

MODEL OF EMBROIDERY DESIGN 'KEPALA PENITI' MINANGKABAU ON ACCULTURATIVE BATIK

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Abstract

This research is motivated by the problem of industrial embroidery 'kepala peniti' tradisional creativity difficulties in developing innovative designs according to the market needs. This study aims to produce a embroidery 'kepala peniti' tradisional Minangkabau design development model based on acculturative batik to enhance creativity, innovative products, quality and competitiveness of the creative industries of West Sumatra. This is The Research Method uses Research and Development (R & D). This research has produced a development model for traditional Minangkabau pinhead embroidery designs based on acculturative batik according to market requirements that are valid, practical and effective. The results of the design validity by the expert team with the average Aiken's V value above 0.815, in the valid category. The result showed that the creativity of the creative industry is increasing. The product of this embroidery design development model received a positive response from the embroidery industry (producers), consumers and luggage. This was shown from the results of the average luggage response practicality questionnaire of 85.96%, the entrepreneur's response (producer) of 92.00%, and the consumer response of 89.37% with a very practical category. which showed market competition is increasing, products are in demand by the market, following the fashion trend that is ready for dissemination to the market; The product model for embroidery design development was declared effective. This was obtained from the results of the t-test comparison of pinhead head embroidery products between before and after development with t-count = 9, 356 > t-table = 1.70 at a significant level $\sigma = 0,000$. The results of the t-test indicate that there was a significant difference between the results of the product before and after development.

Keywords: Model, Embroidery Design, 'Kepala Peniti' Minangkabau, Acculturative Batik

Introduction

Among the results of the popular handicraft industry and the core competencies of the West Sumatra region are the 'pinhead embroidery', both in terms of the type of product and its artistic value.

As a result of Minangkabau art and culture, pinhead head embroidery has grown and is known from the past to abroad pinhead head embroidery has grown and is known from the past to abroad. Today 'Minangkabau embroidery pin' has developed into craft industry centers in almost all regencies / cities of Sumatra: Padang Pariaman, Kota Pariaman, Padang, Bukittinggi, Agam, Limapuluh Kota, Payakumbuh, Tanah Datar, and Solok (yuliarma,2007 and Diskoperindag,2009). Each region that produces embroidery 'kepala peniti' has character and different uniqueness in creating designs and decorative arts (yuliarma, 2017).

Now in this global age, there is no comprehensive written information regarding the characteristics of embroidery designs the 'kepala peniti', making the community, especially the fashion industry, are less familiar with the character of the embroidery design of the 'kepala peniti' of each region and it's difficult to develop it many unresolved design problems even some traditional embroidery designs have been lost and difficult to find, Likewise, people who design (carpenter Nagari) and extension workers are increasingly scarce Likewise people who design (*tukang lukih Nagari*) and the extension workers are increasingly scarce (yuliarma,2015).

The issue that has not been resolved until now in the center of IKM embroidery is low product quality, diversification is less varied, monotonous design and less competitive with international-class products (yuliarma, 2017); so lately productivity has always shown a decline over the years.

The same statement was also conveyed by several embroidery industries in West Sumatra to researchers (Interview, 20 August 2017), that in the small and medium industries (IKM) embroidery, market demand needs and more consumer offerings in solving the design problems that are complained of by monotony and appear less innovative. This is due to the human Resources factor of the workforce designing in the embroidery industry tends to follow the design made in a manner hereditary by the predecessors and the difficulty of

developing designs according to technology and fashion that developed; so that the competitiveness of products is weak both in the domestic and foreign markets (Yuliarma research, 2002, 2009,2015).

