Innovation of East Kalimantan Batik Craft Products Combined with Jumputan Technique

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Abstract— Batik craft typical of East Kalimantan is one of the fields that has a major contribution to the improvement of the regional economy. However, there are not many product innovations carried out by SME Craft batik in East Kalimantan. Recent product development trends lead to a product designed based on customer-oriented needs. There has been no effort to develop batik products that are based on the preferences of customers of craft products. The problems of the study are (1) What are the preferences of the customers of East Kalimantan towards batik design combined with jumputan techniques (2) What are the suitable cansei words chosen by the customers towards East Kalimantan batik combined with jumputan techniques. The purposes of the study are (1) Knowing the preferences of the costumers of East Kalimantan towards the design of East Kalimantan batik combined with jumputan techniques (2) Knowing the suitable cansei words that are chosen by the customers to East Kalimantan batik design combined with jumputan techniques The method used in this study are the initial design of research, the collection of kansei words, the preparation of differential semantic questionnaires (SD), the dissemination of SD I questionnaires and statistical analysis . It can be concluded that people's preference for batik fabric products combined with jumputan techniques is influenced by several sequential things from the most influential: color, comfortable, beautiful, modern, fashionable, elegant, proud, smooth and unique. And for the factor formed is 1 factor with the highest loading factor value of 0.764 in the color component.

Keywords— *Kansei factor; batik; jumputan; East Kalimantan*

I. INTRODUCTION

Increasingly fierce competition, SMEs are required always to improve the quality and to innovate their products. Some previous research that has been done by others concluded that innovation can improve the quality and economic value of a product and company innovation does not affect the company's performance directly, but has a significant effect on product quality. The quality of the product has a significant effect on the company's performance.

Typical crafts in East Kalimantan consist of a wide variety of products, one of them is batik cloth. Batik cloth has undergone development in its application, namely for fashion products, but there are still few batik SMEs that do their product development. In previous research that has been conducted by other parties "Application of Quality Function Deployment Method (QFD) for The Development of Batik Motif Design Typical of East Kalimantan" mentioned that the characteristic batik motif design attributes of Kaltim are: attractive batik motifs, batik motif shapes have Kaltim characteristics, a combination of flora motif colors (tendrils) and medium and small motif sizes. The highest attribute value for the level of importance is the attractive batik motif, with an average value of 4.77. And for the lowest importance attribute is a medium and small motif size with a value of 3.05. The technical response to the development of the design of typical Batik motif Kaltim is the selection of color, balance of motifs, proportions, composition [1].

Product development trends lead to a product designed based on customer-oriented needs [2]. To translate the customer's affective factor, Nagamachi introduced a method called Kansei

engineering. Kansei engineering becomes a method for translating a person's feelings, emotions, and impressions of a desired product [3]. Research on the development of batik has been done by Srikandi, et al. [4], Ristiani and Sulistyaningsih [5]. Other research on product development with kansei engineering methods as has been done [6], [7], [8], [9], [10], [11], [12].

Some SMEs in East Kalimantan are engaged in batik crafts and weaving that are done manually and required high skills so to produce fabric craft products that have high artistic value. With a high art process, the manufacture of batik takes a long time so that the price can also be quite expensive. For the purposes of tourist souvenirs, crafts such as batik tulis at a high price have their own niche market. However, for newly developed tourist attractions, in this case in East Kalimantan is being developed tourist villages, it takes souvenirs that are easier in the manufacturing process and with a sale price that is not expensive so that the people around the tourist village who certainly do not all have high skills and artistic spirit have the opportunity to open a new business making souvenirs in the field of fashion and can also be one of the tourist attractions to come. Because the souvenirs can be affordable by most people.

One of the developing tourist villages in East Kalimantan is Pela Tourism Village, Kota Bangun Subdistrict, Kutai Kartanegara Regency. Some researchers from various fields has been done to help the development of Pela Village such as tour guides. Chairman of Pokdarwis B3 Pela Village and the proposer have made an agreement to produce a souvenir design in the form of batik cloth typical of Pela Village. With the background above, it is necessary to make a research on the development of batik crafts typical of East Kalimantan, in this case represented for Pela Village, with the alternative of combining with jumputan techniques so that it will be easily applied to support tourism in Pela Village.

