

**THE RESEARCH AND DEVELOPMENT OF TIE-DYED
HANDICRAFT PRODUCTS FROM KRABI PROVINCE
FOR THE DESIGNING OF KO KLANG COMMUNITY'S
CONTEMPORARY SOUVENIRS, LEADING KRABI PROVINCE
TO BECOME A CREATIVE CITY**

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Abstract

The main objective of this research was to study the techniques and processes of tie-dyed cloths in order to apply those techniques and processes to souvenirs made by tie-dyed cloths from Krabi Province. The study started from collecting area data, tourism data, techniques and processes of tie-dyed cloths from villager groups in Krabi Province. The data were analyzed and used in the designing of Krabi Province's contemporary souvenirs. In addition, the data were disseminated to the local and communities in Krabi Province. According to the study results, the tie-dyed cloth-making of Baan Koh Klang was considered local handicraft created from villagers' experiences through the learning of natural resources available in the community for beneficial usage. The tie-dyed cloths have artistic values and beauty. The tie-dyed cloths' background is created from the use of simple materials and processes. They have locally unique styles, especially in their natural dye colors obtained from the community. The making of tie-dyed cloths, in Baan Koh Klang, can be extended in terms of knowledge and can be turned into a creative activity. This can create benefits for communities, society and economic values. The researcher has explored the guidelines of souvenir design by adopting principles and processes utilized by the Baan Koh Klang's villagers in order to create a "zero-impact" effect on the community's way of life and tourism pattern. Identities, landmarks and fonts were used to identify Koh Klang.

Keywords: Tie-dyed; Krabi Province; creative city

Introduction

In the global economic development of the 21st century, we can see the developmental directions which focus on creativity in every context. Creativity is a factor in economic, social, and technology development. Creativity becomes the major factor in many aspects to be considered by all parties. Creativity makes the world go round, driven by global trends. The new era of globalization has transformed the developmental patterns which focus mainly on capital, the systematic development, the world of standards and assembly line production into the capital world which focuses more on “creativity”. Thailand has adopted the creative economy framework and added this creativity issue into the 10th National Economic and Social Development Plan B.E.2550-2554 (2007-2011). At present, the creative economy framework is still a part of the 11th National Economic and Social Development Plan, heading to the 12th National Economic and Social Development Plan. Creativity is an issue which many people are interested in.

Thailand had adopted the creative economy framework into the National Economic and Social Development Plan since B.E. 2550 (2007) and has applied it ever since. The creative economy development framework is considered interesting form social and cultural studies. In order to develop a city or land, we need to consider external factors, such as creativity issues and development frameworks from related organizations, which the global society is interested in. For internal factors, we need to consider the potential and social relationships of the selected city area in order to create the development framework which is balanced, does not destroy our internal wisdom and can be adaptive toward external trends.

The creative economy means the value adding of products or services created by human thoughts which lead to production activities relying mainly on creativity. The “creative economy” is the economy-driven concept based on knowledge, education, creativity and intellectual property that are connected to the cultural heritage, social knowledge and new technologies or inventions which develop and lead people towards creativity and also create more products with local identities. The National Economic and Social Development Board (NESDB) has divided the creative industry into 4 categories by adopting the United Nations Conference on Trade and Development’s framework

(UNCTAD, 2016) as follows: 1. Cultural heritage 2. Arts 3. Media, and 4. Functional creation (Homchuen, 2011).

Product design is considered a part in the functional creation category. The functional creation category is based on the design which helps improve the product and adds values to the product. The product design does not only mean the design of the product itself. It also means the design of processes, techniques and tools used in the making of the product. The designed products will be new, various and creative, meeting customers' needs.

In order to turn an area into a creative city, it may start from studying the community's local wisdom in arts. Most local wisdom arts appear in the form of handmade handicrafts or crafts that are part of the community's way of life. Crafts from each community gained more popularity regarding the economic figures of creative industries in the field of art crafts and handicrafts in 2014. Art crafted and handcrafted products of Thailand generated an economic value of 8.7 ten billion baht and in 2014 exported Thai handicrafts generated an economic value of 5.85 ten billion baht (Phatthasiri, 2016). These art crafts and handicrafts were decorative items, hand-woven cloths, handmade products and ceramics. According to the aforementioned figures, handicrafts have gained in popularity, and have different growth directions, compared with the overview economy.

