



---

## TAI LUE TEXTILES OF PHAYAO PROVINCE AND THE PRODUCTS DEVELOPMENT BASED ON THE CONCEPT OF THE CREATIVE ECONOMY

**Rosjana Chandhasa**, Department of Creative Products Design, Faculty of Fine and Applied Arts, Suan Sunandha Rajabhat University, Bangkok 10300, Thailand, [rosjana.ch@ssru.ac.th](mailto:rosjana.ch@ssru.ac.th)

**Panu Pattanapanithipong**, Department of Creative Products Design, Faculty of Fine and Applied Arts, Suan Sunandha Rajabhat University, Bangkok 10300, Thailand

---

**ABSTRACT-** This study aims to 1) to invest general conditions, the use of Tai Lue textiles, patterns, colors, and the production process of Tai Lue textiles of Phayao. 2) to study marketing factors for the product design and the product development of Tai Lue textiles. 3) to evaluate the design results of Tai Lue textiles in terms of the capital, the process, and the usability. 4) to create the prototyped products and to increase the product value of Tai Lue textiles. The sample of this study are 400 people who are interested in textiles using a purposive sampling at textile stores. An accidental sampling was used to choose the sample for providing the information and the opinions toward the product before and after design. After that, the product model was evaluated by 3 star-groups of community products and 3 design experts to evaluate the suitability of product models. After evaluating, the product models were created and evaluated the opinions of the consumers toward the designed products.

The results of this study revealed that patterns appearing on Tai Lue textiles reflected the belief in "Tung", the one hanging flags in Lanna arts. The form of patterns came from shapes of the architecture, castles, and animals (i.e., elephants, horses, bulls). The patterns that are suitable for applying are patterns of the flora, the nature, and the environment which are a stream, plants, leaves, flowers, water ferns, paco ferns, cottons plants, and orange jasmine flowers. The aforementioned patterns were mostly found in sarongs, blankets, and wraps around the breasts. The design and the development of Tai Lue textiles must not conflict with beliefs and rituals. In addition, Tai Lue textiles could be designed to be unique clothing and the models of Tai Lue casual wears based on the concept of the creative economy. Importantly, it could increase the product value.

**Keywords:** Tai Lue textile, product development, creative economy, Phayao province

### I. INTRODUCTION

Tai Lue textiles are made of cotton fibers woven to be a piece of woven fabric. The local wisdom of Tai Lu women's weaving is prominent and unique identity. The characteristics, patterns, colors, and weaving methods demonstrates the native habitat, the status, the ethnic, the way of life and the environment of Tai Lue community members. Tai Lue textiles are divided into four types that are clothing, bedclothes, utensils, and textiles for rituals. The way of life in Tai Lue community has changed because the growth of the production and the industrial system that affects to the daily life of the community members in various dimensions. There are various facilities and utensils that satisfy the present way of life, such as plastics, stainless steels, glasses, cements, rubbers, aluminums, melamine, fiber materials, etc. The convenience has replaced products from ancestors' wisdom. Patterns, colors, and the production process of Tai Lue textiles hide the creativity that is a valuable cultural heritage of the community for a long time. This cultural heritage will be forgotten and replaced with the industrial crisis, the consumer culture, the modernity and the capitalism.

The process of the new creators or the third wave are needed to study for the process of the thinking development. The new creators or the third wave are defined to be the creative class or the group of people who develop the cultural capital to be cultural products that suitably satisfy the needs of local people and the people in the society on the fundamentals of diversity. Jumpatong (2012), Wong a nan, Saributr and Louhapensang (2015), and Somrit and Intasan (2012) investigated Tai Lue textiles in the science of the development in Chiang Rai province and the cost management. It was found that there were issues that were not analyzed and transmitted to understand many identities, such as traditions, the use of textiles, patterns, colors, and the in-depth production process that can be analyzed with marketing factors to design and develop to be the new, modern and various form of Tai Lue products. To present

new products with a touch of Tai Lue culture that respond to people's lifestyles, it is necessary to research Thai Lue woven cloth in Phayao Province and product development based on the concept of creative economy. The general conditions and information of Tai Lue textiles on the suitability and applying on various occasions should be found and reviewed. Marketing factors applied in the design and the production process should be investigated to increase the value of Tai Lue textiles that conforms to the needs of target groups used as the model of the products and services of OTOP and SMEs. This is to find factors that will raise the quality, increase the product and service value by using the capital or resources existing in the Tai Lue community.