The problem in this study is that there has not been much development of East Kalimantan batik design based on design characteristics (both motifs, main ornaments, filler ornaments, number of isen, fabric color as primary color and motif color as secondary color) combined with other techniques that are desired and needed by customers.

The problem is: 1. What are the preferences of the customers of East Kalimantan towards the batik design of East Kalimantan combined with jumputan techniques 2.) What are the suitable cansei words chosen by the customers towards East Kalimantan batik combined with jumputan techniques.

Special Purpose: 1. Knowing the preferences of the customers of East Kalimantan towards East Kalimantan batik design combined with jumputan techniques 2. Knowing the suitable cansei words that are chosen by the customers to East Kalimantan batik design combined with jumputan techniques

II. RESEARCH METHOD

The method in this study is as follows:

1) Initial design of research

What will be done at this stage is to determine the market of potential users.

2) Stages of collecting kansei words

At this stage, the words kansei from various related parties such as batik craftsmen, jumputan craftsmen, consumers and also designers

3) Stages of Compiling a questionnaire

At this stage, a questionnaire was made to explore the impression of what consumers expect of batik cloth with a combination of jumputan techniques.

4) Stages of spreading questionnaires

At this stage, the spread of questionnaires to potential consumers is conducted.

5) Statistical analysis of questionnaires

At this stage, an analysis of the results of the questionnaire was conducted using the SPSS software to obtain any factors that affect community interference with batik cloth with a combination of jumputan techniques

III. RESULTS AND ANALYSIS

Because of the millennial generation market is a huge potential because of the abundant number, so it can be determined that the user market is the younger generation.

The next stage is to collect kansei words that are tried to be dug up by interview, interview, simple questionnaire to consumers, batik artisans and jumputans and designers related to fashion products. By obtaining thirty kansei words that represent the impression of batik cloth with a combination of jumputan techniques. Then reducing by lobbling the words into 9 groups adjusted to the similarity of the meaning of the words kansei that have been obtained. The cansei words are color, comfortable, beautiful, modern, fashionable, elegant, proud, smooth and unique.

The next step is to create a differential semantic questionnaire that requires a response from consumers about the assessment of kansei words that have been grouped into 9 groups associated with the impression of batik cloth coupled with the jumputan technique expected by consumers.

The contents of the questionnaire are as follows: APPROPRIATE ADJECTIVE WEIGHTING QUESTIONNAIRE TO DESCRIBE THE IMPRESSION OF BATIK CLOTH COMBINED JUMPUTAN TECHNIQUE (SHIBORI)

Batik cloth combined with the jumputan technique (shibori) is a fabric that is made by typing on some fabrics and on other parts of the fabric colored by being molded as desired by pinning the mold on the folded fabric to then be colored according to the concept.

CHARGING INSTRUCTIONS:

Father/ Mother / Brother / I are welcomed to choose the appropriate answer. Below after the Respondent's Identity (name, gender, occupation, age &tribe), there are adjectives that describe the impression of batik cloth combined jumputan technique (shibori) expected by respondents.

The 5 adjective scales are as follows:

1 = If the adjectives ARE VERY NOT IN ACCORDANCE WITH the impression of batik cloth combined with the expected jumputan technique (shibori)

2 = If the adjectives DO NOT MATCH the impression of batik cloth combined jumputan technique (shibori)i expected

3 = If the adjective NEUTRAL with the impression of batik cloth is combined jumputan technique (shibori) which is expected

4 = If the adjectives MATCH the impression of batik cloth combined jumputan technique (shibori) expected

5 = If the adjectives ARE VERY SUITABLE with the impression of batik cloth combined jumputan technique (shibori) expected

Table 1. charging instruction

Negative kansei word	Value				Positif kansei word
Not proud	1	2	3	4	Proud
Not beautiful		5			Beautiful
Uncomfortable	1	2	3	4	Comfortable
Common		5			Unique
Not elegant	1	2	3	4	Elegant
Not modern		5			Modern
Colorless	1	2	3	4	Colorful
Not smooth		5			Soft
Not fashionable	1	2	3	4	Fashionable
		5			
	1	2	3	4	
		5			
	1	2	3	4	
		5			
	1	2	3	4	
		5			
	1	2	3	4	
		5			

After the differential semantic questionnaire was created, the questionnaire was distributed to

155 respondents who all filled out the complete. Respondents are the younger generation who are students of D3 Business Administration Study Program and also students of Product Design Study Program, Politeknik Negeri Samarinda.