In this study, the selected area for the study is Ko Klang Community, Krabi Province which is famous for its natural tourist attractions because of the Andaman Sea's outstanding marine resources. In addition, Krabi Province has diverse cultures, different ethnic groups, the sea gypsies' way of life, and way of life in a multicultural society based on different religions and beliefs. Even handicrafts are diverse. Local artworks can be extended to improve products which are identities of the community. The policy to push community tourism forward is added into the Krabi provincial development plan. Furthermore, the policy at the Krabi provincial level focuses on the city development in all aspects, leading Krabi Province into "Krabi Province, the creative city". Krabi Province's city has preliminary potential. It provides policy support at the local level to improve and develop the city. However, in order to support and push the city to become a creative city, the study plan should be made to study internal factors and internal readiness in all aspect and to study rules in order to set up a systematical standard pushing the city forward according to the current

frameworks of the organizations and sectors. This is to create development frameworks and plans which comply with the development at regional, national and international levels.

This study is a development process of knowledge from local wisdom, The study is undertaken to improve and create knowledge in the support of provincial creative economy system development. In addition, knowledge will be disseminated and transferred to the public in the form of activity in order to add values to cultural capital and existing local wisdom. Creativity will be supported and present in the real production sectors.

Research Objectives

1. To study the tie-dye process and local identities.
2. To design contemporary souvenirs from the Ko Klang Community’s tie-dyed cloths
3. To disseminate knowledge to people and communities in the Krabi province.

Research Framework

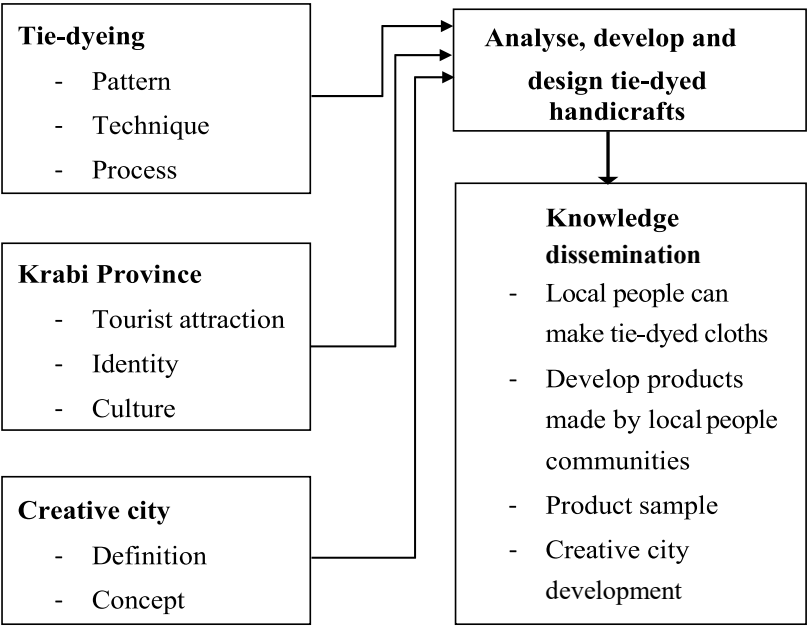


Figure 1: Research Framework

Research Methodology

Scope of research

The researcher selected the study area of Ko Klang Community, Klong Prasong District, Krabi Province because this is one of the communities in Krabi Province which has outstanding natural resources. For example, it is surrounded by water, has mangrove forests, is not located far from the city, has convenient traveling routes and is suitable for tourism. The other outstanding identities of Krabi Province are long tailed boats, various local wisdoms such as batik pattern making, and wooden souvenirs for home decoration. This research is a qualitative research mixed with the experimental designing of tie-dyed cloth patterns and it is conducted to study and find out the identities of Ko Klang Community members.

