# **Clothes Production from Remnant Fabrics**

Kanyuma Yanwiroj\*

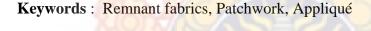
Textile Product Design Department, Faculty of Industrial Textiles and Fashion Design Rajamangala University of Technology Phra Nakhon Bangkok 10300 \*Corresponding Author: kanyuma.y@rmutp.ac.th

## **Abstract**

This research was concerned about clothes production from remnant fabrics that can increase product value and meet market demand by using patchwork and appliqué technique. The research was conducted into 3 phases: data collecting, prototype production and consumer satisfaction evaluation. Questionnaires were used as instrument for data collecting. The first one the researcher inquired; what kind of products that consumer expected to see from remnant fabrics and collected data as market demand in order to produce 9 prototypes by using patchwork and appliqué technique. Finally, the prototype was provided to the sample group with the questionnaire in order to evaluate consumer satisfaction toward the prototype.

The obtained data from the first questionnaire showed the most of sample was believed that product from remnant fabrics was a low price with poor quality and has no attractive design. The majority of sample interested in apparel product produced from remnant fabrics and sign of the zodiac was selected for decorative pattern.

In comparison the result between the first and second questionnaire found that, patchwork and appliqué technique could change people attitude toward the product from remnant fabrics. The satisfaction of sample group towards prototype product was ranging in high level. The most of sample group agree to patchwork and appliqué was appropriate technique for transformation and value added to remnant fabric. A price of prototype estimated by consumer was 2,001 - 3,000 baht per item.



## 1. Introduction

Remnant fabrics or leftover cloths are remainder materials that mostly found from many sources such as clothing production industry, tailor shop, fashion design school and apparel institute. Even though remnant fabrics can be produced into various product by sewn together pieces of fabric and created into new items such as blanket or purse, this method cannot increase much value and attractiveness to the product because patch and seam that occurred on fabric surface.

Then, the objective of this research was to develop the product style from remnant cloths by using patchwork and appliqué technique, cooperated with fashion design in order to produce and increase value of product from remnant cloths.

### 2. Materials and Methods

The research is conducted in 3 main phases: data collecting, prototype preparation and consumer satisfaction evaluation

# 1. Observation and data collecting

The attitude and knowledge toward product from remnant cloths were collected through the questionnaire that divided into 4 parts

Part 1: Personal data as gender, age, marriage status, education background, occupation and income. Type of question on the questionnaire was checklist.

Part 2: Consumer attitude and knowledge towards product from remnant fabrics such as product transformation technique, product type and product style.

Part 3: Purchase decision as quality, price and design.

Part 4 : Suggestion, open end question was selected as questionnaire.

Population used in this research was people who lived in 5 provinces namely Nakornpathom, Nonthaburi, Prathumthani, Samut Prakan and Samutsakhon 4,450,811 people

(Department of Provincial Administration, 2551). Sample comprised 400 people with random selection as follow

Nakornpathom	80	people
Samutsakhon	80	people
Nonthaburi	80	people
Prathumthani	80	people
Samut Prakan	80	people
Total	400	people

Size of the sample was calculated by Taro Yamane formula.

The obtain data were analyzed by using frequency and percentage.

# 2. Prototype production

The patchwork and appliqué technique were chosen for prototype production. Type and style of prototype product was designed from the opinion of sample group. The amount of prototype was 9 items.

### 3. Consumer satisfaction evaluation

In order to evaluate the consumer satisfaction towards prototype product from remnant cloths, questionnaire was chosen as the instrument. Type of question on the questionnaire was rating scales with 5 levels (refer to Likert's scale). The question focuses on attractive design, technique, design creation, function and quality.

The quantitative method was used as analysis instrument in order to find the average level of satisfaction to prototype product made from remnant cloths. The meaning are as follows:

Average score 4.50 - 5.00 means has most satisfaction

Average score 3.50 - 4.49 means has satisfaction

Average score 2.50 - 3.49 means has moderate satisfaction

Average score 1.50 - 2.49 means has less satisfaction

Average score 1.00 - 1.49 means has no satisfaction

## 3. Results and discussion

#### - Personal data

The majority of the sample group was female, age between 20 - 30 years old. The most sample was single and their education degree was bachelor's degree. Income was between 10,001 - 15,000 baht per month.

### - Consumer attitude

The most of the sample had knowledge and attitude to product transformation and remnant fabrics in negative thoughts. Consumer was believed that product from remnant fabrics must have poor quality and no attractive design. They estimated the appraisement price of product lower than 500 baht. The decision making of sample group was affected by attractive design, quality and creative function.

From the questionnaire concerned with type and style of product from remnant cloths, that consumer was expected to see. The results showed, 88 percent of the sample group had interested in apparel product and 86 percent of the sample was selected zodiac sign as suitable pattern for outfit making.

The majority of sample hopes to see new product style from remnant fabrics that can value add to the product.

## - Prototype product

In prototype production process, remnant fabrics that have same color as zodiacal colors in sign of the zodiac were selected and cut it into a shape of zodiac sign. Characteristic of zodiac sign produced from remnant fabric was shown in figure 1. After that, the sign was sewn over the outfit for decoration by using patchwork and appliqué technique. Collection of prototype products were shown in figure 2-4

# - Consumer satisfaction

The level of satisfaction towards prototype product from remnant cloths showed that technique and design creation gained the highest level of satisfaction. The average score were 4.66 and 4.52.

Meanwhile, attractive design, function and quality of prototype gained the high level of satisfaction. The average score were 4.24, 4.22 and 4.14 respectively.



Figure 1 Zodiac sign produced from remnant cloths



Figure 2 Blouse decorated with the sign of aries



Figure 3 Dress decorated with zodiac sign produced from remnant cloths



Figure 4 Collection of prototype products

The majority of the sample group agree to patchwork and appliqué was appropriate technique that could increase product value and possible to release in market. The appraisement price of prototype estimated by consumer was 2,001 - 3,000 baht per item.

### 4. Conclusions

From the research about clothes production from remnant fabrics, the results showed that patchwork and appliqué were appropriate technique that could increase product value and changed consumer attitude toward the product from left over cloths. The sample group was satisfied to prototype at high level. The

patchwork and appliqué can be create high quality product and value added to remnant fabrics.

# 5. Acknowledgements

The author would like to acknowledge Rajamangala University of Technology Phra Nakhon, Faculty of Industry Textile and Fashion Design for financial support

### 6. References

- Caroline Crabtree and Christine Shaw. Quilting, Patchwork & Appliqué: A World Guide. London: Themes and Hudson, 2007.
- 2. Hans Karl Rouette. Encyclopedia of Textile Finishing. Volume 2. Germany: Laumann-Verlagsgesellschaft mbH & Co. KG, Dülmen, 2001
- 3. Philip Kotler and Gary Armstrong.

  Principles of Marketing (International Edition). 9<sup>th</sup> ed. Prentice Hall International, Inc. 2001.
- Ronald Eugene Kmetovicz. New Product Development: Design and Analysis. New York: John & Sons, Inc. 1992.