



The Application of the Costumes of the Tai Tang ethnic group toward Product Design in Bolikhamxay Province, Laos PDR

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Abstract

The aim of this research study was to examine the evolution of the costumes of the Tai Tang group for design and developmental purposes in order to use costumes for the creation of new products in Bolikhamxay Province, Laos PDR through a qualitative research process. The tools used in this research were surveys, observations, interviews, and group discussions with identifying populations and samples. The data was analyzed utilizing theories and concepts of Cultural Ecology and Product Design and was presented using descriptive analysis.

The research results showed that the evolution of the costumes of the Tai Tang in Bolikhamxay Province began during the historical period and has been passed down through the generations. The evolutionary processes can be divided into six areas. Firstly, there is the evolution of the patterns of the costumes from the past, which were woven and worn in their daily lives. However, at present, these costumes are mostly used in their rituals. Furthermore, the patterns of the textiles have been influenced by nature and the natural environment. Secondly, regarding the evolution of the materials used in the costumes, the concept has been concerned with the use of natural materials from the past until the present. Currently, some natural materials have become rare at their sites, so they must survey or import materials from other sites. Thirdly, there has been an evolution in the costume design process. In the past, the production process focused solely on human resources to make handcrafts, but that was a lengthy process. Currently, they are purchasing some raw materials from sites nearby and are using some machinery in their production processes. Fourthly, with respect to the evolution of the aesthetics of the Tai Tang costumes, the artistic compositions represented characteristics, such as unity in the past, which was related to patterns, which were balanced on the left and right sides. Moreover, geometric shapes found in nature were mostly used. The presence of some details of nature or the surrounding environment have been pared down to create more artistic, contemporary, and colorful designs. Fifthly, in regard to the evolution of the usability of the costumes, they were previously used to indicate the wearer's social class. However, the presence of the development of usability has changed in accordance with popular trend of focusing on the utility of being beautiful and functional. Finally, there is the evolution of beliefs about tribal costumes, which are traditionally worn most often in ritual ceremonies or when they are preaching about the principles of cultural beliefs in a specific cultural setting. To summarize, when the development of tribal designs in the costumes of the Tai Tang in Bolikhamxay, Lao PDR was applied to products, it was found that the most appropriate products to which the designs could be applied were handbag products. The developmental processes consisted of the following: 1) analyzing the demand for products, 2) designing the concepts of the products, 3) conducting analyses of the designs, 4) producing the prototype, and 5) assessing the degree of customer satisfaction with the products.

Keyword: Costumes, The development, Tai Tang, Bolikhamxay

1. Introduction

Bolikhamxay Province, which is a part of Lao PDR, is located in the central region. The province was established in 1986, and Bolikhamxay connects to Thailand, Laos, and Vietnam. Moreover, there is a rich bounty of natural and cultural resources. Given the abundance of nature, the landscapes are beautiful, and the scenery is breathtaking. Moreover, the province is full of important religious sites. Bolikhamxay has a total of 7 districts, which

serve as home to the various tribes, who live there. Therefore, the tribes can be divided into 18 tribes as follows: 1) the Pakxan District has 12 tribes, 2) 10 tribes inhabit the Bolikhanh District, 3) 8 tribes live in the Xaychamphone District, 4) the Thaphabath District has 6 tribes, 5) the Viengthong District has 6 tribes, 6) the Pakkading District has 12 tribes, and 7) the last of the districts, the Khamkeuth District, has 15 tribes. Meanwhile, the Khamkeuth District has the most tribes in Bolikhamxay and is also an important historical site, especially with regard to the tribal costumes that continue to be used in the rituals or religion ceremonies.

Garments are the fabrics that humans use to cover and wrap their bodies. The design and the method of dressing involve the use of clothing structures and dressing techniques from particular eras. However, in early times, there was a lack of understanding about the creation of the garment patterns. Some clothing characteristics reflected a lack of familiarity with the wearing of certain garments and a lack of understanding of the philosophical aspects of clothing, along with the aesthetic aspects of dressing in the past. The creation of new clothing styles, combined with the prevailing fashion of the time, was also undertaken (Nuchnomboon R., 2006). This led to the development of new and innovative clothing styles. Therefore, historical studies allow us to comprehend and gain insights into the various clothing trends that reflect the human way of life. Since clothing styles differ from one era to another, clothing has evolved over history (Kurovat P., 1992) Through the study of clothing development, we can gain a better understanding of its evolution.

