

Soil Batik: The Innovation in Designing and Coloring

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Abstract—Batik innovation has been carried out by Indonesian craftsmen and designers. The purpose of this study was to create new batik patterns utilizing a soil formula that brought out different colors. Quality Function Deployment method was used to understand the consumers' need. The results showed that the consumers were interested in culinary, culture, regions, and local community philosophy motives on their Batik. This study contributed concepts for the craftsmen to satisfy the consumers' need.

Keywords—soil batik; innovation; design; coloring

I. INTRODUCTION

Batik is the result of creative work of art of high value and a source of pride for the nation of Indonesia as a cultural heritage that contains historical value and rich in meaning. Batik is regarded as a cultural icon that has a unique nation as a symbol and tradition in a society with a deep philosophical and cultural heritage [1]

Design innovation has been carried out by craftsmen and batik designers proved every region in Indonesia has a particular characteristic of this time, but technical innovation and the manufacturing process is still few. In the process of making batik one of which was the dyeing process. Batik can be classified into two from the dyes, they are natural and synthetic dyes. Most of batik uses synthetic dyes because it is easier and cheaper. Only small part batik uses natural dyes because the long process, the material for natural dyes is also very difficult to get [2, 3, 4].

From these facts, researcher interested in making batik by using natural dyes derived from soil. In this study, researcher will make innovations that include design and engineering by applying natural dyes soil. The new element is the technique used in the manufacturing process and batik coloring with soil. Batik is produced by using natural dyes, named batik soil.

II. METHODS

This study was the research development. The purpose was to produce a specific product, to test the effectiveness and to enhance the product. In general, research development was to produce and develop a new product or improve existing products, which can be accounted. Products can be a prototype and design [5, 6].

The method used for data collection was interviews on, batik expert region. As for consumers batik data collection was done through observation.

The method used to analyze the data in this study was qualitative and quantitative. Quantitative analyzed consumer data batik filling instrument using percentages, while qualitative was used to describe the results of interviews to batik experts from the so batik soil.

This study followed the method of Quality Function Deployment was commonly abbreviated QFD. QFD was a methodology to translate the needs and desires of consumers into a product design that has the technical requirements and characteristics of a certain quality. This method was chosen because of the focus on customer needs, to minimize misinterpretation to customer needs, and assist in planning products that generate high customer value [7, 8].

III. RESULTS AND DISCUSSION

Results

Consumer opinions on batik soil previous research results were: for decorations prefer fauna and flora motifs, and combination between dark and light color for the base and decorative motif.

While the result of discussion with experts and batik designer:

- a. The land as a natural dye, there were several factors: location where the land was located, type of land used, soil conditions (powder, chunks, clean or dirty), and the soil color (red, brown, black or yellow), and the soil texture, time taking of land (whether morning, afternoon, evening or night), because the soil conditions (moist, dry, wet, etc.) It might be affected by natural conditions when the land was taken [9].
- b. The fabric that can be used was cotton cloth,
- c. The wax can be used that did not contain latex soupy and clean,
- d. The motifs had a philosophy of life people, natural element should be dominant, structuring motif was set so that it looks beautiful and exclusive [10, 11, 12].
- e. The combination of soil and synthetic colors should attract between light and dark so clearer,

f. Scratches and culture should be integrated in the motif.

Analysis of the survey results and interviews were analyzed using quality consumer demand. Based on the results, batik motif accommodated the desire of consumers based on the results of interviews with designers and motif developed, namely: The main ornament, Ornamentation support, Ornament *isen-isen*, Ornament outskirts, and other components.

From the results of the consumer quality demand then made batik design, it showed on:



Fig.1. Batik Design 1

Batik design 1, inspired by kupang for main ornament, and snail for supporting ornament.

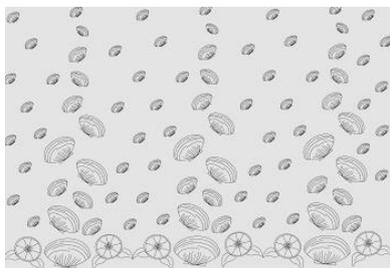


Fig. 2. Batik Design 2

Batik design 2, inspired by kupang for main ornament, scallops, and citrus fruit for supporting ornament.

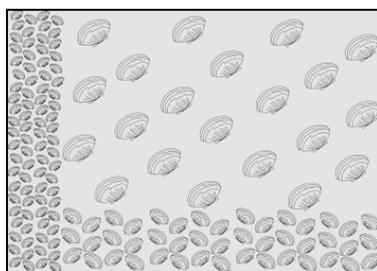


Fig. 3. Batik Design 3

Batik design 3, inspired by kupang for main ornament and betel leaf for supporting ornament.

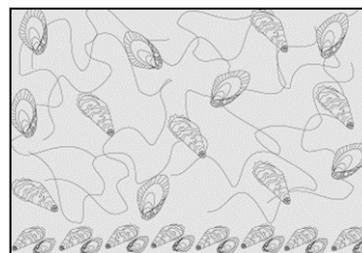


Fig.4. Batik Design 4

Batik design 4, inspired by kupang for main ornament and seaweed for supporting ornament.

From the results of the preparation of the quality consumer demand, then it applied on the instrument and in survey on consumers to know the desire of consumers about the desired motif. At that time, instruments survey was included batik soil prototype which has been made.