## II. LITERATURE REVIEW

Ananchai and Sitthichokthanarak (2010) investigated the development of product and marketing models for Tai Lue woven fabrics for sustainability of Ban Thung Mok community, Chiang Kham district, Phayao province. The result revealed that the people in Ban Thung Mok community used their local wisdom derived from their ancestors to weave Tai Lue textiles. In the early stages of the founding of the weaving group, weaving Tai Lue textiles was a non-agricultural occupation, but it is the main career for them now. The marketing problems in the past was that there was no marketing promotion and seeking new customers. There also was the lack of the product development. After the weaving group had trained on the marketing and the product development, they developed the new model of Tai Lue bags and had the marketing plan.

Wanalaichareonchit (2000) studied the production plan for Tai Lue woven clothes: a case study of Chaing Kam district, Phayao province. It was found that factors affecting to the gathering of the weaving groups, the achievement of groups, and forming the community are characteristics of generosity in rural society, the relationship, and the collaborative learning process in terms of the management. Because everyone is involved in owning a Tai Lue weaving business, this can be an alternative career that is appropriate and consistent with the village community and can generate community income. At the same time, it can improve and strengthen original skills of the community. The producers can participate in the production, have more bargaining power, and develop to be the career that sustainably generate incomes in the future.

## III. METHODOLOGY

The qualitative research was used to investigate general conditions, the use of Tai Lue textiles, patterns, colors, and the production process of Tai Lue textiles of Phayao. The quantitative research was used to study the attitudes and the ideas on 8P marketing factors toward Tai Lue textiles in order to design and develop Tai Lue textiles of Phayao. After that, the design result and the Tai Lue textile development were evaluated to create the models in increasing the value of Tai Lue textiles. The research methodology is described below.

- 1) Study the basic information and related research, to meet and to group and individually interview producers, and to collect data in terms of an identity, the aims of creating work, the production process, the limit, problems, the production of creating work, physical characteristics, and unique patterns of artwork.
- 2) Investigate the opinions of people and tourists in Bangkok to collect the data in terms of the needs in the production to apply in the design.
- 3) Process the data and to analyze the identity of Tai Lue textiles and the needs to be used as information in the next step.
- 4) Design unique and beautiful products to satisfy the needs of markets and to evaluate the model in order that the producers recommend and provide correct data in materials and production process.
- 5) Improve the model of products and to evaluate the result again.
- 6) Create the product model.
- 7) Investigate the opinion of the people and the tourists in Bangkok toward the products that has been designed and developed.
- 8) Analyze and to summarize the opinion of the people and the tourists toward the products.

- 9) Analyze, synthesize, and spread the body of knowledge.
- 10) Conclude and report the overall result.

#### **THE POPULATION AND THE SAMPLE OF THIS STUDY**

**The population** are the groups of entrepreneurs of the Tai Lue textiles, the people and the tourists who are interesting in Tai Lue textiles.

**The sample** is defined as per the objectives of this study as follows:

The sample of informants in this study includes 15 producers of Tai Lue textiles and clothing in Phayao. The criteria in choosing the sample is that the sample must be the 9 producers of Tai Lue textiles (a piece of fabric) and Tai Lue clothing, 3 producers of women's accessories and bags, and 3 producers of decorations. The chosen sample is groups that are ready to develop Tai Lue products, have the potential in the manufacturing of 3-5 star-goods, and provide the information in the general production, the use of Tai Lue products, patterns, colors, and the production process of Tai Lue textiles in Phayao province.

The 400 population and the tourists inquired about their needs are the sample using the purposive sampling at stores of products.

The design experts who have more than 5 years of experiences in products, clothing fashions and the marketing.

