



# Local weaving pattern analysis of Ban Muang Hom, Wang Thong District, Phitsanulok province for developing weaving patterns and textile product that reflect the local identity

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## Abstract

For many years, Thai local weaving patterns and textile product mostly on local cloth production it didn't used the patterns on much more other product types and the local textile product entrepreneur they want to make more textile product that reflect the local identity and also satisfy the customer too that cause of this research purpose object to study and analyze the weaving patterns of Ban Muang Hom, Kaeng Sopha Sub-district, Wang Thong Disctrict, Phitsanulok Province, to develop fabric weaving and textile products and consumer satisfaction assessment on fabric weaving and textiles. The samples were the handicraft group, Ban Muang Hom, Wang Thong District, Phitsanulok Province with 500 tourists, 5 entrepreneurs and 3 product design experts. This research is the mixed methodology research by the process of analyzing the concrete sculpture pattern around the base of the stupa (Phraprang) of the Chulamane temple, Phitsanulok province and the pattern of the Tapakhaohai temple pottery in the development of Mudmee textile patterns and textile products such as lamp, bag, men's and women's shirts. According to the product development process, the tools used in the research were divided into the following research tools: (1) 12 design patterns, (2) the customer satisfaction questionnaire. The statistics used in the research by the mean and standard deviation. The research found that the woven fabric pattern from the analysis of the concrete sculpture pattern around the base of the stupa (Phraprang) of the Chulamane temple, Phitsanulok province, The pattern 6th, 4th, 1st, and the pattern of the Tapakhaohai temple pottery measured in the pattern of 3rd, 4th, 1st was selected the mostly. The woven fabric was developed as the form of textile product, and quality is then assessed by consumer satisfaction. The lamp product was mean 4.29 (S.D. = .54) at high level. The bag product was mean 4.17 (S.D. = .61) at high level. The men's shirt was mean 4.32 (S.D. = .48) at high level. The women's shirt was mean 4.10 (S.D. = .52) at high level.

**Keywords:** traditional cloth patterns, textile product, local identity

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## 1. Introduction

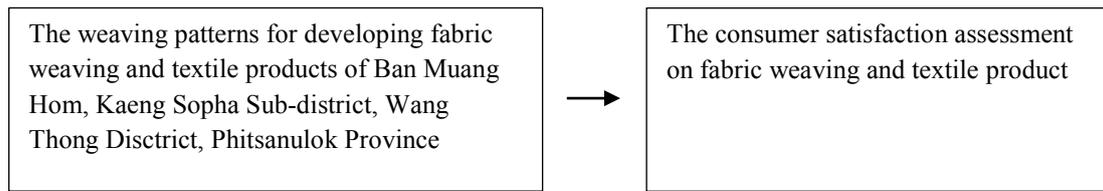
The Phitsanulok people live in various localities. There are many ethnic groups that living in the same habitat and the immigrant group of the later settlers are Tai-Lao Khrang people who migrating in the early Rattanakosin period, Tai Dam or Lao Song people migrated from Phetchaburi, including Hmong, Ka Riang, and Isan people, etc. Today, these groups have preserved the arts and crafts of wisdom. The local hand-woven fabric has been inherited from ancestors and also represents the identity in each of ethnic that being of the local weaving techniques and weaving patterns of Phitsanulok province. [1]

Mr. Weera Rojanapanrat the Minister of Culture (Wo Tho.) said at the seminar. The campaign for Thai fabrics and local cloth using at Khonkaen province said that Thai fabrics are the cultural heritage that reflects the identity of Thai. Showing the way of life and wisdom but the change of era and way of life are combined with advanced technology. The importance

of using Thai fabrics has been reduced to make people aware of the value of Thai fabrics and pride in Thai fabrics as well as promoting the use of Thai fabrics in everyday life and also make the Thai fabric products widely continued to generate income for fabric weaving manufacturers and suppliers of Thai fabrics [2]

The researcher has analyzed the patterns of the concrete sculpture pattern around the base of the stupa (Phraprang) of the Chulamane temple and the pattern of the Tapakhaohai temple pottery to develop the unique weaving fabric pattern for Phitsanulok and bring the fabric to develop lamp, bag, men's and women's shirts product for promote the community income with community participation.