Based upon the necessity for clothing, we can clearly observe the variations in the manner of dress within each region or country, which differ in various aspects, such as climate, customs, traditions, cultures, and rituals. Within the Indochinese region, there are cultural differences in clothing. From the aforementioned, the researchers were aware of the significance of applying the attire of the Tai Tang ethnic group in Bolikhamxay Province, Laos.

There were two main purposes of this research study. The first purpose was to develop the clothing evolution of the Tai Tang ethnic group in Bolikhamxay Province, Laos. The second purpose was to design and develop the clothing items from the Tai Tang ethnic group in Bolikhamxay Province so that items could be developed into new research products. Given that this tribe has a distinctive identity in their way of dress, the area of the Tai Tang ethnic group in the Khamkeuth District was chosen for this research, particularly Bolikhamxay Province. The Khamkeuth District is also an historically significant area in the region and Laos PDR. The use of the traditional clothing styles from the Tai Tang ethnic group persists mainly in ceremonial or ritual events, in which they often dress in accordance with their traditional customs.

The researchers recognized the importance of studying and applying elements of the attire of the Tai Tang ethnic group. Therefore, they gathered documents both from primary and secondary sources during this research so that knowledge could be disseminated, and the practical application of cultural and artistic knowledge could be promoted in various aspects and for maximum benefit.

2. Objectives

- 1) To develop an evolution in the clothing of the Tai Tang ethnic group in Bolikhamxay Province in Laos.
- 2) To design and develop clothing items from the Tai Tang ethnic group in the Bolikhamxay Province so that they can become new research products.

3) Methodology

The purpose of studying the application of Tai Tang ethnic groups clothing in Bolikhamxay Province, Laos PDR, was to design products using the qualitative research study process. The objectives of this study were to explore the evolution of the Tai Tang ethnic group's costumes, to create designs and to develop them, and to utilize the traditional clothing. The research process was divided as follows:

- 1) The objective of this study was to investigate the development of the Tai Tang ethnic groups clothing in Bolikhamxay Province, Laos PDR by focusing on the development of six aspects: (1) developing the patterns for the design of clothing from the Tai Tang ethnic group, (2) discovering the evolution of materials used in the tribal clothing, (3) improving the clothing production processes, (4) enhancing the aesthetics of Tai Tang ethnic attire, (5) determining the benefits derived from wearing ethnic clothing, and (6) discovering the cultural beliefs and attitudes related to Tai Tang ethnic attire. The target group for this research is the Tai Tang ethnic group located in the Khamkeuth District of Bolikhamxay Province.

- 2) The processes focused upon designing and developing clothing for the Tai Tang ethnic group in Bolikhamxay Province, Laos, to create products, which were specifically applied to the category of clothing accessories. The processes consisted of the following components: (1) analyzing the product's requirements, (2) conceptualizing the designs of the products, (3) evaluating the results of the design, (4) producing prototypes, and (5) assessing the degree of satisfaction with the final products. Finally, data was collected from documents and field sources for the purpose of analyzing the data and determining the research results.

4. Results

4.1 The development of the Tai Tang ethnic group's clothing in Bolikhamxay Province, Laos PDR

Bolikhamxay Province is located in the central region of Laos. It is an area to which the ethnic Lao people have migrated towards in the southern portion of the region, following the various rivers that originate from the Phu Loei, such as the Nam Khan River, Nam Song River, and the Nam Ou River, which flow into the Mekong River. These migrations have left numerous traces as evidence from the past to the present. In the northern part of Bolikhamxay Province, the ethnic Lao people have migrated to areas along the Mekong River and its tributaries, including the White River, Red River (as Hong River or Huang River), and Black River, heading towards the northern region and the Nong Sae area. (This area was located in Yunnan province and covered China's Guangxi Province and Guangdong Province.) Currently, the ethnic groups residing in the Bolikhamxay Province consist of various diverse tribes: the Tai Lao, Tai O, Phutai, Tai Meuy, Tai Maen, Tai Pao, Taeng, Tai Lue, Tai Yor, Tai Saek, Tai Ae, and the Kwan. Most of these ethnic groups have lifestyles that are closely tied to the large rivers. In addition, they have built sturdy houses along the rivers to serve as their homes, and these groups engage in agriculture and raising cattle, as well as practicing various handicrafts.