The data of respondents who filled out questionnaires can be explained as follows:
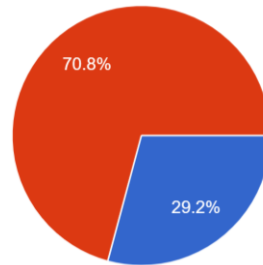

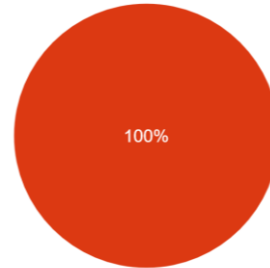
Figure 1. Male sex 29.2% and female 70.8%

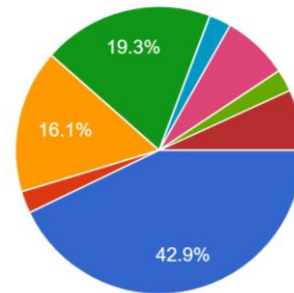Figure 2. 100% of respondents aged between 17-25 years

Figure 3. Javanese tribe as much as 42.9%, Bugis as much as 19.3% and Banjar as much as 16.1%.

After the questionnaire was collected, the validity test was carried out with the result that all adjectives were valid because they have a Pearson Correlation value above 0.6 and have a significant value of 0.000

Table 2. The result of adjectives

Kansei word	Pearson Correlation	Sign.
Not proud/ Proud	0.707**	0.000
Not beautiful/ Beautiful	0.738**	0.000
Uncomfortable/ Comfortable	0.753**	0.000
	0.679**	0.000
Common/ Uniq	0.715**	0.000
Not elegant/ Elegant	0.744**	0.000
Not modern/ Modern	0.759**	0.000
Colorless/ Colorful	0.711**	0.000
Not smooth/ soft	0.736**	0.000
Not fashionable/ fashionable		

After that the reliability test was carried out and the result was that all the components of the question were reliable because it had a Cronbach's Alpha value of 0.887.

After the variable questionnaire was declared valid and reliable, a factor analysis was conducted to find out the respondent's preference for batik cloth with a combination of jumputan techniques.

From the analysis of factors that have been done, it was obtained kmo and Bartlett's test value of 0.892 > 0.5 so that this condition shows that the sample was sufficient. With KMO and Bartlet's test value of 616,824 and a significant value of 0.000, the analysis process can be continued.

With anti image correlation values from variables 1 to 9 indicated consecutively is 0.880; 0,896; 0,885; 0,877; 0,914; 0,865; 0,917; 0.881 and 0.910 where the value of each variable > 0.5, then all variables can be continued with the next process.

The total variance explained value that had a value above 1 is only 1 component so it can be concluded that the factor formed was 1 factor, with sequential loading factor values of 0.764, comfortable 0.754, beautiful 0.752, modern 0.734, fashionable 0.731, elegant 0.720, proud 0.719, smooth 0.695 and unique 0.677.

IV. CONCLUSION AND SUGGESTION

4.1. Conclusion

From the analysis and discussion it can be concluded that:

The word kansei that represents batik fabric with a combination of jumputan techniques is color, comfortable, beautiful, modern, fashionable, elegant, proud, smooth and unique. People's preference for batik cloth with a combination of jumputan techniques is most importantly influenced by color factors.

4.2. Suggestion

The next suggestion is to create a differential semantic questionnaire so that batik cloth design specifications can be obtained with a combination of jumputan techniques that are in accordance with people's preferences.

Here is an example of batik cloth with a combination of jumputan techniques :

Figure 4. Example of Batik clotch

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