In Figure 1, a very simplistic conceptual model illustrates a relationship between the weaving patterns for developing fabric weaving and textile products of Ban Muang Hom, Kaeng Sopha Sub-district, Wang



**Figure 1** Conceptual framework of the local cloth pattern analysis of Ban Muang Hom, Wang Thong district, Phitsanulok province for developing weaving patterns and textile product that reflect the local identity

Thong District, Phitsanulok Province and the consumer satisfaction assessment on fabric weaving and textile product.

## 2. Methods

### 2.1 Population and Samples

The population and sample: The one of fabric weaving group of Ban Muang Hom, Kaeng Sopha Sub-district, Wang Thong District, Phitsanulok Province, and the 30 weaving patterns from the concrete sculpture pattern around the base of the stupa (Phraprang) of the Chulamane temple. The 6 waving patterns from the 6 Tapakhaohai temple pottery designs. The 3 textile products are 3 lamp designs, 3 bag designs, 3 men's and women's shirts designs with 3 product design experts, 500 consumers and 5 entrepreneurs.

### 2.2 Research Tools

1) Study and analyze the fabric weaving pattern of the Ban Muang Hom, Kaeng Sopha Sub-district, Wang Thong District, Phitsanulok Province by the researchers used questionnaire as the research tools to determine question topics for the local identity material and processes.

2) Development of weaving and textiles the researcher has used the research tools by exploring the base of the stupa (Phraprang) of the Chulamane temple and the pattern of the Tapakhaohai temple pottery by the product design expert questionnaire for product fabric weaving pattern design of lamp, bag, men's and women's shirts product.

3) Consumer satisfaction questionnaire for fabric weaving and textile products The researcher used the research tool to identify the issues and to create the evaluation form for the prototype product.

### 2.3 Data Collection

To meet the objectives the researcher also collected the data. Study data from related research papers. Explore the research ground. Prepare a letter of support to gather information from product design experts and product prototype to assess the satisfaction of the developed product model.

### 2.4 Data Analysis

The research analysis of the data in accordance with objectives the researcher analyzes the unique weaving patterns of the Ban Muang Hom fabric weaving group in the terms of color, texture, pattern, the concrete sculpture pattern of the Chulamane temple and the pattern of the Tapakhaohai temple

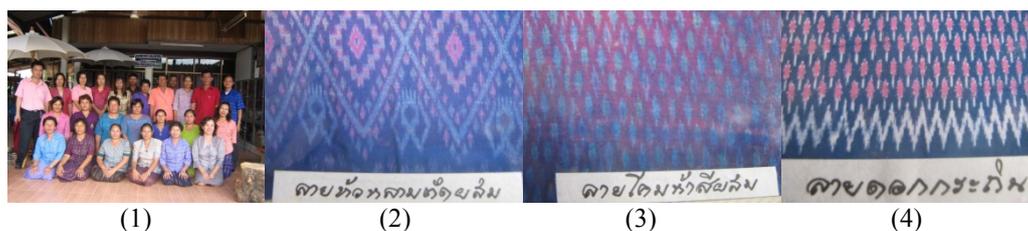
pottery, the product design of lamp, bag, men's and women's shirts product and the satisfaction of consumers, entrepreneurs, and the mean, standard deviation data obtained.

## 3. Results and discussion

The study and analysis of fabric weaving patterns of Ban Muang Hom, Kaeng Sopha Sub-district, Wang Thong District, Phitsanulok Province. The study and analysis of the woven fabric pattern of the Ban Muang Hom fabric weaving group in terms of materials used in the manufacturing process and patterns [3], The weaving materials used in local weaving of 3 provinces of Suphanburi, Chainat and Uthaithani are not currently cultivated because the villagers find that time wastage, if any year, natural disasters, rain, floods, or drought, mulberry died, no food to feed that cause the silk died the villagers will be lost because the villagers want to invest into crop breeding and prolonged periods of cultivation. Currently, villagers in the community buy fiber materials from the factory because the fiber obtained from the production of the factory is the good quality fiber, convenient and less time-consuming to prepare the material used for weaving. Tai-Lao Khrang people weaver uses 3 types of fibers: silk fiber, cotton fiber and artificial silk fiber. The place to buy fiber to woven is the Chul Thai Silk factory in Chaiyaphum province that buying from Khonkaen, Kamchanaburi province. The villagers are able to shop as their needed.

