is the low level of education so that residents are less open-minded and unable to develop. Besides, the geographical location which is far from urban areas makes it increasingly difficult for residents to access many things such as schools, jobs, goods to meet their needs, and so on. Most of the work of residents is as migrant worker (*Tenaga Kerja Indonesia*), sugar cane farmer/sugarcane labor, while many women do not work or only do housework.

Seeing the social and economic conditions of the community like this, making the residents of

those sub-villages meet the criteria to become one of the targets of the community empowerment program. Community empowerment itself is understood as a form of the government effort to increase the dignity of the lower classes of society who have limitations in escaping poverty and underdevelopment. Community empowerment is also understood as an effort to increase the capacity of the community both individually and in groups in solving various problems related to efforts to improve the quality of life, independence, and welfare. Through community empowerment, new insights are given that are useful for community development, especially in employment (Green, 2016). Meanwhile, society is a form of social organization in which social interactions are important for the reproduction of everyday life that appears within moral boundaries (Goodsell, Flaherty, & Brown, 2014). Communities who are in the same area can be conceptualized into a form of

asset or human capital (Flora, Flora, & Gasteyer, 2016). In the same place, there are various kinds of human resources (Green & Haines, 2011) that can be empowered. Of course, this has become an important note (Matarrita-Cascante & Brennan, 2012) in the context of community empowerment.

Principally, community empowerment must start from within the community itself. Society is a place where principles of rule, including innovative potential, are created (Filippini & Barr, 2017). Positive results can occur depending on the empowerment process which depends on the empowerment initiative (Nielsen, 2012). Economic empowerment does not occur independently, but it relates and depends on many factors (Fleischman, 2018) including the conditions of community members and others. In other words, the community is the actor and determinant, while government agencies or other related parties only act as facilitators who assist the community only. To achieve maximum results, the community empowerment process must be per the needs and potentials of the community itself. Community empowerment itself can be done through two approach methods, namely Rapid Rural Appraisal (RRA) and Participatory Rural Appraisal (PRA). Rapid Rural Appraisal (RRA) studies the condition of communities, especially underdeveloped villages, repeatedly and quickly carried out by a small group of teams assigned to gain an understanding of the condition of the area. RRA is classified as exploratory whose purpose is to describe problems and opportunities in an area through the active participation of local or regional communities (Pido, 1995). Meanwhile, Participatory Rural Appraisal (PRA) emphasizes community involvement in the entire process of empowerment activities. Researchers believe that research with PRA is simple and does not require much except a basic summary with participatory studies, coherent data variables, and a small sample size which makes it complex in design, analysis, and interpretation (Riley & Fielding, 2001).

Researchers saw an opportunity to take advantage of the natural potential in Blitar Regency to be used as a means of improving community welfare. Nature cannot be separated or always related to human projects or activities (McLean, 2020). Bram Buscher saw the emergence of the flexibility of nature, which is a kind of vague capital that is no longer tied to a specific material or relationship context (Igoe, 2014). In industrial society, nature is implicitly considered as capital (MacDonald & Corson, 2014) which can be used as a commodity (Büscher, 2014). One of the potentials uses of natural materials is the manufacture of eco-print products. Eco design is becoming an important trend in the fashion industry (Wang & Shen, 2017). This is one form of development of the next generation of home products based on 'do it yourself' that are popular lately (Borgne, et al., 2019). Products with printed or dyed materials that are eco-friendly or environmentally friendly are on the market (Teli, Sheikh, & Shastrakar, 2013). Eco-print products are a form of products that pay attention to the environment, especially because they are made from nature. With the increasing awareness of environmental and pollution issues, natural coloring is important because it comes from materials that can be recycled and can become health / environmental care products (Prabu, Teli, & Waghmare, 2011). The natural dye technique is increasingly developing with various new inventions, one of which is the eco-print technique. The eco-print technique is defined as a process for transferring colors and shapes to fabrics through direct contact. The main purpose of this printing is to produce color patterns with strict boundaries on the material without any coloring that spreads beyond the boundaries of the design motif (Shenai, 1985). This research wants to explore how much natural potential in Blitar Regency to be used as a basic material for eco-print products. This research will also see how far this eco-print product can be implemented in various media. Furthermore, researchers will also implement the eco-print

product to improve the welfare of the people of Blitar Regency.