Research tools

This research focuses on fieldwork which requires information and data from people in the community. Participant observation and in-depth interviews are used. The researcher used data collecting tools as follows: data recording form, camera, recorder, interview questionnaire, electronic equipment such as telephone, computer, and devices to record pictures and data.

Data collection

The researcher collected data and information in 2 ways:

1) Data from theoretical section: Data and information collected from tie-dyed cloth related documents, textbooks and research searched from the library's e-database, online database, information about product design and creative city concept.

2) Data from fieldwork section: The fieldwork is conducted by asking survey questions. The research tools used are data recording form, camera, and recorder. These tools are prepared to collect data and information related to the outstanding tourism of Krabi Province, tourist attractions, products, materials and items which are highlights of Krabi Province and information about the community and tie-dyed cloth of Krabi Province obtained by interviewing. Miss. Kanit Sookdaeng, Miss Sopha Kohklang, Mister Mat and Miss Moona.

Study Results

1) Tie-dyed making process of Ko Klang Community, Krabi Province for the tie-dyed cloth creating

According to the first objective of the research which is to study the tie-dyed process of Ko Klang Community, the researcher has collected tie-dyed techniques and studied the process of natural color dyeing in Ko Klang Community, Krabi Province. The researcher obtained some information about the natural color dyeing process from Ko Klang Community, Krabi Province.

The tie-dyed cloths of Baan Koh Klang are the local handicrafts that the local people create from their own experiences and learn from natural resources available in the community. These handicrafts are made to have a usable function. They have art and beauty values. These tie-dyed cloths have background. Materials, methods and processes of tie-dyed cloth making are simple and have outstanding local features like natural dye colors. In addition, the knowledge of tie-dyed cloth making in Baan Ko Klang can be extended and developed into creative activities that create benefits toward society and economic values.

1.1 Background of tie-dyed cloth making in Ko Klang Community, Krabi Province

According to the interview of Mrs. Kanit Sookdang, aged 58, who disseminated the knowledge of tie-dyed cloth making, Baan Ko Klang's tie-dyed cloth making concept started and extended from the mangrove forest resources management project implemented by the Klong Prasong Community. Mrs. Kanit and people in the community understood the importance and the abundance of natural resources available in the community. The mangrove forest resources management project was a project which prevented the storm and Strong wave in mangrove forests. Everyone in the community helped to grow mangrove forests. After mangrove trees grew into forests, day were able to prevent natural disasters in the community, Mrs. Kanit and people in the community were willing to disseminate and extend knowledge of products from the project.

Baan Ko Klang's tie-dyed cloth group was extended and started from the mangrove forest conservation in the community. In the past, The Ko Klang Community did not have trees. Nowadays, there are big mangrove trees in the community. Mrs. Kanit and people in the community wanted to contribute

something more to the community and they had the idea to create the community's learning center. At the beginning, they had a budget to the amount of 6,000 Baht. Raks Thai Foundation took part in the initiation of the community's learning center and management consisted of people in the community. This tie-dyed cloth making group was formed around B.E. 2560 (2017) by a group of people who liked arts and had basic artistic skills. These artistic people had knowledge in natural colors and natures of colors. They know that the butterfly pea flower provides a purple color, The okra flower provides a red color, and the purple cabbage provides a purple color. All kinds of flowers can provide dyeing colors. In the area of Ko Klang Community, there are many trees and barks that provide beautiful colors, such as *Xylocarpus granatum* Koenig, *Avicennia officinalis* L., mangrove's bark, Indian almond's leaf and turmeric.