The steps and dyeing processes nowadays, most of the villagers use chemical dyes to dye silk fibers because they are easy to find, convenient to use, the fix color fiber or on the fabric as well the color does not seal, save time for color dyeing. The chemical color is a popular color for every household.

The procedures and local weaving methods of the traditional weaving techniques continue using today as the endemic identity, Plain (Khad) weaving, Mudmee weaving, Jok weaving, and Khit weaving. The 4 types of weaving require the accumulation of experience, knowledge, wisdom. The skill of each weaving is inherited. The Plain (Khad) weaving is a weaving alternating between threaded yarn and weft. Villagers are usually weaving loincloth and weaving fabric. Mudmee weaving is usually weaving a thread of yarn and weft before weaving. Jok weaving is the use of prickle or fingers to count the weft then insert



**Figure 2** (1) Woven fabric group members (2) Mixed headed diamond-shaped fabric pattern (3) Mixed Lamp (Khom) five color fabric pattern (4) Krathin fabric pattern  
(Source: Suphansa Inpitak, 2015) [4]

the special yarn to the fiber that is filled up. The unique weaving characteristics of the Tai-Lao Khrang ethnic group are the use of fabric cloth or Mudmee with Jok sarong or whole Jok cloth.

The use of color, Plain (Khad) weaving techniques found in the source of local woven cloth of Tai-Lao Khrang people in Suphan Buri, Chainat and Uthaithani provinces, found that the color of the Plain (Khad) weaving technique was single color fabric and colored fabric used mostly in dark colors such as 3 colors, 5 colors and 7 colors are divided into traditional colors: red, green, yellow, orange, pink and applied colors are blue, violet, magenta, orange, and brown. Tai-Lao Khrang people in Suphan Buri, Chainat and Uthaithani found that the colors used in Mudmai many colors. However, the most popular colors are red, magenta, and blue. The similar colors are the use of the ethnic that including red, yellow, white, orange, black, green, and blue. The fabric red based color mostly and then pink, white, blue secondly.

The pattern of weaving cloth that used in local weaving of Tai-Lao Khrang ethnic group in 3 provinces: Suphanburi, Chainat, and Uthaithani province there are the variety of patterns used to weave, so it is found that the patterns appear on each piece of cloth is divided into 2 groups: 1) geometric patterns, such as grid pattern, rhomboid pattern, triangle pattern, straight line pattern, etc. 2) Natural patterns such as animal patterns: spider, Naga, Unicorn, elephant, etc. The flower patterns: Chan flower, etc. The utensil patterns: Khomleung, Laibao pattern.