It is hoped that this research can contribute to the development of eco-print products made from nature in the Blitar Regency, besides, eco-print products can be implemented to improve the economy, as well as encourage people in the Blitar district to become creative-preneurs. This is because creativity in the present era can be commercialized and used as an economic source (Caves, 2000). An entrepreneur is a connection between creativity and business (Townley & Beech, 2010). Thus, entrepreneurship with creativity can be seen to be closely related (Kirzner, 1978). By turning people into creative people who can produce certain products (Patten, 2016), people are expected to be independent, able to explore and take advantage of the potential in their area and be more prosperous. This research can also be used as a reference and contribute to related parties, especially the Local Government to sustainability for the improvement of the community's economy through eco-print products in the Blitar Regency.

## **2. RESEARCH METHOD**

To achieve the research objectives, researchers used the combination of methods such as: Participatory Rural Appraisal (PRA) and Service-Learning (S-L) method in art learning based on socio creative-preneurship. The eco-print implementation using the S-L method involved totally 145 students from the Visual Communication Design class Petra Christian University who had focused on learning based on socio creative-preneurship. The data collection techniques used were literature study and field study methods which included observation, interviews, questionnaires, and Focus Group Discussion (FGD). The data analysis technique used is descriptive qualitative analysis. Through qualitative descriptive analysis, problems are resolved, and practices are improved through

observation, analysis, and description (Koh & Owen, 2000).

### **2.1 Participatory Rural Appraisal (PRA)**

In simple terms, Participatory Rural Appraisal (PRA) is a form of approach in studying the conditions and life of a community, all of which originate from, with, and by the community itself. Participatory Rural Appraisal (PRA) is widely used in participatory research developed for rural or rural communities to provide a platform or tool for training, planning, and evaluation that offers great potential if adapted to specific and clear settings and needs (Rachel, 1997). PRA can be very useful in an area with data deficiency and a culturally different context (Al-Qubatee, Ritzema, Al-Weshali, van Steenberg, & Hellegers, 2017). The power and popularity of PRA are partly explained by the unpredictable analytical abilities of local people or communities expressed through participatory sequences and particularly visual methods (Chambers, 1994a). This is a change in approach from questionnaire surveys to sharing experiences with local communities (Cavestro, 2003); (Sijbesma & Postma, 2008). So, it can be said that the actors of PRA are the community, with the help of the community for the benefit of the community itself. The main objective is to produce a program to improve community welfare by the circumstances, desires, and potential of the community. PRA also aims to develop the capacity of the community to analyze their situation and carry out planning accordingly.

Different from conventional empowerment methods that teach communities, PRA supports community involvement to learn and solve their problems by involving traditional knowledge and abilities among community members. PRA resonates with paradigm shifts in society in social and natural sciences, business management, and mental development, supporting decentralization, local diversity, and personal responsibility

(Chambers, 1994b). In this approach, it is important to combine implicit knowledge from society with different scientific knowledge from researchers and decision-makers to solve problems and reach acceptable and implementable solutions (Zanetell & Knuth, 2002). Thus, PRA emphasizes the involvement of all groups of society and takes into account those who have the most limited access to welfare. Due to the position of the community as the main actor in PRA, external parties, government, NGOs, and other related parties, only play a role as a facilitator. They are only limited to providing information assistance related to what is needed by the community.

## **2.2 Service-Learning (S-L)**

This study implements Service-Learning (S-L) activities as a means of the PRA process of community empowerment in the sub-villages in Blitar District by involving Visual Communication Design students as facilitators. S-L itself is a form of experimental education in which students are directly related to activities in meeting community needs (Dumas, 2002) through a process of learning action and student reflection in the process of understanding their knowledge and abilities in-depth and realizing real goals or results for the community and society. (Mason & Dunens, 2019). Through S-L, students not only learn from experience but also learn from reflection on experience because experience requires them to rethink the experience so that they can affirm old thoughts (Dewey, 1997). That way, students can develop and at the same time strengthen the community or community around them (Volchok, 2017). Therefore, it is hoped that through this S-L activity it can help not only students in achieving educational benefits that can be demonstrated and proven (Mohan, 1994) but also the people of Selorejo, Genuk and Kademangan sub-villages, in identifying, understanding, analyzing, and solving economic problems and welfare in society.