The traditional clothing of ethnic tribes is considered the cultural center of the nation. Accordingly, the official attire often employs the traditional clothing of the Lao ethnic groups as a national symbol, and it is worn by all ethnic groups in society. For example, the traditional clothing is featured in school uniforms and in employee uniforms both in the public and private sectors. This distinctive clothing style, which is representative of the identities of ethnic traditional clothing, is commonly found in the daily attire of women. Meanwhile, for men, traditional clothing is more prevalent during ceremonial events, festivals, and rituals, such as ordinations, religious ceremonies, and weddings. The history of traditional clothing in Laos can be divided into four main periods: (1) the prehistoric period, 2) the Lan Xang Kingdom era, 3) the modern Laos History era, and 4) the current era of the Lao People's Democratic Republic (PDR Laos).

1) In ancient times during the Stone Age and before the era of Lan Xang Kingdom, people used animal skins as clothing, began to cultivate crops, raised sheep, and planted flax. In this period, they utilized animal skins and started weaving early in the era. Later, during the Bronze Age, they learned how to navigate ships and engage in clothing artistry. Even though animal skins were still used, they began to explore weaving and to embellish clothing. Regarding the Iron Age, they became more familiar with weaving and adorning fabrics with patterns. In the state society, there were people from the Lawa tribe, who were residing on the western coast and living in close proximity to the ethnic Mon and Khmer people, which led to acculturation between the Lawa, Mon, and Khmer. This cultural exchange continued until the early Christian era when Indian culture was introduced. This influenced the Lawa people and led to the development of their unique identity, distinctive customs, and their attire, which reflected the differences among the ethnic groups.

2) During the era of the Lan Xang Kingdom, the differences in clothing were distinct and evident and visually distinguished the upper-class people, the commoners, and the various ethnic groups residing within the Lan Xang Kingdom. During this period, the social stratification was clearly defined, with three major kingdoms: the Kingdom of Luang Prabang, the Kingdom of Vientiane, and the Kingdom of Champassak. This period was characterized by a lack of stability of governance, which led to disunion and collapse of the Lao Kingdom, particularly among the royal lineages of each kingdom. Eventually, the Lan Xang Kingdom became tributary states of Siam in the year 1779 CE and Siam granted governance rights over the Lan Xang Kingdom as three separate kingdoms. Consequently, the clothing of this period reflected the fusion of various cultural elements.

3) Regarding the modern history of Laos, Laos was colonized by France in the year 1893, and the Kingdom was divided into two parts. One part came under the rule of France, while the other remained under the governance of the Kingdom of Siam. In terms of clothing, there was an acculturation from the West, such as the practice of wearing lace tops for which various types of fabrics were employed in making the shirts.

4) On December 2, 1975, the people of Laos officially declared independence during the era of the Lao People's Democratic Republic (PDR Laos). This declaration of independence led to changes in how clothing is used in present-day Laos. These developments in clothing have brought progress and has transformed the culture and society of the Lao people during the Lao PDR, which has fostered creativity and changes in clothing styles and their usage in the country and which has resulted in the various aspects of development as follows:

(1) By exploring the developments in clothing design patterns, it was found that the Tai Tang ethnic group is the largest ethnic group in the Lao PDR. This has resulted in the strength of various cultures, and in members of the Tai Tang ethnic group being distributed throughout all regions of the country. In the Khamkeuth District of Bolikhamxay Province, people have been influenced by the clothing styles of the Tai Tang ethnic group and their way of life. The traditional authenticity of Tai Tang ethnic group can be seen in ceremonies

and in some official events in which they wear a combination of traditional and Lao ethnic clothing styles. In summary, there are three clothing styles. Firstly, when dressing up for work or official ceremonies, the attire is similar to that of the Lao or wearing "Sin" as a local wisdom woven fabric, which has the Tai Tang ethnic group's unique patterns incorporated into the Lao ethnic clothing style. Secondly, for those outfits worn at gatherings, individuals may dress according to their preferences, or the dress code that has been specified for the event. Some may choose to wear Lao ethnic clothing, either in a combined style or in full Tai Tang ethnic attire. Nearly all women in the ethnic group wear complete Tai Tang ethnic clothing, while some might wear attire similar to the Lao ethnic group during wedding ceremonies or during religious ceremonies. There is a significant number of people who dress in traditional attire and who adhere to the specific dress code of the Tai Tang ethnic group. The patterns found on the clothing are categorized based on their traditional designs.