#### IV. DATA COLLECTION

The data was collected by analyzing and synthesizing related documents. The observation and the photography were used to record, summarize, and classify the information as follows;

- 1) To provide a forum on specific issues for the sample of this study in order to gain the information in the use of Tai Lue textiles, patterns, colors, the production processes, the suitability of patterns and the appropriate potential of the production in classifying and appropriate matching the producers with the products. The data was summarized in a notebook. The conversation was recorded with a voice recorder. The photographer contributed to record, summarize, and classify the data.
- 2) The in-depth interview was used with the producers to collect the data relating to applying the Tai Lue textiles in various contexts of the community, patterns, colors, the production processes, the material management, the processing, and the problems in every step of production process of original products. The data was summarized in a notebook. The conversation was recorded with a voice recorder. The photographer contributed to record, summarize, and classify the data.
- 3) Close ended questionnaires with photographs were used to ask the opinion of the target people and the target tourists toward the original products and the needs of the new products. After that, the result was concluded and evaluated to find the way of the need to be the data for designing and developing the products in the next step.
- 4) The questionnaires with photographs of the model of the products were used to inquire the producers and the design experts about the design issues and the suitable product development before moving to the production process.
- 5) The model with the questionnaires was created to communicate and describe the design concept in order that the people and the tourists can understand the model, try the model and exchange their opinions toward the original and new products. The producers provided the suggestions in useful guidelines of creating the model.
- 6) After creating the Tai Lue textile model, the questionnaires were used to evaluate the opinion of the target group in terms of the suitability, the practical function, and the aesthetic function to test the market before placing on sale.
- 7) The questionnaires were used to inquire the opinions from the target group toward the model and the development methods in transmitting the knowledge of Tai Lue textiles based on the concept of the creative economy for producers of the Tai Lue textile and Tai Lue product in Phayao province.

**THE ANALYSIS AND THE STATISTIC USED IN THIS STUDY**

**The Procedures Of The Analysis**

- 1) Analyze information from documents, books and related studies using the rational theory to present information in the form of description to find the fact and the opinion of the identity. The data gathered from the analysis and the study was analyzed and classified into groups in terms of the components, the conditions, and the relationship and then synthesized to be the guidelines of the development.
- 2) Analyze information derived from the interview and then summarized and classified into groups to be the guidelines of the development in the next step. The information gathered from the producers, the design experts, the marketing experts, and the target sample in the questionnaires was analyzed and evaluated to be the guidelines of the product development.



The opinions toward the original products and the new products developed based on the concept of creative economy were compared. The descriptive analysis was used to describe the issues of the practical function and the aesthetic function. This study employed statistics of percentage, mean and standard deviation to analyze the opinions.

**V. THE ANALYSIS RESULTS**

**The analysis results on general conditions, the use of Tai Lue textiles, patterns, colors, and the production processes of Tai Lue textiles in Phayao province**

It was found that what appears on Tai Lue clothing and Tung was the patterns reflecting beliefs. These clothing and textiles were used in various cultural occasions. The patterns found on Tung the related to beliefs could be summarized in the below table.

*Table 1: Patterns and beliefs from Tung used in rituals*

Patterns of Tung	Beliefs
<p>Patterns from animals (i.e., elephants, horsed, the cattle)</p> 	<p>It is believed that after offering Tung, there will be the abundance and many followers in the next life.</p>
<p>Patterns from castles</p> 	<p>It is believed that after offering a Tung, the givers will go to the heaven.</p>

The patterns appearing on Tungs were in flavor of the Tai Lue people. They respected and used in various religious ceremonies for making a merit to deceased persons.

Table 2: Tai Lue clothing

Tai Lue clothing	
Tai Lue clothing includes sarongs, male and female shirts, pants, and male and female headdress.	
	
Castle patterns	
	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;">A: the</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;">B: The central part of sarongs</div> <div style="border: 1px solid black; padding: 5px;">C: the end part of sarongs</div>

Table 3: Patterns of various types of fabrics

Patterns	Meaning
Patterns inspired by the stream, water ferns, and islands	The natural abundance of the country and the environment of the areas including mountains, rivers, and waterfalls were applied on textiles (sarongs) that shows the identity of Tai Lue people in Phayao.