One of the reasons is the ability of insight, the skills of human resources in the expertise of the production process are very low, especially related to design technology, sewing technology, embroidering technology has not been carried out through the right stages; like layout is not right and quality control is still low (yuliarma,2012). Likewise, understanding of textile technology and fashion. In general, the ability to produce embroidery is from a hereditary culture that has not had time to understand technological innovation and has not been trained in the ability to produce according to consumer needs and fashion trends. (yuliarma,2007). Lack of professional technical / design skills / skills, so that the design is tradition; As a result of the work cycle, design is still dependent on orders, not independent research and development (exploration) (Sunarya, Y. Yan, 2008). When linked to modern design, there are four things that have not yet received technological innovation, namely: (1) economic contacts at the time of design was made, (2) the use of new technology that allows a designer to play with shapes, motifs, colors, techniques and modes, (3) the relationship between product consumption and personal satisfaction, (4) the needs of the community with its various changes. All of them are characteristic of the craft industry that has not been worked on professionally (Heskett, 1986). Because it's clear that the industry today's embroidery really requires the development of innovative design creativity in accordance with the fashion trends that are developing today (Roy Sianipar,2016).

This study aims to produce a development model for pinhead head embroidery designs based on acculturative batik to enhance the creativity of industrial human resources, innovative products, and high competitiveness.

Method

This research was conducted using Research and Development methods for the development of embroidery designs '*kepala peniti*' (pinhead) based on batik acculturation. The R & D method is a research method used to produce a particular product, and test the effectiveness of the product. To be able to produce products used research that is needs analysis (Sugiono, 2009 : 297).

According to the opinion of Gall, Gall, & Borg (2003) and Sugiyono (2013), then the procedure adopted in the research on the development of '*kepala peniti*' (pinhead) embroidery designs product that are following steps: 1) Collection / Information stage (formulation of problems to be studied, implementing need assessment for market needs data), 2) designing products (models), 3) implementing focus group discussion (FGD), 4) revising the model, 5) Validating the design of the model by experts, 6) revision of the model design by the researcher, 7) model testing / market testing, 8) revision of the model, 9) final product.

Information / Data Collection

According Sugiyono (2009: 298) research can depart from the existence of potential and problems. Based on: a) the results of observations on the product design of '*kepala peniti*' (pinhead) embroidery in the study area of 50 cities, Agam, Pariaman, and Solok; b) the results of data analysis results of Yuliarma's research (2017) about the characteristics of traditional Minangkabau embroidery designs and quality issues, design innovation, and human Resources creativity, as well as diversification; c) literature study; d) reviewing the needs of the fashion industry and consumer needs; then the writer formulates the problem of this research, namely the development model of '*kepala peniti*' (pinhead) embroidery design based on acculturative batik that can improve quality, increase diversification of diverse products, and enhance the creativity of human Resources crafters and produce innovative design products that meet market needs with aesthetic value following the times.

Carry out needs analysis (Need assessment)

This stage of the activities carried out is to analyze the material needs of design development and diversification by: 1) directory document design characteristics analysis (yuliarma, 2017); 2) mode analysis; 3) industrial needs analysis, 4) analysis of consumer needs related to the type of material, motifs, decorative patterns and placement of motifs, color combinations, ornamental skew compositions, and types of products. Data retrieval Needs analysis was carried out in four locations in the industrial center of '*kapala peniti*' (pinhead) embroidery in Limapuluh Kota, Agam, Pariaman, Solok.

Designing Products (Models)

Designing the model is done by: (1) improving the quality of embroidery designs of pinhead heads base on market needs, including: arrangement of decorative motif patterns, color combinations, and composition of ornamental sticks; (2) develop embroidery model 'pinhead' based on batik acculturative. Model design development is carried out by following the stages of the process according to Aspelund K. theory (2006,3-4), namely 1) inspiration, 2) identification, 3) conceptualization, 4) exploration / refinement, 5) definition / modeling, 6) communication, and 7) production. Through embroidery techniques '*kepala peniti*' ('pinhead')

which combined with batik techniques produce innovative products, modern aesthetics and the human Resources creativity process increases; 3) Develop diverse designs for product diversification through the manufacture of various casual fashion designs and fashionable party fashions.

The description of the technology process carried out is as follows:

- a. **The initial stage** raised the idea of a motif originating from the characteristics of embroidery designs 'kepala peniti' (pinhead) resulting from the art of Minangkabau traditional culture produced by Agam regional IKM centers as the basis for the development model of batik-based pinhead embroidery designs (yuliam,2016).