Through the research and exploration of clothing styles, it has been found that the Tai Tang ethnic group's patterns can be categorized into two groups. Firstly, there are those patterns, which were inspired by nature and are sub-divided into two types: those derived from plants and those derived from animals. Some examples include edible fern patterns, flower patterns, leaf patterns, vine patterns, bird patterns, and fish patterns. Secondly, there are patterns that have been influenced by beliefs, such as the mythical creature "Tohon" (Brush-tailed porcupine) and "Naga." However, the traditional attire of this ethnic group involves wearing the hair up or in the style of a hair bun without any elaborate adornments, which is similar to the Lao ethnic group. The hair bun is covered with head wrap called "Kan Pok Hua." Its base is black in color with patterns on both sides and strings with flower patterns and hemp threads in white. The materials of the hemp threads, which are silk or cotton, also feature "Jo Aeang or Sai Aeang," which is a multicolored woven cord that is worn over the hemp thread. The Tai Tang ethnic group maintains its traditional clothing style. The only difference is the availability of the fabric and materials purchased in the local market and the modern techniques, which are used for weaving and tailoring, and which make the process more convenient for daily use. Presently, the Tai Tang ethnic group still wears traditional clothing, but the clothing is mainly worn during important events, such as ceremonies and religious festivals, while adopting the Lao ethnic clothing for more formal occasions.

Therefore, the development of pattern clothing design among the Tai Tang ethnic group, specifically in the Khamkeuth District of Bolikhamxay Province, has evolved over time. In the past, the fabrics, which were woven, served mainly for daily use and for ceremonial purposes. However, at present, the traditional clothing style is still evident and is primarily worn during significant ceremonies. The patterns, which have been derived from both natural elements and the environment, follow the principles of culture and cultural ecology. This adaptation is evident in the ways in which they produce and utilize the clothing to suit their different environments and living conditions.

(2) The Development of the Clothing Materials In the past, it was shown that materials derived from nature were used, which included silk and cotton. The clothing was made using silk from silkworms that had been raised, and the produced silk was used as one of the materials for weaving fabrics. Regarding clothing made from cotton, they did not produce cotton themselves in the area, but they mostly purchased it from markets and from it, they wove their own clothing. Therefore, developments in clothing materials among the Tai Tang ethnic group, from the past until the present, still relies on those materials derived from nature. However, due to the scarcity of certain natural materials in the area, they have sought to acquire resources from other sources. Humans have the potential to transform or modify resources, which can lead to changes in the methods of production and material selection to create clothing that can adapt to the social structure.

(3) The Developments in Clothing Production Processes It was revealed that in the past, the basic production methods for making clothing involved using silk from silkworms. The process began with planting mulberry trees to feed the silkworms, and then with harvesting the silk cocoons to obtain silk threads, which were later woven into fabrics using traditional weaving techniques. However, in the present day, the focus has shifted to producing clothing, which utilizes silk from silkworms, as well as silk that has been purchased from nearby areas or factories.

Therefore, in the past, developments in clothing production processes have focused on natural production methods, which involved time-consuming steps. Moreover, the processes relied upon manual labor in the production process. However, presently, there is a shift towards purchasing materials from nearby areas and incorporating machinery into the production processes, which follow the principles of cultural ecology. As a result, humans now rely on technology to adapt to the social and environmental aspects, while the level of cultural advancement depends on the energy being used. Cultures with lower levels of advancement are those that rely on human power, while cultures with higher levels of advancement are those that can efficiently harness natural energy.

(4) Developments in the Aesthetics of Clothing It was revealed that in the past, the artistic compositions emphasized a central point with various natural color tones and patterns in the attire of the Tai Tang

ethnic group. The clothing consisted of a combination of diverse colors, which blended to form a vibrant ensemble. According to an interview with Mrs. Jai, a clothing producer (January 12, 2564), the distinctive and identifying colors, which represent the ethnic group are primarily the "Siw" color as green, followed by purple and blue.