## **3. RESULTS AND DISCUSSION**

The process of community empowerment through PRA and S-L activities in this study shows a tangible result through the introduction of an eco-print innovation product to the people of Selorejo, Genuk and Kademangan sub-villages, Blitar Regency. Eco-print is already familiar in society. Through this activity, the eco-print products produced by the people of those sub-villages experienced positive changes. What was originally only the result of simple community crafts, with the help of PRA, it has become a community product that is environmentally friendly as well as has economic value that can compete with other commercial products.

From the results of the research that has been done, it can be seen that the exploration of eco-print products for the community in the Selorejo, Genuk and Kademangan sub-villages show that creative innovation products using the results of eco-print can encourage the community empowerment process through increasing the economic value of the eco-print products. With the increase in the economic value of eco-print products, it has an impact on the level of product sales which significantly affects the income level of the community.

The exploration of eco-print products introduced to the people is a creative and environmentally friendly design production and does not require complex and complex techniques or expertise. So that it makes this opportunity attractive to be pursued and developed more deeply.

The exploration of eco-print products is one of the means in developing and disseminating the understanding that products produced by eco-print creations are environmentally friendly and have economic value that can compete with other similar products. Besides, eco-print products also have their cultural values and uniqueness by carrying out nature in the production process, making motifs to the final product. The eco-friendly theme promoted by eco-print is increasingly resonating with the involvement of natural forms in motifs that are the

result of the exploration of eco-print products. The following are examples of some of the unique motifs that were produced:



Figure 1. Eco-print Motif Creation

The eco-print product exploration process uses a variety of eco-print techniques by utilizing various types of natural ingredients such as papaya leaves, noni leaves, tarum leaves, teak leaves, and others to various types of flowers that grow around. These materials are not only used as basic patterns for motifs on eco-print products but also as natural dyes in eco-print products. This is what makes eco-print a unique and economical product.

By using this PRA method, the community can be motivated to work on and implement eco-print motifs in two ways, namely steaming and pounding. Initially the researchers and the community only applied steaming techniques, but seeing the enthusiasm of the community, we also taught pounding techniques. What's interesting about these two techniques is that the steaming technique requires strong energy to roll and tie the eco-print fabric before steaming, so it requires men to do it. Meanwhile, the mothers prefer the pounding technique, which is to make an eco-print motif by hitting the leaves with a rubber hammer on the cloth that has been embroidered. This work can be done independently by mothers.

The following is the result of the implementation of the steaming and pounding technique.



Figure 2. Eco-print motif using the steaming and pounding technique

### 3.1 Preparation

The PRA has problem solving and program development orientation. So that in its implementation, it prioritizes the involvement of all group members, respects differences, and community opinions. Good cooperation has been done by researchers before this activity is carried out, making it easier for the researchers to communicate and coordinate. In this eco-print research, the beginning of the research was started by conducting a field survey. Prior to conducting this eco-print research, the researchers had activities with several communities in Kab. Blitar with the theme of education, such as making teaching aids, written batik and also eco-print motifs in one of the villages. According to the methods used, namely PRA and S-L, the planning for making eco-print is divided into two, namely: coordination with the community in Selorejo, Genuk and Kademangan Sub-Village and coordination with students of Visual Communication Design 4 class.

From eight communities, there are four communities that are interested in being involved in

research and do some training to improve the welfare of the communities, and finally in the process only three villages were actively involved. The villages that want to join this program are because (1) the community feels the need for its members to improve their skills through this eco-print product training, (2) the community is willing to provide facilities for learning facilities for students and also members involved, (3) the community interested in the topic offered, namely eco-print product, (4) high interest from community members who expressed their willingness to be involved, (5) community leaders felt the impact of this research and workshop would be very useful for the welfare of community members.

In this preparation stage, this eco-print research began by involving 68 students in the Visual Communication Design 4 course in the year 2019. Then continue with the implementation stage that involved 77 students in the year 2020. The initial briefing was carried out by the researchers who explained about eco-print product, research objectives, the extent of student involvement in research, the eco-print motif training process that implementing the S-L method, student rights and obligations, material to be studied, learning methods, research schedule and communication ethics. The duration of each stages are around four months which is in March until June.

S-L aims to improve academic learning by applying the theory taught in class to real situations in the field according to the problems faced by the community. S-L responds to the needs of society so that it has more potential compared to conventional learning methods (University of Southern Indiana, 2019). A course can be said to implement S-L when: (1) there is service to the community that benefits students and the community, (2) can improve academic learning, (3) aims as part of civic learning where students can play an active role in society and be involved in a community that democratic (Howard, 2001). In addition to learning experiences in the community, students and the community can

experience positive multicultural relations, due to various differences in social, economic and cultural strata (Natadjaja, 2019). Careful preparation is made before students go to the village.