Natural color dyeing in Baan Ko Klang, Klong Prasong Sub-district, Muang District, Krabi Province, is made by bringing plants or raw materials from nature that are available in the community into beneficial use. Parts of a plant are used, such as the bark, core, root and leaf. There are 5 kinds of plants that the Baan Ko Klang's natural color tie-dyed cloth making group uses:

1. Mangrove wood providing a brown color.
2. *Xylocarpus granatum* Koenig's bark providing a reddish-brown color.
3. *Avicennia officinalis* L.'s bark providing a brown color.
4. Indian almond leaves providing a yellowish green.
5. Turmeric providing a bright yellow color

According to the interviews, the plants' natural colors were used in the dying process and were selected the plants when they were 5 years older or more in order to obtain bright and durable colors. In addition, only plants in the community were selected for dyeing. Available natural resources were used for their utmost benefits and these natural resources show the local identities of Baan Ko Klang. From the interviews, tie-dyed cloth making started when people in the community considered the importance and abundance of natural resources available in the community. They extended knowledge and ideas from their own experiences and learned through natural resources. They knew that they had good resources and products, so they used these good resources and products to create local wisdom with "values" and "added values" toward themselves and the community. The natural color dyeing of Ko Klang Community can be divided into 5 types. As shows in Table 1.

Table 1: Natural Color Dyeing in Ko Klang Community

1) Color from *Xylocarpus granatum* Koenig



Figure 2: Cloth dyed with its color from *Xylocarpus granatum* Koenig wood

2) Color from *Avicennia officinalis* L.



Figure 3: Cloth dyed with its color from *Avicennia officinalis* L. wood

3) Color from mangrove wood



Figure 4: Cloth dyed with its color from mangrove wood

4) Color from India almond's leaves



Figure 5: Cloth dyed with its color from Indian almond leaves

5) Color from turmeric



Figure 6: Cloth dyed with its color from turmeric

1.2 Materials and equipment used in the making of tie-dyed cloths

Materials used in the tie-dyed cloth making process in Baan Ko Klang are found in nature and available in the community.

1.2.1 Natural colors from parts of trees, such as, the bark, leaves and fruits. Each part of a tree provides different colors, depending on the qualifications of the tree. For example, *Xylocarpus granatum* Koenig, *Avicennia officinalis* L., mangroves bark, Indian almond leaves and turmeric are used in the dyeing process.

1.2.2 Cloths used in the dyeing process depend on the needs and objectives of usage. There are 3 types of the community's souvenir: scarf, shawl and T-shirt.

1.2.3 Tools used in the tie-dyed cloth making process are rubber bands, rope, ice-cream sticks, clothespin, water pipe and *Caesalpinia bonduc*'s seeds (a seed of local plant).

1.2.4 Equipment used in dyeing and cleaning include a boiling pot, big pan or enameled basin.

1.2.5 Salt is put into the boiling pot to make the color enduring.

1.2.6 Limewater

1.3 Tie-dyed cloth making process

Miss Sopha Ko Klang provided some information related to the traditional tie-dyed cloth making as follows:

1.3.1 Prepare water for dyeing and prepare parts of trees: bark, leaf, fruit or other part, that can provide natural colors. Tree barks are ripped, leaves are shredded and blended into smaller parts. Then, natural color mixed water will be poured into a big boiling pot or big pan. Fresh water will be poured in the proper amount matched with the quantity of cloths that need dyeing. Cloths will be boiled in the natural color mixed water around 1 hour or more than that in order to meet the needs of beautiful colored cloths.

1.3.2 Tie and dye cotton cloths or dyeable cloths in order to create patterns by the use of tools, such as, rubber band, rope, ice-cream stick,

clothespin and water pipe. Cloths should be tied tightly to create expected patterns. The tying depends on techniques and methods of each person, such as, fabric folding and tying technique, fabric scrunching and tying technique, and fabric folding and clipping technique. Patterns from different techniques will be various.

1.3.3 Tied cloths must be soaked in fresh water. All parts of cloths must get wet, so the dyeing color can seep into cloths. After all parts of cloths get wet, they are brought up, twisted and wrung.

1.3.4 Dye cloths. Be noted that the colored water is put with salt to make the color endure and stick. There are 2 ways of dyeing: hot dyeing and cold dyeing. It will take approximately 20 minutes for hot dyeing, whereas cloths can be soaked all night for cold dyeing.

1.3.5 When cloths are dyed completely, they will be put into lime water. Then cloths will be washed in fresh water. If the color appears satisfied, cloths can be untied. If not, cloths can be dyed again.