Hence, in the past, the development of the aesthetics of clothing among the Lao ethnic group involved artistic compositions expressed in a unified manner, with patterns that were balanced on both sides. These were often inspired by the natural forms found in geometry. Currently, the process involves trimming and modifying the details from nature or the surrounding elements to create a more contemporary and artistically designed appearance. Following the principles of cultural ecology, the creation of art serves as a tool for humans to assist in adapting to their surroundings and expressing beauty as a crucial and ultimate aspect, especially in those artistic works that serve as objects of art.

(5) Developments in the Practicality and Utility of Clothing It was shown that in the past, clothing was worn to display social status and for ceremonial purposes. However, in modern times, clothing is worn to enhance physical appearance and aesthetics. It is used as a means of decoration to make the body more beautiful. Clothing, which symbolizes social and economic status, is also worn during religious ceremonies and traditional rituals, and reflects the identity of the Tai Tang ethnic group. This was mentioned by Hanchana Seesan, a traditional weaver, in an interview on December 14, 2563.

Therefore, developments in the practicality and utility of clothing have changed over time. In the past, clothing was used to display social status. However, in modern times, its usage has evolved following consumer trends, which emphasize the aesthetic benefits. This change aligns with the principles of cultural ecology, in which the relationship between culture and the environment is closely intertwined and mutually influential. Humans have the potential to adapt and change their usage of types of attire in their daily lives. However, certain traditional forms and customs have been inherited and still persist, and thereby, serve as expressions of local culture.

(6) Developments in Cultural Beliefs and Attitudes towards Clothing It was revealed that from the past to the present, their clothing has often been associated with ceremonies and traditions, in which specific outfits were frequently worn during various rituals to express auspiciousness.

Therefore, the development of the Tai Tang ethnic group's cultural beliefs and attitudes towards clothing largely rests on their ceremonial and traditional practices. Following the principles of cultural ecology, beliefs, and customs, various ceremonies serve as cultural tools that help to maintain a balance between the population and the environment. The concept of cultural ecology blends seamlessly with production methods and technologies, which have been shaped by the specific cultural beliefs of that particular community.



Figure1The traditional style of clothing worn by the Tai Tang ethnic group

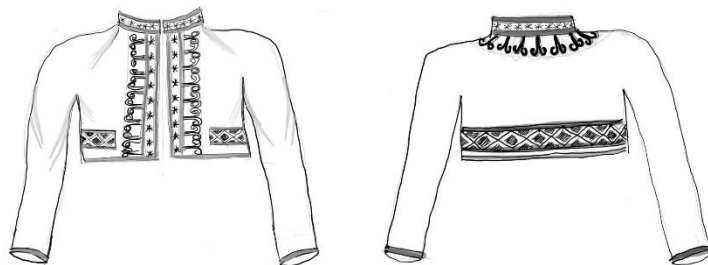


Figure2A sketch of the attire of the Tai Leu ethnic group



Figure3A sketch of the traditional cloth and belt of the Tai Tang ethnic group

The results of the study on the development of clothing among the Tai Tang ethnic group in the Khamkeuth District of Bolikhamxay Province, Laos, revealed 6 aspects according to the cultural ecology principles of Pongsapich A. (2003). These aspects have been influenced by the surrounding environment and nature, which led to learning how to make adaptations in various ways. In terms of the clothing's design, it has evolved over time by modifying patterns and motifs. Due to ease of production, the materials used in making clothing have shifted from natural materials to more scientifically advanced materials. Moreover, the production processes have also undergone changes with the incorporation of technology and has resulted in technological advancements in the production process. In the field of design aesthetics, there has been a tendency to trim details from natural elements or objects in order to create more contemporary and modern designs. Regarding the benefits and uses of the clothing, it has been continuously developed to make it more suitable for our modern world. Overall, cultural beliefs have also adapted and been applied according to the cultural patterns.

4.2 The utilization of Tai Lue ethnic group's traditional clothing towards product design in Bolikhamxay Province, Laos

The study revealed that the target group for this application should be the Generation Y consumers in Bolikhamxay Province. Generation Y refers to individuals born between 1981 and 1996, who are approximately between the ages of 25 to 40 years. This group places significant importance on social media, but this age range can also experience feelings of loneliness and stress due to various responsibilities. Hence, they prioritize relaxation, well-being, and those activities that bring balance to their lives. This group values Work-Life Balance. Meanwhile, those organizations that offer flexible regulations or provide opportunities for breaks during workdays tend to attract Generation Y individuals more than other organizations. Generation Y individuals commonly seek recreational activities during their weekends. Statistics have shown that over 77 percent of Generation Y individuals prefer going to cafes or coffee shops, and they also enjoy traveling to showcase their lifestyle on social media every

week. Moreover, they prioritize spaces for relaxation and prefer minimalist and serene elements over luxurious lifestyles. The Direct-to-Consumer (D2C) business model appeals the most to Generation Y consumers since they actively seek out and directly purchase their products from brands. Brands that align with the interests of Generation Y consumers have an advantage in this market segment.