On the community side, this preparation stage is carried out before students come to the village. The researchers has coordinated to ensure that the community has prepared a number of things including: (1) an adequate training location, (2) training participants, (3) equipments for making eco-print such as cooking pots, stoves, raffia ropes, PVC pipes that provided properly by community or subsidized by the researchers, (4) raw materials such as teak leaves, medicinal plants or flowers that can produce pigments.

In the preparation stage for implementing S-L, there are four stages that students must go through in this program, considering that making eco-print motif is relatively new for them, namely: learning eco-print techniques, practicing independently, providing training to communities and an innovation stage where they are expected to be able to find new motives. The four stages are carried out by students in groups and outside the classroom. While the other two stages are learning eco-print techniques in theory and making reflections done individually.

Table 1: Preparation Stage Timeline

Preparation Stage	March 2019	April 2019	May 2019	June 2019
Learning				
Practicing				
Providing training				
Innovating				

In this preparation stage, the researchers tried to prepare the community to be able to implement eco-print products as well as students can implement S-L. Students met with the community and provide first training accompanied by their tutor and researchers. All villages received two training sessions, namely basic training and also advanced training. In basic training, students provided an

introduction to what eco-print product is and how to make it use one type of leaf. Basically, the community understand about eco-print technique first and tries to put it into practice. Meanwhile, in the advanced training, students have implemented various kinds of leaves and have introduced them to the community how to create motifs with various leaves.

In accordance with PRA principles, the implementation of this planning stage, students and the researchers function more as facilitators. The main actor in the training is the community. So that in implementing this S-L, students and the researchers must be able to learn from each other's and share experiences with the community.

### **3.2. Planning**

PRA is not a single set of techniques that are finished, perfect and correct. Therefore, this method must always be developed to suit local needs. Since the goal of implementing the PRA method is joint program development with the community, its application should always refer to the program development cycle. To see expected results, resolved problems, emergence of follow-up problems etc., we must do evaluation and follow-up plans.

After the first training was completed, the researchers conducted a field survey. From the results of our visits, the three communities continued to make eco-print motif. In Selorejo, the community leader, Mrs. Margaritha Lobo, admitted that she had difficulty gathering community members to practice, so that currently only she has done various eco-print motif experiments. The fabric that we provide has also been used up for independent training. Mrs. Lobo said that she was motivated to try to make this eco-print because of the beautiful motifs, besides the trend she also saw on the internet if this eco-print was selling well at a fairly expensive price. Moreover, by utilizing natural materials, he also protects nature, especially if he harvested from plants that he planted himself (Lobo, 2019). In

Genuk, the community has tried to implement eco-print on used clothes and t-shirts. The community in Kademangan conducts eco-print motif training together, while waiting for their children to come home from school. The training was carried out twice, and the materials were all used up. Mrs. Mumpuni and Mrs. Cahyani said that mothers are motivated to make eco-print motif again. When they wait for their children to attend school, they make arrangements to do training. They are happy because they have activities while waiting for their children to come home from school (Mumpuni and Cahyani, 2019).

At this planning stage, the researchers also provided additional training for mothers who were more motivated in making eco-print products. After several trainings to make eco-print, at the end of the training there was always discussion and evaluation discussing how to plan future activities in order to get input for improvement at a greater level. Finally, researchers and community agreed to develop the production of eco-print in several product items such as bags, wallets, clothes, and others. In addition, we realize the importance of brands and logos so that in the future the products of each village will have their own brand. Not to forget, we also plan to make packaging designs for the products to be sold.

### **3.3 Implementation**

At the implementation stage, although the making of eco-print motifs and products is the responsibility of the village community, the researchers still involves the students to be able to contribute ideas for eco-print products that are believed to be more creative and innovative. Unfortunately, during this implementation process, there was an outbreak of the Covid-19 pandemic, so that many adjustments were made to S-L by students and PRA carried out by the community. However, the implementation and organization of the community is tailored to the needs and level of development and capacity of the community. The

researchers continue to monitor direct activities to see if they are in accordance with the plans that have been prepared.