1.3.6 Bring the tie-dyed cloths out and dry them in the sun or dry them indoor. After that, the tie-dyed cloths can be used beneficially.

1.4 Benefits of tie-dyed cloths according to creative economy framework

According to the interview with Miss Sopha, it is said that the tie-dyed cloth making in Ko Klang Community started from local people wearing tie-dyed cloths in the community. They then saw an opportunity that tie-dyed cloth making could generate other benefits. Later, they started making tie-dyed cloths and took it seriously. The conclusion of benefits from tie- dyed cloth making can be made as shown below.

1.4.1 Benefit in one's self and community: The tie-dyed cloth making is useful in terms of values in daily life's use. Tie-dyed cloths are created by local people's wisdom. They reflect an outstanding identity of the community clearly. The more they produced tie-dyed cloths, the more values were created for people in the community. Distribution of tie-dyed cloths can generate self-income and community income.

1.4.2 Benefit in tourism development

1) The tie-dyed cloth making area can be used as a learning resource for tourists, students and others. They can learn and do some workshops on tie-dyed cloth making.

2) Tie-dyed cloths can be made into contemporary souvenirs. The tie-dyed cloth making can bring the values of the community products into the society. This leads to the contemporary product design. The community's products will gain outstanding identities.

3) Distribution channels for Baan Ko Klang's natural color tie-dyed cloth making group in Klong Prasong Sub-district, Muang District, Krabi Province are as follows:

3.1) Product expo's fairs

3.2) Sales representatives from Klong Prasong School 3.3) Orders from AirAsia and Tourism Authority of Thailand (TAT)

4) Problems found in the distribution channels of Baan Ko Klang's natural color tie-dyed cloth making group are: there is no press releasing activity, the tie-dyed products are not well-known, there is no updated or accessible distribution channel.

1.5 Tie-dyed cloth preservation

According to the interview and participant observation, it was found that the current tie-dyed cloth making of Baan Ko Klang was popular among tourist groups and groups with specific interest in tie-dyed cloth making. They liked to learn and participate in activities. These groups showed interest in tie-dyed cloth making more than the groups of local people and neighboring people. There were relatively few people that wanted to conserve local wisdom or knowledge on tie-dyed cloth making.

In order to conserve the tie-dyed cloth making process, children or youth groups in the community should study and learn about the tie-dyed cloth backgrounds, tools and materials, methods or steps of tie-dyed cloth making. Then, additional education on this matter should be made and processes should be extended. The important thing is the tie-dyed cloths should become the community's identities.

2) Design of contemporary souvenirs made from Krabi Province's tie-dyed cloths

According to objective number two, which is to design contemporary souvenirs made from Krabi Province's tie-dyed cloths, the researcher meets this objective by conducting fieldwork to find out information about natural color dyeing techniques. The researcher searched data and information about Baan Ko Klang Community's identities and Krabi Province to design contemporary souvenirs made by tie-dyed cloths. Steps of fieldwork are as shown below.

2.1 Steps of identity and tourism information analysis

The researcher collected data and information by interviewing groups of local people and local leaders. Sound recording form and photo shoots were used. Information was collected as shown below.

2.1.1 Krabi Province's identities are long-tailed boat, black crab and Khao Khanabnam which is a tourist attraction that has two hills rise above the Krabi River.

2.1.2 Tourism pattern on Ko Klang, Krabi Province is considered a creative economy tourism. Tourists can experience ways of life in Ko Klang's community by real-life activities, such as, local food cooking, tie-dyed cloth making and batik making. The local people who provide these services will gain income rotation from products and services.

2.1.3 Researcher used English alphabets from the word "Ko Klang", "Long tailed boat" and Ko Klang's map that were considered local identities to make experimental tools for tie-dyed cloth pattern making, apart from the use of natural colors and natural colored dyeing techniques.

2.2 Steps in the designing of contemporary souvenirs made from tie-dyed cloths

The researcher selected the pattern of souvenir making implemented by tourists that showed identities of Ko Klang and Krabi Province. Creative economic tourism is needed to be focused on background acknowledgement, materials and tools, steps and methods in souvenir making. The researcher designed tools for tourists to create patterns in cloth by using identities, places or alphabets to represent Ko Klang, Krabi Province. Steps in the designing were as

shown below.