The results of the analysis of products in the market in Laos indicated that compared to other countries, there were relatively few products, which were related to the culture of the ethnic groups. The preferences of the target group depended upon the usage characteristics. The researchers studied the patterns of products that were available in the market to serve as guidelines for product design. The analyzed products include handbags since modern bag designs have gained popularity and acceptance in society. However, modern bag designs that convey the identity of the ethnic group have started to appear and be sold in the marketplace, such as modern bags reflecting the Lao ethnic group's identity and modern bags from Tai Lue ethnic group. However, the modern handbag designs from the ethnic group in Bolikhamxay Province are not yet available in the market.

Most of the materials used for these products are woven fabrics that combine rattan with various patterns or cloth bags. This is in line with concepts from Schipani and Steven (2008), who examined the production and sale of handicrafts to tourists at the village level. The way of life of the Tai Tang ethnic group is still relatively simple, but there is a desire to produce consumer goods that are made from natural materials and to integrate traditional utility items and modern products. Investigations of consumer groups, which are based on market research and marketing trends, have been undertaken in stores that sell products in Bolikhamxay Province and in Vientiane. It was found that modern or contemporary products, especially handbags, which reflect the heritage of the ethnic group, have gained popularity among domestic tourists, foreign tourists, and local residents. Moreover, these handbags are especially popular among Generation Y females.

However, the current availability of modern product designs is still limited and does not fully meet the needs of the target group. Therefore, when designing modern products, it is necessary to consider cultural identities and the applicability of ready-to-wear fashion. Based on market demand, the researchers summarized the product requirements from the perspectives of both the governmental and the private sectors and determined that modern products should have cultural identities and practical usability in the present.

The researchers analyzed the clothing of the ethnic group to determine the elements that could be suitably adapted for product design, specifically for handbags. This analysis incorporated the Tai Tang ethnic group's distinctive patterns, colors, materials, and production methods, as well as the characteristics of the clothing's usage. The focus of this study was in the area of Bolikhamxay Province, as illustrated in Figures 4 – 8 below.



Figure 4 The analyzed patterns that are to be utilized as concepts into product design



Figure5 The materials that are utilized in the clothing of the Tai Tang ethnic group



Figure6 More materials that are utilized in the clothing of the Tai Tang ethnic group



Figure7 Utilizing the clothing of the Tai Tang ethnic group to be used as decorative body adornment products



Figure 8 These bags were adapted and designed as a type of fashion accessory product by the researcher to display the designs for evaluation.

1) The results of the data analysis from the questionnaire to assess the design aspects of decorative bags products

From the quantitative analysis, it was revealed that the attire of the Tai Tang ethnic group still holds beliefs that are related to Naga, Nguek (Big snake), or Tohon (Brush-tailed porcupine). The researcher has applied these elements to create fashion accessory products that align with the intended target group, making them more practical and acceptable for current use. Furthermore, these designs communicate the application and historical significance of the Tai Tang ethnic group's culture.

The researcher utilized the concepts derived from the analysis to create five prototype handbag designs, which were then evaluated by design experts in order to obtain their opinions and suggestions. The results revealed that the design models with the highest suitability had been Model 1 ($\bar{x}=4.75$, S.D.= 0.44) and Model 4 ($\bar{x}=4.65$, S.D.= 0.49), respectively. However, those signifying a 'High level' of suitability were followed by Model 2 ($\bar{x}=4.41$, S.D.= 0.71), Model 5 ($\bar{x}=4.25$, S.D.= 0.44), and Model 3 ($\bar{x}=4.18$, S.D.=0.64), respectively. The consumer group also strongly agreed by particularly favoring Model 1 based on its high degree of practicality, while also suggesting an increase in the utilization of local materials.