Patterns	Meaning
	
<p data-bbox="256 584 695 611">Patterns inspired by trees and flowers</p> 	<p data-bbox="995 584 1337 768">Trees, flowers, and bamboo plants were applied on towels, bed sheets, and mattresses that demonstrate the identity of Tai Lue people in Phayao.</p>
<p data-bbox="256 1099 647 1126">Patterns inspired by cotton leaves</p> 	<p data-bbox="995 1099 1337 1283">Tai Lue people in Phayao province prefer to plant cotton plants. These cotton leaves were applied to be patterns on towels and bed sheets.</p>

Patterns appearing on textiles and clothing were inspired by the nature and the environment of Tai Lue people which are the streams, trees, flowers, water ferns, cotton plants, etc. Those patterns were found on sarongs, wraps around the breasts that show the natural abundance and the environment of the country. The inspirations from mountains, rivers, and waterfalls were applied on textiles (sarongs) that demonstrate the identity of Tai Lue people in Phayao.

**The analysis results on the opinions of the Tai Lue textile identity and the needs of the product to be the design guidelines**

In the study of related information to be the guidelines of product development, it was found that the general information in the questionnaires that affects to the opinions in many issues was the target consumers that are 95.25 percent of women and 4.75 percent of men. The local people are accounted for 65.25 percent, and followed by the tourists with the percent of 34.75. The age range are greater than 48-year-old (50.50%), 38-47 years old (35.50), 28-37 years old (10.25%), and 18-27 years old (4.75%). Their incomes were divided into 4 main groups that are greater than 26,001 baht (34.25%), 18,001-26,000 baht (27%), 10,001-18,000 baht (23.75%), and less than 10,000 baht (15.00%).





In studying their opinions, there was the highest level of buying decision on using the products for themselves with the mean of 4.68, and followed by the product novelty and the product worthiness with the mean of 4.65 and 4.57 respectively. In addition, there was a high level of buying decision on buying the products for others, the sizes and the portability of the products with the mean of 4.43 and 3.86 respectively. There also was the medium level of buying decision on the price of the products with the mean of 3.22.


In the survey of opinions and needs of the sample consumers to be used as a guideline for the design and development of Tai Lue textile products, the result revealed that the products the sample consumers need is the products of clothing and female bags.

**The results of the identity used to design the patterns of textiles**

The results revealed that the unique patterns must not conflict to beliefs, a flavor, and rituals of Tai Lue people. The popular patterns were simple which are the patterns inspired by plants, leaves, and flowers. The patterns conforming to beliefs are the patterns inspired by bract of flowers, Thai hook motif, and Cassumunar ginger trees.

*Table 4: The patterns inspired by bracts of flowers*

	<b>The patterns inspired by bracts of flowers</b>
<b>Style 1</b>	
<b>Style 2</b>	
<b>Style 3</b>	
<b>Style 4</b>	

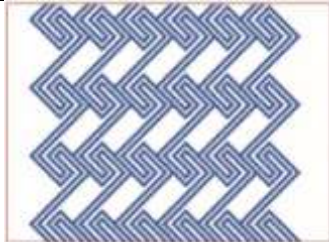

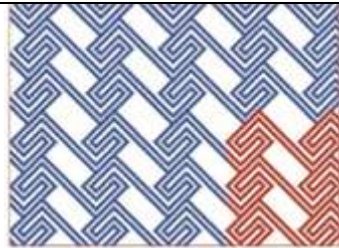
	The patterns inspired by bracts of flowers
Style 5	

According to the table 4, the 4<sup>th</sup> and 5<sup>th</sup> styles of patterns were applied with Tai Lue textiles as shown on the figure below.







Figure 1: The patterns inspired by bracts of flowers

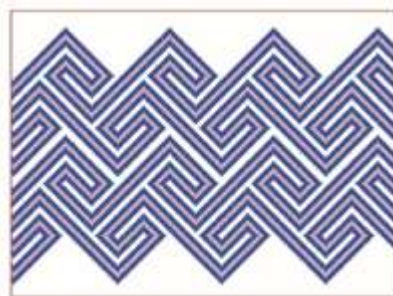
Table 5: The patterns inspired by Thai hook motif