2.2.1 The researcher determined identities of Ko Klang, Krabi Province.

2.2.2 The researcher drafted pattern on the paper.

2.2.3 The researcher created a simulated model in 3ds max program.

2.2.4 The researcher ordered relevant person to make models made by galvanized metal panel.

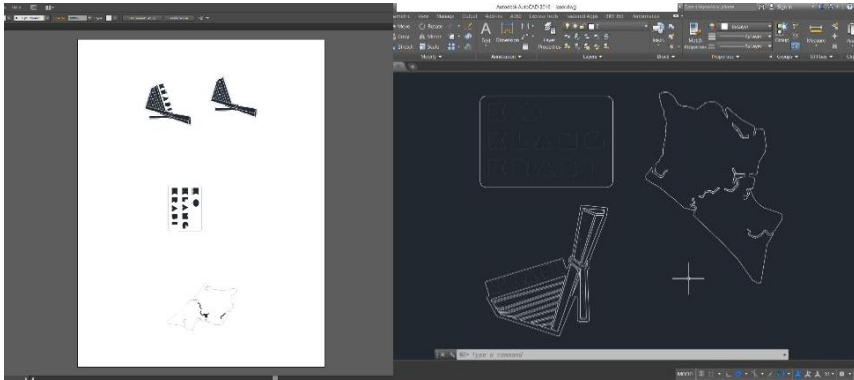


Figure 7: The making of simulated models in 3ds max program

1.1 Steps of product making

The researcher chose metal materials based on strength in order to clip cloths and create patterns. The water jet process must be applied to create the design patterns as expected.



Figure 8: Tools used in the designing of tie-dyed cloth patterns

1.2 Steps in knowledge disseminating to the community

After the researcher entered into the fieldwork to collect data and information on identities, tourism and natural color tie-dyed cloth making of Ko Klang Community, Krabi Province and designed tools to make contemporary souvenirs of Krabi Province, the researcher entered in the Ko Klang Community again to disseminate knowledge in the contemporary souvenir making process and method to local people groups. The result was that the local people groups could disseminate knowledge and teach tourists or people who were interested in tie-dyed cloth making, which was considered the identity of Ko Klang Community, Krabi Province.

1.2.1 Steps in disseminating knowledge to local people in Ko Klang Community, Krabi Province

The researcher re-entered the Ko Klang Community area to provide sample models to people in the community and tie-dyed cloth makers to experiment the tie-dyed cloth making together.



Figure 9: Dissemination of tie-dyed cloth making steps, methods and experiments

1.2.2 Contemporary souvenirs created from tie-dyed cloths, based on the analysis of information on tourism, identities and tie-dyed techniques of Ko Klang Community, Krabi Province.

Table 2: Tie-dyed cloth pattern designing tools

Tie-dyed cloth pattern designing tools	Demonstration
	
	
	
	



Figure 10: Souvenir outcome

Discussion

Objective number one is the study of tie-dyed process and identities of the area, tie-dyed cloths with quality are created, leading Krabi Province to become a creative city.

There are many definitions of “creative city”, created by international organizations, domestic organizations and scholars in relevant field. UNESCO (2016) has defined the word “creative city” through Creative Cities Network which means cooperation between communities, local areas and government sector which create cities through the development and improvement of environment, social structure, and economic structural system. In addition, it includes assets in culture (Landry, 2008), historical background, norms and local traditions that blend with the modern technology, leading to cities that can facilitate business building or creative industry building. The creative industry can be divided into 7 groups of cities as follows: 1) City of Craft and Folk Art 2) City of Design 3) City of Film 4) City of Gastronomy 5) City of Literature 6) City of Media Art and 7) City of Music (UNCTAD, 2016). In order to improve products into creative products, local wisdom should be blended with technology in order to create innovative products created from culture, historical background, norms and traditions. The researcher sees the potentials of Ko Klang Area, Krabi Province, which is ready in terms of policy, product and service, various handicraft and arts projects, such as, the making of long-tailed boat models, batik cloths, ways of life and food. The researcher has applied knowledge in product development and design to promote the potentials of the

community's souvenirs. Identities of Ko Klang's long-tailed boat were blended with the designing of souvenirs that could actually be produced for selling, without affecting local people and community's ways of life.