### 3.2 Development of Weaving and Textiles

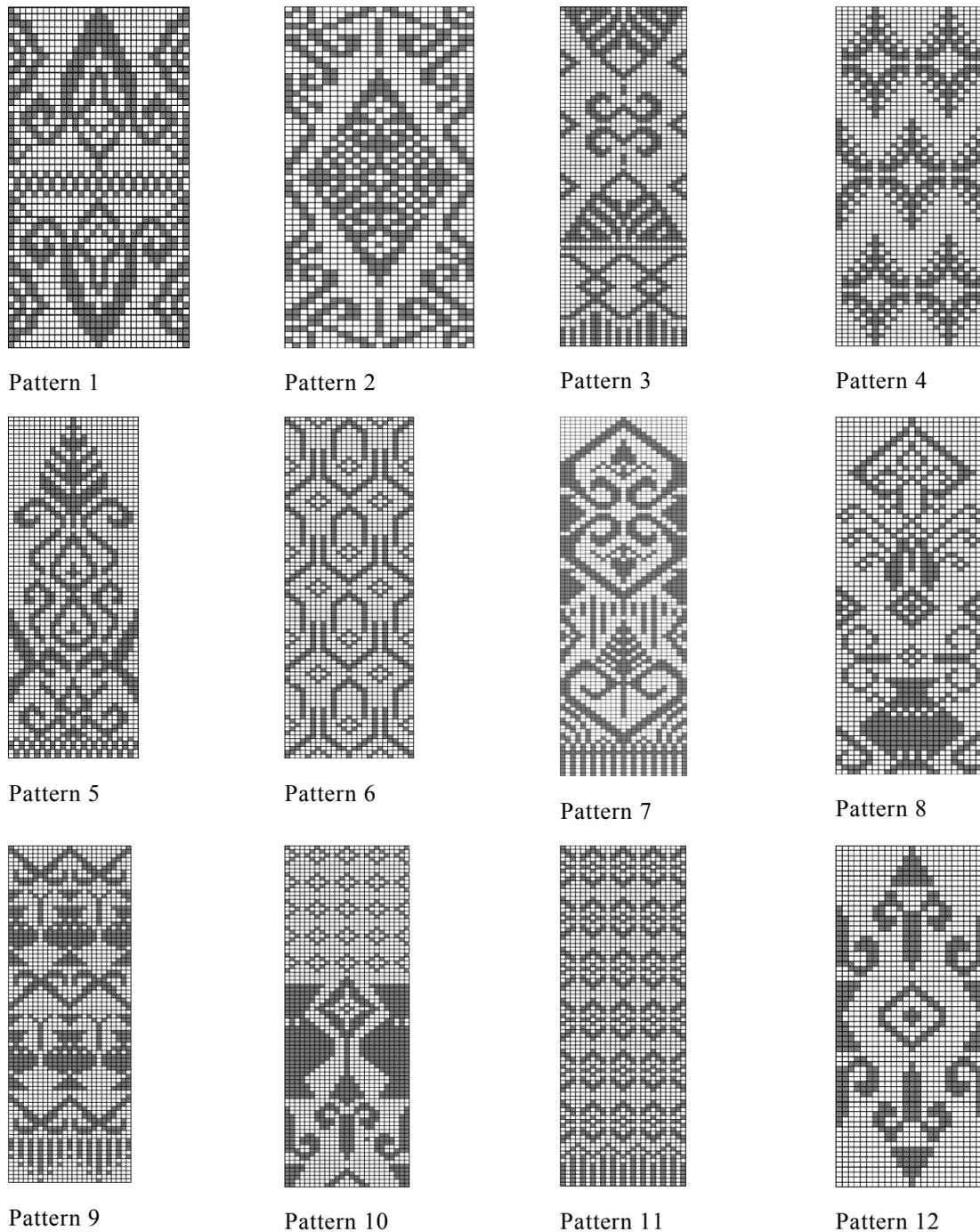
The development of woven patterns from the analysis of the base of the stupa (Phraprang) of the Chulamane temple and the pattern of the Tapakhaohai temple pottery to draw the pattern of 6 woven fabrics and the 6 Tapakhaohai temple pottery patterns and the use of the woven fabrics that used in textile products: bag, men's and women's shirts product. The pattern that is used to analyze the identity of the arts and culture of Phitsanulok province is used to develop the pattern. [5] The design of the weave to produce the fabric as the cloth by decorating fabric with the fabric structure. However, the design of the fabric structure, the designer must take into

consideration the suitability and quality of the fabric required. The design of the fabric has the following steps: 1) create a conceptual framework for design; 2) explore and select things that inspired by the design, shape, color, pattern, photograph, sketch, and image then make it to tell the story to use as a guideline to design patterns on the cloth. This can be repeated many times in full cloth positions. 3) Choose the color palette within the given frame by pulling the desired color from the picture then paint it with watercolors or pencil colors on the paper as well as colored sticks from soft to darken palette or from darken to soft palette that close to the color of mostly photos. These colors are useful for color combinations and comparable colors to use dyed silk to weave. 4) Calculate and determine the process of the number of yarn and weft silk to be patterned as designed. It may use a stroke on the table and / or calculate by numbers. 5) Add the technique or effects to get new designs and palette such as Jok, Kid, Madyom, Folding, and Battic techniques.

### 3.3 Consumer Satisfaction Assessment on Weaving and Textile Products

The consumer satisfaction was assessment by questionnaire on the prototype textile products such as lamps, men's bags, and women's shirts. The tourist in the temple of Wat Phra Sri Rattana Mahathat Worawiharn temple and the fabric distributor of the traditional woven fabric in 1) the woven fabric pattern 2) lamp product pattern 3) bag product pattern 4) men's wear product pattern 5) women's wear product pattern.