	The patterns inspired by Thai hook motif
Style 1	
Style 2	
Style 3	



	The patterns inspired by Thai hook motif
Style 4	
Style 5	
Style 6	
Style 7	


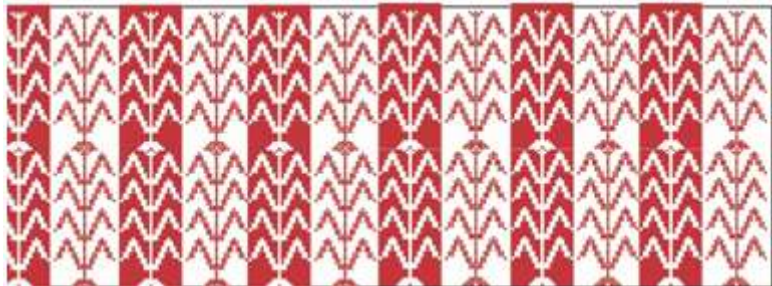

According to the table 5, the 6<sup>th</sup> style of patterns was applied to Tai Lue textiles as shown in the figure below.



*Figure 2: The patterns inspired by Thai hook motif*

Table 6: The patterns inspired by Cassumunar ginger trees

The patterns inspired by Cassumunar ginger trees	
Style 1	
Style 2	
Style 3	
Style 4	

The patterns inspired by Cassumunar ginger trees	
Style 5	
Style 6	
Style 7	





According to the table 6, the 4<sup>th</sup> style of patterns was used with Tai Lue textiles as shown in the figure below



*Figure 3: The patterns inspired by Cassumunar ginger trees*

**The analysis result in the product styles of Tai Lue textile**

Table 7: The styles of casual wears made from Tai Lue textiles

	The styles of casual wears
Style 1	
Style 2	
Style 3	
Style 4	

	The styles of casual wears
Style 5	

Nine casual wears from Tai Lue textiles were designed and evaluated. The result from the evaluation of producers and experts revealed that all styles of Tai Lue textile casual wears could be applied to have unique patterns and be suitable and easy for the production. Moreover, all styles of Tai Lue textile casual wears did not conflict to beliefs and rituals of Tai Lue people. The models of casual wears made from Tai Lue textiles were designed as shown in the figures below.



*Figure 4: The designed nine casual wears from Tai Lue textiles*

## **The Evaluation Of Tai Lue Products Designed To Be The Guideline For Producers**

### **The results on general information of the consumers**

The most of sample consumers are the local people with the percent of 74.25. The age range of the sample are greater than 48 years old (61.00%), 38-47 years old (33.00%), 28-37 years old (4.5%), and 18-27 years old (1.50%). Their incomes are 18,001-26,000 baht with the mean of 37.00, 10,001 – 18,000 baht with the mean of 25.25, greater than 26,001 baht with the mean of 22.75, and less than 10,000 baht with the mean of 15.00.

### **The Result Of Market Testing**

The analysis results of the prototyped product could be summarized that the sample had a highest level of satisfaction on the product with the mean of 4.45. The sum of the aesthetic function is appropriate at the highest level with the mean of 4.53; the interesting identity promotes the value of the products, the suitable composition of patterns, colors, and patterns respectively. The sum of practical function is in a highest level with the mean of 4.34; the details of practical function are the simplicity of the use, the suitable form of the product for the use, the suitability of the sizes, the maintenance of the products, the product durability, and the safety respectively.

## **VI. CONCLUSION**

The objectives of this study are 1) to invest general conditions, the use of Tai Lue textiles, patterns, colors, and the production process of Tai Lue textiles of Phayao. 2) to study marketing factors for the product design and the product development of Tai Lue textiles. 3) to evaluate the design results of Tai Lue textiles in terms of the capital, the process, and the usability. 4) to create the prototyped products and to increase the product value of Tai Lue textiles.

### **The result of general conditions, the use of Tai Lue textiles, patterns, colors, and the production process of Tai Lue textiles of Phayao**

It was found that what appears on Tai Lue clothing and Tung was the patterns reflecting beliefs. These clothing and textiles were used in various cultural occasions. The patterns found on Tung are the patterns inspired by animals, elephants, the cattle, and castles. It is believed that after offering Tung that has the patterns inspired by elephants, horses, and the cattle, there will be the abundance and many followers in the next life. The givers will go to the heaven when offering the patterns inspired by the castles.

The most clothing of Tai Lue people includes towels, sarongs, male and female shirts, pants, and male and female headdress. The patterns found on the textiles are the patterns inspired by the nature, such as streams, trees, leaves, flowers, cotton plants, etc. Those patterns are mostly found on sarongs, blankets, and wraps around the breasts.