Figure 9 Prototypes of bags that were derived from the application of the attire elements of the Tai Tang ethnic group

To summarize, based on the analysis of the data from the degree of satisfaction regarding the application of Tai Tang ethnic attire in the Bolikhamxay Province, Laos, for the purpose of product design, it was found that those individuals interested in handbag products had been highly satisfied. Recommendations included incorporating more local materials, such as rattan and fabric, in order to increase the income of the local residents. Moreover, there is also a demand for clothing and decorative items for the home that emphasize the cultural identity of the Tai Tang ethnic group in Bolikhamxay Province.

5. Conclusion

5.1A Summary of the development of the Tai Yuan ethnic attire

Based on the study of the development of Tai Tang ethnic attire, which focuses on the influence of the principles of cultural ecology and nature, the development was categorized into the six following aspects. Firstly, there was the development of the pattern designs of the clothing of the Tai Tang ethnic group. In the past, textile production was primarily for daily use, but at present, it is mostly seen in significant ceremonies or rituals. Patterns are often inspired by nature and the environment. Secondly, there was the evolution of materials used in tribal clothing. From the historical past and up to the present, natural materials have been used. However, due to the scarcity of certain natural materials in the region, alternative sources have been explored. Thirdly, there were improvements in the clothing production processes. In the past, the production process emphasized a natural, but time-consuming approach, which relied upon manual labor. Today, there is a shift towards purchasing materials from neighboring regions and incorporating machinery into the production process. Fourthly, there was the enhancement of the aesthetics of the Tai Tang ethnic attire. In the past, compositions shared a unified structure, with symmetrical patterns. These designs often followed the geometric shapes that are found in nature. Currently, details are often extracted from nature or the surroundings to create designs that are modern, contemporary, and vibrant, as well as increasingly artistic. Fifthly, there were benefits derived from wearing this ethnic clothing. The clothing was originally worn to display social status. However, in modern times, the utilitarian purpose has shifted to align with consumer preferences, which focus on enhancing personal beauty. Finally, there was the development of cultural beliefs and attitudes related to Tai Tang ethnic attire. The attire, which is commonly worn for ceremonies or rituals, is closely intertwined with the cultural beliefs that are specific to that culture.

5.2 A Summary of the Application of Tai Tang Ethnic Attire in Bolikhamxay Province, Laos, for Product Design

The application of Tai Tang ethnic attire in Bolikhamxay Province, Laos, for the purpose of product design revealed that the use of the ethnic attire of the Tai Tang people encompasses patterns, materials, production processes, and functional benefits for designing decorative clothing products. The targeted interested in products, derived from the adaptation of Tai Tang ethnic attire, consists of both domestic and international tourists, as well as local residents. Even though there is a preference for using these products, a lack of diversity in the application of these products still remains. A survey, focusing on ethnic Tai Tang attire, particularly those items possessing distinct characteristics that have been applied to product design, has shown that the group, which is the most interested, is comprised of those who desire decorative clothing products, especially the females of Generation Y. They favor contemporary products with a minimalist style.

Furthermore, both the governmental and private sectors are seeking designs that reflect cultural values and offer practical present-day applications. The results of this research revealed the following: (1) a study of the target audience's utilization of Tai Tang ethnic attire in Bolikhamxay Province, as applied to product design, and an analysis of existing products in the market in Laos and (2) an analysis of the designs of the decorative clothing products, specifically handbags. The design model of Style #1 was found to be the most suitable, with an average rating of ($\bar{x}=4.12$, $S.D.=0.76$). Recommendations included considerations for sizes, materials, and production techniques in order to ensure appropriateness. It has been suggested that the bags be designed as a set, with various sizes and with the use of materials available in the region. The assessment of product satisfaction showed that those interested in handbags had been highly satisfied. In addition, suggestions were made about how to enhance income by transforming locally available materials, such as rattan and fabric, into products that could benefit both the local community and various ethnic groups.