For the implementation, the researchers registered various motifs that have been made together with the community such as the *EcoVertex\_pusaran* motif as the copyright of the Selorejo village, the combination *EcoFusion\_perpaduan* motif for the Genuk village, the *EcoRadial\_jari-jari lingkaran* motif and *EcoDiagonia\_dinamis* for the Kademangan village. Furthermore, the motive that already belongs to the village is expected to become a characteristic that can be implemented by the community. In the making of this eco-print, the participants created a motif that has obtained an IPR so that in the future they can be more flexible in developing motifs and commercializing their creations.

Table 2: Implementation Stage Timeline

Implementation Stage	March 2020	April 2020	May 2020	June 2020
Briefing				
Designing				
Eco-print Products				
Branding & Packaging				

In the process of implementing eco-print products during the Covid-19 pandemic, there is communication barriers, especially when the researchers, students and the community could not meet and interact directly. Some of the students' ideas are still communicated to the community to inspire them in making eco-print products which are expected to follow the trends.

Here, one of the examples of the results of the exploration of eco-print products created by student in S-L program.

### 3.3.1 Eco-print Fabric Products Design

Students individually make an eco-print product design proposal under the guidance of their respective tutors. They explore ideas, compile concepts and express them visually, one of which is in the form of fashion design. Not everyone who enters and starts a fashion business, especially clothing, has high knowledge of pattern techniques, sewing techniques, quality control techniques, and so on. Therefore, it is necessary to have innovation and unique ideas without using complicated technical techniques but still be able to increase the selling value of a product. Fashion products do not have to and always use high enough sewing techniques, but there are many ways to create unique, attractive, and good fashion products with only a wide cloth. Eco-print products using satin will look better because satin products are smoother, cooler, and lighter. Lighter fabrics are easier to shape and work with. Here are some examples of creations using eco-print fabrics as fashion products:



Figure 3. Eco-print Innovative Fabric Creations by Astrella Phelia

This creative product uses only a piece of eco-print cloth with a width of 120 cm x 120 cm to be created according to the user's wishes. Also, the



different eco-print motifs from one fabric to another give its unique value.

### 3.3.2 Eco-print Clothing Product

During its development, several villages have also developed clothes that are used for various events such as carnivals, exhibitions and community uniforms. Students' ideas can be an inspiration to the community, but in accordance with PRA principles, the community becomes the main actor and they should make decisions because they are the ones who understand better the conditions and needs of their villages. The basic idea for processing the most common fabrics is to make them a fashion product. Because fashion products that can be make as a dress can become a good business.

The following is an example of the work of the Genuk village community whose ideas came from the work of students. They did not directly apply the patterns or models made by students which were originally cardigan model, but they made modifications and tried to sew their own clothes from the eco-print motifs they made before. We found that they were proud of their work.



Figure 4. Eco-print Cloth Creations

The concept of developing the *EcoFusion* motif in Genuk village originated from the fashion design work of the Petra Christian University Visual Communication Design students namely Tesalonika Dyka Tertiyus. The reason behind the development of fashion products with Eco Fusion motifs is to provide a variety of fashion items on the market today that beautiful and wearable. This Eco-print technique with an *EcoFusion* motif is applied to a cotton cloth. Components or raw materials from teak leaves, moringa leaves, and katuk leaves.

## 4. CONCLUSIONS

Empowerment of the people of Selorejo, Genuk and Kademangan Sub-village, Blitar Regency through PRA, where the active involvement of residents as planners, decision-makers, and implementers of empowerment activities has a positive impact on the development and sustainability of eco-print product production in the sub-village. The participation of students through the implementation of S-L in this process also provides positive encouragement and influence through the exploration of eco-print products together with the residents of the sub-villages so that they can create new creations for eco-print products that were originally still traditional and simple, into new unique products and have a higher economic value. Thus, the exploration of this eco-print product can be a means of empowering and improving the welfare of the people of Selorejo, Genuk and Kademangan sub-villages, Blitar Regency.

The combination of PRA and S-L methods can strengthen the potential of each party involved in community empowerment through this eco-print product. Although in the middle of the process there are obstacles due to the Covid-19 pandemic, with good cooperation between various parties, it turns out that the implementation of this eco-print product can be realized. The eco-print products that are produced are mostly aimed at female target audience, even though this S-L program involves an

almost equal number of male and female students. In the future, we hoped that more eco-print products can be sold and improved the welfare of the community.

Through this research, we hope that the eco-print product exploration process will get more attention and support as an effort to empower disadvantaged communities in other areas. Not only limited to eco-print products, but also various other potentials that still need to be explored and developed.

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