Figure 1. Motif design Initially embroidery of traditional cultural arts pinhead Agam area before being developed (Source: research document yuliarma, 2017)

- b. **Second stage** Developing 'kepala peniti' (pinhead) embroidery designs based on acculturative design in the form of fashion products for casual and fashionable functions. The principle of the composition of motifs and the placement of ornamental motif patterns is adjusted to the value of modern concepts and lifestyles.

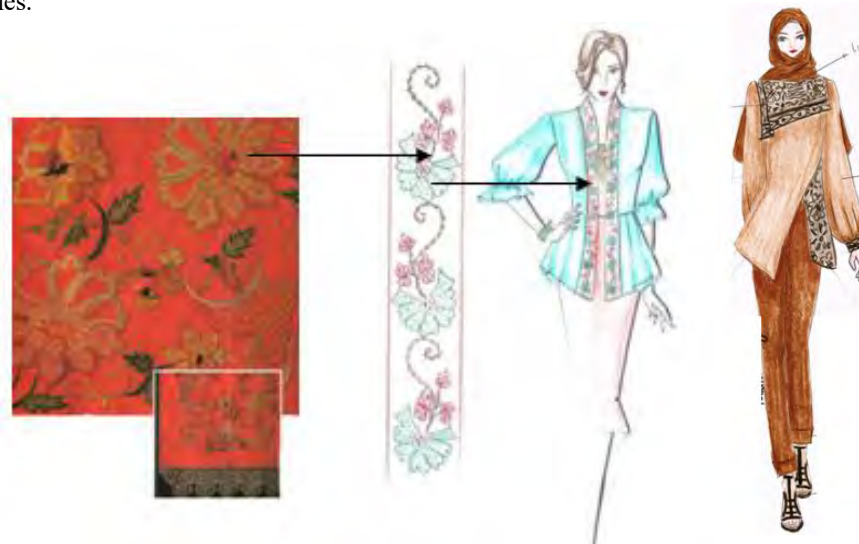


Figure 2. Development Model of pinhead embroidery design traditionally based on acculturative (Source: research document, 2017)

- c. **Third phase** The development of the embroidery model 'pinhead' based on acculturative batik from the development of product designs for the function of casual clothing and fashionable nable party fashions. At this stage the prototype design is made. The process of producing prototypes is: preparing materials according to the accumulative design, making embroideries, preparing body sizes, making patterns, cutting cloth, sewing, and finishing (Yuliarma, 2016). (A discussion about the acculturative prototype of embroidery design development models of Minangkabau art and culture has been written in other international journals).



Figure 3. Prototype of the 'pinhead' design model for embroidery designs based on batik acculturation. (Source: research document, 2017)



Figure 4. Prototype of the 'pinhead' design model for embroidery product designs based on batik acculturation. (Source: research document, 2017)

1. Carry out Focus Group Discussion (FGD)

The FGD was conducted to evaluate the embroidery design model of the 'pinhead' that had been developed, to test the market and obtain input from various parties: Acting stakeholders, entrepreneurs (producers) of embroidery industry, and consumers of embroidery products.

2. Revise the Model by the Researcher

The results of the Focus group discussion (FGD) were then analyzed again for later refinement and revision of the embroidery design development model 'the pinhead' based on acculturative batik according to market needs.

3. Validate Model Design by Experts

Validators are chosen based on people who have knowledge, experience and understanding in the field. Construction validation testing, can be used by the opinions of experts (expert judgment) (Creswell, J.W,2008). In this case after the instrument about the aspects to be measured is constructed with based on certain theories, then consulted with experts (Sugiyono, 2009: 125). The model design that has been revised by the researcher, then requested validation for design experts / fashion designers (1 person), instrument experts (1 person), Minangkabau culture experts (1 person) to get further improvements.

4. Revise the Model by the Researcher

Based on the design validation carried out by experts, the researchers then revised the suggestions according to the model that had been designed.