The results of the customer satisfaction survey on consumer products showed that consumers are tourists in the temple area with 500 people. The entrepreneur that distributes 5 types of native woven fabrics found that the satisfaction of the woven fabric pattern of tourists. The most unique pattern was mean 4.47 (SD = .71) at the high level. The entrepreneurship on patterned issues differs from elsewhere at the highest mean was 4.80 (S.D. = .45) at the high level when considering each issue in terms of the pattern is on the beautifulness of the pattern is unique. The patterns are different from other places and the color of the fabric. [6] The visibility or components of the essential in the art or visual art are point, line, colors, light and

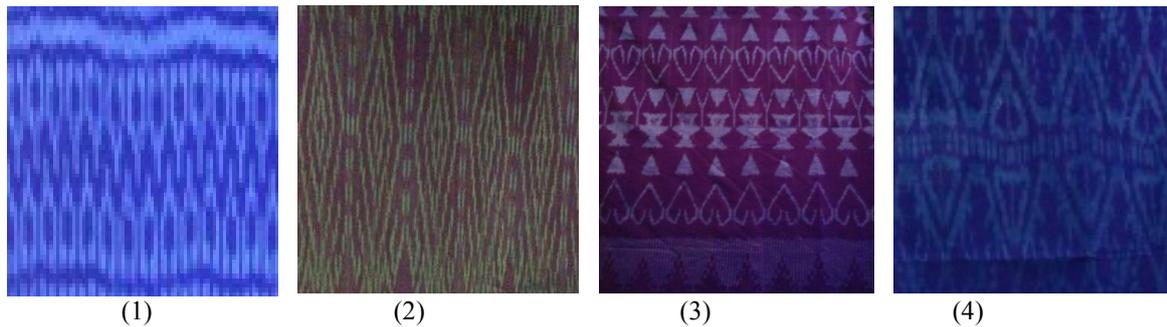


**Figure 3** Analysis of weaving patterns 1st-12<sup>th</sup>

shadows, body, shapes, surfaces, which we can bring each component to create a variety of art. This gives the different sense of sight. The visual elements can create emotions for the audience.

The tourist satisfaction in the form of tourist lamps on the issue of novelty was the highest at 4.29 (SD = .54) with high level. The entrepreneurship in the new issue was 4.60 (S.D. = .55) with the highest level when considering each issue in terms of beauty, novelty, and suitable for buying souvenirs. The model

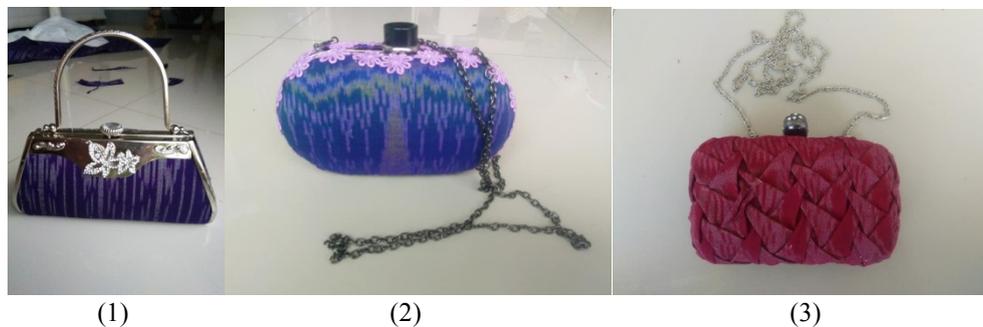
meets consumer demand. The format is suitable for use. [7] The competitive advantage offered by Porter is threefold: the first is to make difference is not available in general that have the story and product performance. The next approach is low cost if the business is low cost it can stay in the highly competitive market and the last one is that the specific market where the business is focused on producing products or services for niche markets with specific products and services, high sales prices can be set.