Based on the results of peer group obtained the results of the discussion about the specifics of batik will be designed by the discussion above returned to observe similarity and to be discussed for representative-ness, with the observation of consumers regarding the design of the batik cloth. It was indicated that each batik design were made had own consumer with a different amount [7].

Based on the outcome of the preparation of the consideration of quality consumer demand can be analyzed motif oriented consumer tastes are [10, 13, 14]:

- a. Batik most preferred by consumers included batik design overall was the decoration small batik placement hoarse.
- b. Decorations
 1. Form: it referred to the motives did not have characterize batik craftsmen and trends
 2. Size: decorative medium size was balance between the main motive, supporter, *isen-isen* and periphery.
 3. Laying : decorative can be placed anywhere as long as not too monotonous for causing boredom
 4. Color: colors for decoration were colors with a mix of primary and secondary color composition tends to analog.
 5. Basic color fabric: the fabric base color using the colors of the secondary and tertiary, but it tend to dark colors or older than the color of the decoration.
 6. Type of fabric: quality fabric smooth and comfortable when it was used.

Discussion

1) Soil Batik Results

Based on the observation and discussions with designers and craftsmen batik, then compiled the quality consumer demand and the consideration of quality consumer demand

can be analyzed that the formulation of soil batik design-oriented consumer tastes as followed [7, 10]:

1. Shape: Designers should have high innovation both of the source of ideas and creativity shape. Innovations range of bias could stem from the culinary, cultural, regional, local particularities, the philosophy of the local community.
2. Size: balanced between the main motive, supported motive, *isen-isen* and periphery. The motive more easily applied to variety of shapes and proportions of the body.
3. Laying: ornaments can be placed anywhere as long as not too monotonous for causing boredom. Laying the main decoration should be a center of interest.
4. Color: Color for decoration were combination of primary and secondary color composition, it inclined to analog. Consumers want to wear when they want to look elegant batik making more likely a combination of colors on color matching c and harmony.
5. Basic color fabric: the fabric base color using the colors of the secondary and tertiary, but it tend to be older than the color of the decoration.

2) *Development of soil batik design oriented to consumers*

Based on the results of the charging instrument on consumer batik, interviewing designers and the expert, it can be developed batik design soil. It can be seen as follows:

a. *Batik Design 1*

The first design used primarily decorative mussels and/ citrus fruit that made varying shapes, sizes, and colors, while supporting decorative took the idea of varying size, shape snail. However, out decorative outskirts using form horizontal lines used variety of colors. Basic fabric used a red motif old to bring color to be more visible ornamentation.



Fig. 5. The results of batik design 1

b. *Batik Design 2*

Development of the design 2 was the ornament *kupang* full on all parts of the fabric. The great size were varies from large until small. On the bottom of the fabric, the decorative motif outskirts of using *kupang* and citrus fruit in larger size Motif outskirts of using the decorative horizontal straight line on one side of the decorative. The colors used are the ground color, red and blue. While the basic fabric using a deep red color.

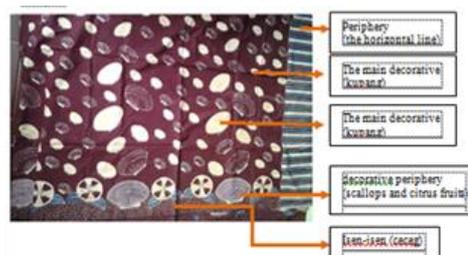


Fig. 6. The results of batik design 2

c. *Batik Design 3*

In this design using the main decoration *kupang* had same shape, but the size was different. For decorative supporting use of *betel leaf* motif, while the edges on one side using a decorative *kupang* that size was smaller. Soil color was dominant, but it still used other colors of synthetic dyes as its appeal. On the bottom of the fabric used light brown color.

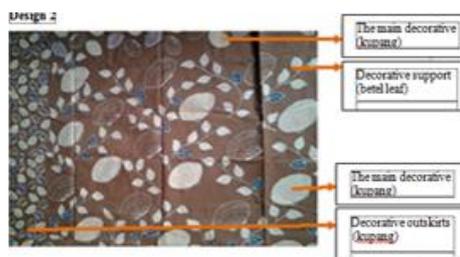


Fig. 7. The results of batik design 3

d. *Batik Design 4*

The main decorative used distillation *kupang* which was good shapes and size, while supporting decorative used *seaweed* shapes and curved lines between ornamentation. For periphery used the form horizontal lines on one side of the fabric and the bottom using a combination motif mussel using size variations. Color motif mostly used soil color, but combined with synthetic color. However, the color of the base fabric using an older brown color than the color of the soil so that the motif remains visible.



Fig. 8. The results of batik design 4

IV. CONCLUSION

- *Formulation of Soil Batik Design*

Formulation of soil batik design that oriented consumer tastes can be viewed from:

- Decorations referred to the shape of motives that have nothing characterize batik craftsmen and trends, culinary, cultural, regional, local particularities, and the philosophy of the local community.
- Size: the decorative medium size was balance between the main motive, supporting and *isen-isen* and its outskirts.
- Laying: decorative can be placed anywhere to make the atmosphere more passionate as long as not too monotonous.
- Colors for decoration were combination of primary and secondary color composition which tends to analog. Basic color fabric used older color than the color of the decoration.

- *Development of Soil Batik Design*

Development of soil batik design that oriented to consumer which develop the main decoration, support decoration, *isen-isen* and periphery in terms of shape, size, color and placement.

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