6. Discussion

6.1 The Development of the Clothing Style of the Tai Tang Ethnic Group

In the past, textile production was chiefly aimed at creating clothing for daily use. However, at present, the clothing style is often encountered in various ceremonial contexts. The patterns have been influenced by inspiration from nature and the environment. This corresponds with Arunothai S. (2006), who mentioned that the selection and artistic compositions can be categorized into both natural and invented patterns, for which the concepts for the design of various decorative applications are considered. The origin of patterns can be attributed to nature and to human creativity, with varying forms, such as geometric shapes, imitative patterns taken from nature, patterns adapted from nature, certain man-made items, and imaginative creations. The evolution of the materials used in the Tai Tang ethnic attire, from the past until the present, has primarily relied on natural resources. However, due to the scarcity of certain natural materials in the region, alternative sources have been sought, as suggested by Pongsapich A. (2003). This resonates with an era when there were limited technological advancements. Because

human beings are compelled to adapt to their environments, they, in turn, shape their environments in order to define culture. However, as technological advancement progresses, humans are gaining the capability to alter or modify their surroundings to greater and greater degrees. Developments in the clothing production processes reflect this shift. In the past, manufacturing processes focused on natural methods, which involved time-consuming steps that required considerable manual labor. Presently, there is an inclination to source materials from neighboring areas and to incorporate machinery into the production processes.

The Department of Cultural Promotion (1994) stated that the process of weaving fabric is an intellectual property that originates from accumulated knowledge, which evolves into cultural heritage through creative continuation, and that yields products that can serve as social assets for self-sustainability. In the past, the evolution of clothing aesthetics among the Tai Tang tribe was comprised of elements that had been unified in artistic composition and was related to patterns that were balanced on both sides. These patterns predominantly followed geometric shapes from nature. Presently, details, which have been selectively extracted from nature or the surrounding elements, create designs that are both modern and vibrant. This aligns with findings from Mayesky (2015), who mentioned that exposure to artistic experiences invokes an appreciation for beauty that has been acquired from nature and art. This sense of appreciation is a feeling that is derived from human perceptions and is nurtured through experiences that involve all five senses. The development of the clothing's benefits and functions have transitioned over time. In the past, clothing symbolized social status, while today, its usage varies according to trends, and it is often worn for aesthetic appeal. The evolution of cultural beliefs and attitudes about clothing primarily involves ceremonial or ritualistic attire, which is sculpted by cultural perspectives that are unique to each society. This corresponds with Para S. (2007), who stated that humans tend to source local natural materials when making clothing. Presently, not only does clothing serve as protection against weather and hazards, but clothing also communicates culture, tradition, social status, activities, and environments. For example, beekeepers wear protective suits as part of their profession, while swimwear signifies swimming or swimming instruction. Moreover, clothing, which is worn for aesthetics, showcases an individual's financial status and societal identity in modern times.

The application of clothing for product design from the Tai Tang tribe in Bolikhamxay Province consisted of analyzing the product needs within the area of Bolikhamxay Province, which involved the tourists who travel there. Currently, the modern products that are in high demand within the category of clothing embellishments are in alignment with the preferences of Generation Y consumers. This generation is particularly interested in having culturally immersive travel experiences and tends to make purchasing decisions that are based on popular trends. The study of the products in the area needs to focus on decorative clothing items, specifically handbags. This aligns with the product design framework by Bunwong N. (1999), which places emphasis on the importance of understanding the needs of the target audience so that the products' designs can align with their objectives. The analysis of design concepts for products featuring modern clothing adornments, specifically handbags, drew inspiration from the application of the clothing adornment practices of the Tai Tang tribe in Bolikhamxay Province. Among these products, handbags exhibited the highest level of suitability. The recommendations, which emphasize considerations for size, materials, and production techniques to make them suitable for designing handbags of different sizes and which feature these of those materials that are available within the region, aligns with the perspective of Suksod T. (2001) with regard to viewing designing as the process of creating new items, of making improvements to products, and/or of further developing the existing ones. A portion of the product's design concept may be derived from traditional models, which can then be adapted to fit contemporary society and human lifestyles and can then result in modernized and adaptable designs, which can meet the current consumer needs. In the prototyping process, the production process, which includes weaving and embroidery, involves transforming the process of manufacturing traditional crafts and techniques from the local community into production on a mass scale within the community. Meanwhile, for decorative clothing products like handbags, collaboration between local weavers and handbag creators is part of the process. The evaluation of satisfaction about the products revealed that those interested in decorative handbags had been 'highly satisfied.' Suggestions were made about how to further incorporate local materials, such as rattan or fabric, which could increase income for the local community. This aligns with findings from Bunwong N. (1999), who noted that both 'utility' and 'ease of use' are crucial factors to consider when designing products, both of which make purchasing decisions easier for the target group. It is important that usability, suitability, and safety be insured during usage.

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