**Figure 4** Woven patterns (1-4)



**Figure 5** Lamp (1-3)



**Figure 6** Wallet (1-3)

The satisfaction with the bag style of tourists in the pocket-shopping bag issue was highest at 4.17 (SD = .61). The high level of entrepreneurship in the issue was beautiful and mixed with other materials. The highest mean was at 4.00 (S.D. = .17), 4.00 (S.D. = .55). Shopping Bag Style There are different models from the market that easy to carry. There is the mix with other materials perfectly. [8] The product of today's beauty is that it is important not to lower the function. The beautifulness is what makes a purchase decision because of the impression.

The satisfaction with the men's style of men's suits in the issue of men's suits was at the highest level of

4.32 (S.D. = .48). The level of entrepreneurship in the issue was designed to suit the actual usage. The highest was at 4.40 (S.D. = .84). The high levels were considered on a case-by-case basis. The modern pattern is suitable for men's wear was designed to fit into actual use, suitable for purchase as a souvenir. [9] Usability for product design needs to meet the intended use as designed, not only beautiful design. At present, usability can create a good selling point for products.

Satisfaction with the design of the women's t-shirt in terms of suitability for design was highest at 4.10 (S.D. = .52). The highest mean was 4.60 (S.D. = .55).



**Figure 7** Men's shirt (1-3)



**Figure 8** Women's shirt (1-3)

**Table 1** Customer satisfaction survey on consumer products

Item	Statistic Value	Level
The most unique pattern	4.47 (SD = .71)	high level
The lamps product on the issue of novelty	4.29 (SD = .54)	high level
The bag style	4.17 (SD = .61)	high level
the men's style of men's suits	4.32 (S.D. = .48)	highest level
the women's t-shirt in terms of suitability for design	4.10 (S.D. = .52)	highest level

When considering each issue in terms of fit for women. Modern The pattern is suitable for the production of women's shirts that designed to fit into actual use. [10] Industrial goods designed for functional use alone are not sufficient to have the beauty of the product itself. The standard is acceptable.

#### 4. Conclusions

Study and analysis of weaving patterns in Ban Muang Hom, Kaeng Sopha Sub-district, Wang Thong District, Phitsanulok Province in the process of making the pattern, the yarns must be divided in length to fit the width of the weft provided by approximately 97 cm. The meats may be determined by design patterns such as 15, 25, 31 Lu. There are a variety of inventions that are named for convenience in remembering as following: Naklek, Nakyai,

Prathapien, Kai, Jeen, Prasat, Tarang, Koedokmai, Vimaninn, Baipoe, Keawlamtad, 2 Layer of Keawlam, 9 Layer of Nokajokthet, Chan Keaw, 3 Line of Tanrang, Lokchang, Pichonlek, Pichonyai, Pichonsaiyaw, Kreafa, Chopka, Poemane, Chaiyaperk, Ketkeaw, Nophakhaw, Mernkathang, Jitlada, Hohongyok, Wongdern, and Vijitra pattern. In development of weaving and textiles, the analysis of the cements scripture pattern at stupa (Phraprang) of the Chulamane temple and the pattern of the Tapakhaohai temple pottery based on the evaluation of the opinions of the designers, weaving patterns from the pattern design around the base of the prang of Chulamane temple were selected to produce 3 patterns: 1<sup>st</sup>, 4<sup>th</sup>, and 6<sup>th</sup> pattern on the lamp textile product design 2<sup>nd</sup> type, the bag is the 3<sup>rd</sup> type, the men's shirt is the 3<sup>rd</sup> type, and the women's shirt the 1<sup>st</sup> type. In consumer satisfaction assessment on weaving

and textile products, the consumer Satisfaction assessment for the prototype textile products: lamps, men's bags, and women's cloth of the tourist in the temple. There are 500 people in Wat Phra Sri Rattana Mahathat Worawihan temple, the unique patterns at high level. The lamp product design is in the novelty. The bag product is the most buyer attractive bag. The men's shirt product is suitable for real use design. The entrepreneurs that sale local weaving fabrics are 5 people in the local woven fabric patterns are different from the other with the highest level. The lamps product in the novelty was the highest level. The bag products in terms of beauty and combination with other materials were the highest level. The men's shirt product in suitable for real use design was mean at high level. The women's shirt product pattern in suitable for production the highest mean at the highest level.

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