### **The design of Tai Lue textiles of Phayao province**

The researchers designed the unique patterns that did not conflict to beliefs and rituals of Tai Lue people. The popular patterns that seem to be simple styles are the patterns inspired by plants, leaves, flowers, and trees. The patterns conforming to the beliefs are the patterns inspired by the bract of flowers, Thai hook motifs, and Cassumunar ginger trees; these patterns are applied to design the nine models of casual wears made from Tai Lue textiles to be the design guidelines. All styles of Tai Lue textile casual wears could be applied to have unique patterns and be suitable and easy for the production. Moreover, all styles of Tai Lue textile casual wears did not conflict to beliefs and rituals of Tai Lue people. The new findings based on the concept of the creative economy found in this study is that the original products of 1-2-meter sarongs cost 240-300 baht. But, when the original products of 1-2-meter sarongs were developed to have unique patterns, they cost 200-250 baht per the length of 10-15 centimeters. That is to say, this study can increase the product value.

In developing products based on the concept of the creative economy, this study developed the image, branding, logos and packaging of 5 Tai Lue textile groups as follows;

1. The Ban Dan Mueang community group's design of logos, tags of products, clothing labels, and name cards.



Figure 5: The Ban Dan Mueang community group's design of logos, tags of products, clothing labels, and name cards.

2. The Ban Thung Mok community group's design of logos, clothing labels, name cards, and cloth bags



Figure 6: The Ban Thung Mok community group's design of logos, clothing labels, name cards, and cloth bags

3) The Ban Tat Sob Wan community group's design of logos, clothing labels, name cards, and cloth bags



Figure 7: The Ban Tat Sob Wan community group's design of logos, clothing labels, name cards, and cloth bags

4) The Ban Wiang community group's design of logos, clothing labels, name cards, and cloth bags



Figure 8: The Ban Wiang community group's design of logos, clothing labels, name cards, and cloth bags

5) The Ban Sun Poo community group's design of logos, clothing labels, name cards, and cloth bags



Figure 9: The Ban Sun Poo community group's design of logos, clothing labels, name cards, and cloth bags

After evaluating the market testing of prototyped products to be the guidelines of the production for producers, it was found that the consumers had a highest level of satisfaction on the aesthetic function, the interesting identity that promotes the value of products, the suitability in the composition, colors, and patterns respectively. The sum of the practical function is in the highest level. Moreover, the product is suitable on the finely sewing, the form of the use, the proportion, the maintenance, the durability, and the safety in use respectively.