5. Market model / test trials

The design development model that has been validated by experts is then tested, namely through market trials, socialization, dissemination to embroidery producers, consumers and supervisors or stakeholders) to see the usefulness, practicality and effectiveness of prototypes. In this study market testing was conducted in four regions, including: 50 cities, Agam, Pariaman, and Solok. The data that has been obtained is then analyzed and

used to improve or revise the product developed. After going through a market testing process, it is expected that the quality of the embroidery design model of the 'pinhead' based on batik acculturation developed is better.

6. Model Revision

This stage is carried out from the results of the model / market test trials in industry / producers and consumers and then the researchers re-analyze and then revised the model that has been developed again. That is, the product revision is based on the results of the initial field test.

7. Final Product

This stage is the final product which is the result of the development of a model in the form of a prototype product of the embroidery design development model 'pinhead' based on batik acculturative.

Results and Discussion

The results of the Embroidery Design Development Model 'pinhead' Minangkabau 'based on acculturative Batik

This study produced: 1) the development model of 'pinhead' embroidery designs based on batik acculturative; and 2) proto-type models for the development of traditional Minangkabau embroidery designs based on acculturative batik according to market needs. In this paper the discussion is limited to the development model of pinhead head embroidery designs based on batik acculturative. While the discussion about prototypes reset was discussed in another journal paper.

To produce a development model for pinhead head embroidery designs based on batik acculturative, there are several steps that must be taken, as stated by Aspelund K. (2006,3-4) that, the design process is developed through the following stages: 1) inspiration, 2) identification, 3) conceptualization, 4) exploration / refinement, 5) definition / modeling, 6) communication, and 7) production.

Product design drawing model 2. is a manifestation of the results of the design of a 'pinhead' embroidery design development model based on Minangkabau acculturation, covering the process of technology design for acculturative product embroidery pinhead from Agam area. Pinhead Embroidery design development Minangkabau acculturation is interpreted from the concept the source of the motive idea comes from the characteristics of the various motifs in the form of a large rose (*rosa spp*) and dahlias (*Dahlia sp*) from the Agam region of West Sumatra (yuliarma research, 2015 dan 2017).

While the concept of batik acculturation is interpreted from the unified concepts of batik and embroidery concepts into one modern acculturative work that follows market needs. He design concept takes into account the usefulness of the product following the needs of the market in agreement with Clipson in Nanang Rizali (2002), that the design in the context of the product creation process is closely related to the needs of the user (consumer) and of course always try to make the design acceptable to consumers (creativity). As well with the concept of color, placement of motives and material selection is also influenced by the direction of fashion needs at that time and always changing. According to Sulasmi.D, (2002) the principles that need to be well understood in color composition are (1) repetitive color arrangement, (2) aligned arrangement, (3) contrast color arrangement. Furthermore, in designing fashion, it is expected that the creativity of the designer's ability to solve problems in creating innovative designs, with new ideas and techniques that are valuable. In other words, creative design is a design that is produced with the value of new ideas, methods, and techniques that have met the standard criteria of innovative, varied, aesthetic and fashion trends.

Designer creativity is very individual, as what resonates for a designer may not be relevant to others, but deepening the designer's own understanding, and finding other people's perceptions, can help the creativity design process. According to Cropley, (2002) in Jennings (2011,14) the characteristics of creativity in the products produced must show the appearance of key aspects of creativity including: Novelty, Effectiveness, Elegance, Communication, Emotion, Surprise, Ethicality.

Furthermore Jennings (2011, 19) said Creativity in fashion design is diverse and the need for a broad base of knowledge about the field of clothing, such as considering: 1) environment, 2) cognitive aspects, 3) trait characters, 4) motivation, 5) design process, and 6) the field of clothing as influencing the dimensions of creativity mode. So, in testing the creativity development designers need to consider these 6 aspects.