One of the continually top selling handicrafts that are made from natural products in the local area is "tie-dyed cloth". The making of tie-dyed cloth in Baan Ko Klang, Krabi Province is considered the local handicraft work which the local people created from their experiences. They learned things through natural resources available in the community for beneficial use. These tie-dyed cloths have artistic and beauty values. They have backgrounds, require some materials and tools and have easily followed steps in the making of these products. They also have outstanding local features, especially natural dye colors obtained from local plants in the community, such as, mangrove, Indian almond, turmeric, *Avicennia officinalis* L. and *Xylocarpus granatum* Koenig. These natural colors have their identities. In addition, knowledge of tie-dyed cloth making of Baan Ko Klang can be extended and improved into creative activities, creating benefits toward communities, society and creating economic values by making souvenirs aimed for tourists. However, tie-dyed cloth makings are different in the Southern provinces. Outstanding identities of the products must be defined. Apart from unique colors from local plants, patterns of tie-dyed cloths can act as the community's symbols. They can help tourists to identify where the products come from.

Objective number two is the design of contemporary souvenirs made from Krabi Province's tie-dyed cloths and the dissemination of knowledge to people and Ko Klang Community in Krabi Province. When the researcher obtained brief information from objective number one, the researcher tried to find out the design concept for souvenirs by mainly applying principles and processes of Ko Klang's local people who lived in Krabi Province. This was conducted to create zero impacts on local people's ways of life or community tourism. Additional pattern designs of tie-dyed cloths were made. The symbols of long-tailed boat, Ko Klang's map and the alphabetic patterns of the words "Ko Klang" and "Krabi" were used to identify Ko Klang, Krabi Province and identify identities of the area, apart from the use of natural colors obtained from the area by natural technique. The transformation from the traditional souvenirs to new ones was in alignment with the concept from Silrattana (1988) which stated that current souvenirs were different in many forms of appearance,

consumption, function, utensil, jewelry or artifact. The reasons behind these different forms came from various conditions, such as differences in materials, making techniques, values or local traditions. Prasert Silrattana's concept was in accordance with Tungcharoen (2001)'s concept which stated that the souvenir design was the study of thinking concept that helped the design to be based on reality or closed to reality. More or less, the souvenir design requires psychological principles that can influence people. Also, the visual arts design needs to create some thoughts among audiences. The souvenir design is an applied art because it creates souvenirs with benefits in terms of beauty and functions by mainly considering consumers' needs. Apart from the designing of pattern creating tools for tie-dyed cloths, the researcher disseminated knowledge to people and Ko Klang Community in order to create the learning environment and support people to use tools widely. This could lead to creativity in the next pattern development.

For the study of pattern designing process for tie-dyed handicrafts to become contemporary souvenirs of Ko Klang Community, leading Krabi Province to become a creative city, the researcher collected data and information on community's identities in order to analyze design aspects. The frameworks in the study of souvenir design can add marketing values and lead Krabi Province to become the city which can facilitate business building and become a part in the city of craft and folk art that will develop into a creative city.

Conclusion

According to the designing of tools to create patterns in tie-dyed cloths which are souvenirs with identities of Ko Klang Community, Krabi Province, the researcher created a galvanized metal panel which could print patterns in cloths and did experiment work with groups of local people who made tie-dyed cloths. The results of tie-dyed cloth patterns were satisfactory, as shown in the resulting figures. There were some impacts from tool clippings that were heated for a long time. Some burned spots occurred on cloths. The suggested improvement was specific tool clippings should be designed to obtain clearer and more beautiful patterns on the cloths. Handicraft souvenirs were all handmade, so the appeared patterns were different, depending on the hand's pressing weight, the tightness of cloth tying and duration of cloth dyeing.

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