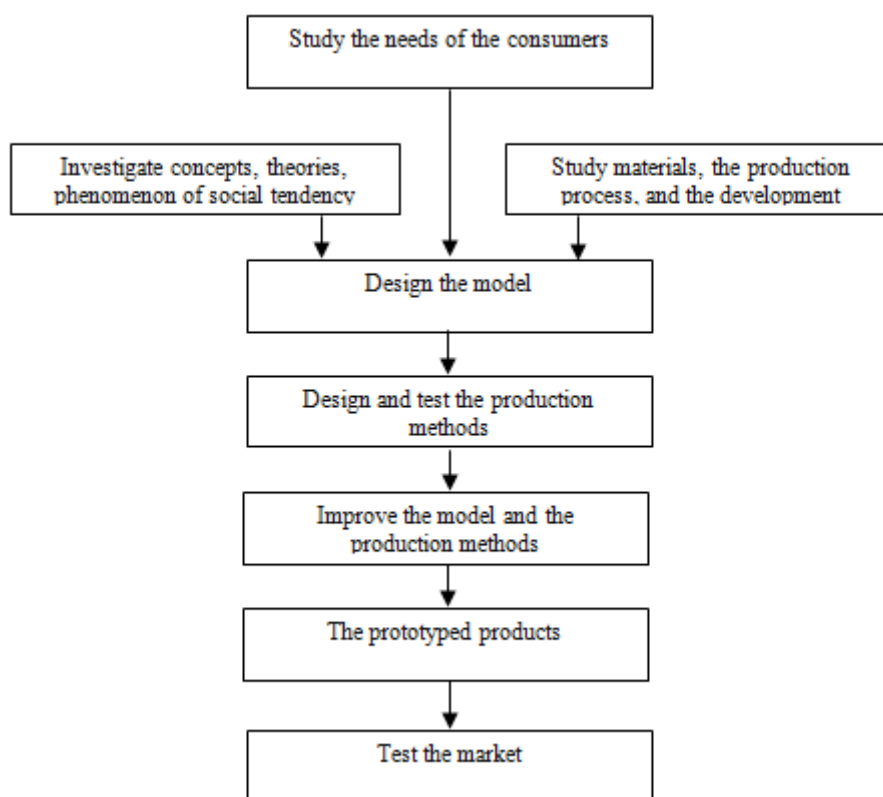
## VII. DISCUSSION

This research focuses on the process of creating a new product with a touch of Tai Lue culture that responds to the lifestyle of the people today. Design methods and techniques of product manufacturing were investigated to have the product models that satisfy the needs of the target consumers. In this study, the groups of producers have learned the thinking methods, the pattern development, the product



development, branding, and the importance of the brand image. They also understood how to develop the products.

The effects found in this study was that the producers, the researchers and the students have learned how to think, develop, and increase the product value. Originally, the textiles have only the patterns of streams alternating with base colors to be used in making casual wears that woven faster than weaving the whole piece of sarongs. The applying patterns to Tai Lue textiles is suitable for making clothing and increasing the value of it. This study caused the participation and provided the recommendations for the suitable guidelines of the production that was accepted by the consumers. The researchers acquired the new suitable form of production process and the new knowledge to develop the composition of making bags that satisfy the needs of the target groups. The producers realized the satisfactions of the consumers from this study, the significance of model development, and the creation of the community identity. However, the model in this study was inspired from the opinions and the needs of some social groups at that time, so it could not be used at all time. Therefore, the producers must be awaked to the changes in the society and observe the needs of the target consumers and conduct the development continuously. The process of this study could be summarized as follows;



*Figure 10: the process of the development*

From the findings of Sudsang (2000), it was found that the production development of the community can drive by having the knowledge and the comprehension on the methods of the production, and the concept of new products, testing the acceptance of the market that conforms to the concept of the creative economy. The difficulty of the model duplication affects directly to the achievement of the market, but the brand identity and local cultures affect indirectly to achievement of the market. In addition, the properties, the education, and the working experiences of entrepreneurs also affect to it.

## **THE RECOMMENDATIONS**

### **The suggestions for the use of research results**

- 1) The patterns of Tai Lue textiles can be applied to arrange suitably for the heddles.
- 2) There should be the consideration on the tendency of design, colors, decorations in each year to apply in the products. This can make the product more suitable.

### **The suggestions for further research**

- 1) The development of the creative product model from Tai Lue textiles should conform to the market testing and the possibility in the development the product quality for export.
- 2) The development of techniques of processing products and the integration of other materials are needed to study.
- 3) The model, the process, or the identity from this study should be developed with the products from other materials, such as woods, irons, leathers, and other fibers.

### REFERENCES

1. nanchai, W., & Sitthichokthanarak, N. (2010). Development of product and marketing models for Tai Lue woven fabrics for sustainability of Ban Thung Mok community, Chiang Kham district, Phayao province. **The Far Eastern University Academic Journals**, 4(1), 57-66.
2. Jumpatong, K. (2012). **Thai Lue Weaving Village, Ban Thung Mok Village**. Phayao: University of Phayao.
3. Somrit, S., & Intasan, P. (2012). Cost Management and Product Compensation from Tailue Textiles, Chiengkum District, Prayao Province. **Journal Of Modern Management Science**, 5(1), 116-125.
4. Sudsang, N. (2000). **Industrial design**. Bangkok: Odeon Store.
5. Wanalaichareonchit, J. (2000). **Production plan for Tai Lue woven cloth: A Case Study of Chiang Kham District Phayao Province**. Chiang Mai: Faculty of Economics Chiang Mai University.
6. Wong a nan, R., Saributr, U., & Louhapensang, C. (2015). Study of Ethnic Tailue Cultural Art for Accessory Product Design. **Journal Of Industrial Education**, 14(3). 368-375.