Product design model image 3. is a prototype form of the design results of the embroidery design model desain pinhead 'based on batik acculturative, which is interpreted from the concept of inspirational sources of dahlia motifs (*Dahlia sp*) from the Agam region with the process of product design technology through modification of the cultural characteristics of the embroidery of Minangkabau safety pins with the matching characteristics of Cirebonan batik in West Java. The concept of acculturation contains meaning, a social process that arises when there is a union of two or more different cultures that meet and influence each other into a new culture without losing the old cultural elements (Koentjaraningrat, 1999). Can be interpreted as acculturative in the development of 'kepala peniti' (pinhead) embroidery designs and batik namely the development of traditional embroidery and batik designs by: 1) modifying, and 2) modernizing the design by modernizing the characteristics of traditional designs accordingly fashion trends and consumer needs; so as to produce innovative Minangkabau character designs.

Data Description

1. **Development Model Instrument Validation Results**

Validation test results conducted by the validator on Acculturative Minangkabau Traditional Design Design Development Model Instruments in Accordance with Industrial Needs are Valid with Aiken's V value of 0.815. The results of the Aiken calculation range from 0 to 1 and the number 0.600 can be interpreted to have a high enough coefficient. V value of $0.815 > 0.600$ is stated in the valid category.

2. **The results of the construct validation and validation of the contents of the embroidery design development model**

The testing phase of the level of feasibility of using the embroidery pin design model 'pinhead' is based on batik acculturative, conducted by a feasibility test which includes construct validation, and content validation. Content validation score data and construct validation data in the form of questionnaires were obtained from lecturers in fashion design and expert lecturers in the field of learning technology, as well as lecturers in arts and culture.

Table 1. Results of Validation Values

No	Evaluator	Validation Value	Category
1	Learning technology expert	0.82	valid
2	Expert Content	0.83	valid

Design Revision

Based on the assessment of the design validation test in terms of 2 (two) assessment criteria, this product obtained the level of achievement of 0.82 construct validation and content validation of 0.83 in the Very High category. So that in terms of product design, the model for developing batik embroidery designs for acculturative-based pins does not need to be revised.

3. **Practicality Test Data**

a. **Producer Response to Practicality The design model of pinhead-based head design development is based on acculturative batik according to market needs**

The result of the practicality test for the embroidery design development model is according to the market needs according to the manufacturer, namely 92.00%, so that it can be concluded that the embroidery design development model according to industry needs is in the category "Very Practical".

b. **Consumer Response to Practicality The design model of pinhead head embroidery design is based on acculturation according to market needs**

The results of the practicality test of the traditional embroidery design model of Minangkabau are acculturative according to the industry's needs according to consumers, which is 89.37%, so that it can be concluded that the Minangkabau embroidery design is in the category "Very Practical".

c. **Stakeholder response to Practicality The design model of pinhead head embroidery design based on acculturation according to market needs**

The results of the practicality test of the embroidery design development model according to market needs according to stakeholders is 85.96.00%, so it can be concluded that the embroidery design development model according to industry needs is in the category "Very Practical".

Table 2. Data on Total Response of producers, exporters and consumers About Practicality of Minangkabau Traditional Head Design Embroidery Models based on Batik Acculturative According to Market Needs

No	Response to practicality	Percentage of Assessment	Information
1	Producer	92,00	Very practical
2	Consumer	89,37	Very practical
3	stakeholders	85,96%,	Very practical
Average producer assessment Consumers and stakeholders		89,11	Very practical

Table 2. The average results of the practicality test for the development models of Minangkabau traditional pinhead embroidery designs based on batik acculturation according to industry needs according to producers and consumers is 89.11%, so it can be concluded

4. Effectiveness Test Data

The results of the t-test comparison of pinhead head embroidery products between before and after development with $t\text{-count} = 9,356 > t\text{-table} = 1.70$ at significant level $\sigma = 0,000$. The results of the t-test indicate that there is a significant difference between the results of the product before and after development.

Conclusions

The model for developing acculturative batik head designs based on batik can improve quality, increase diversification, diverse products, and enhance the creativity of crafters, and produce innovative design products that suit market needs with aesthetic value following the times and increasing market competition.

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