

A Design Thinking Process of Developing Souvenir Products from Cultural Capital of the Tai Yuan Ethnic Group in Phitsanulok Province

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Abstract

This article aims to study the cultural capital of the Tai Yuan ethnic group in Phitsanulok Province, develop products from the cultural capital by using design thinking processes, and evaluate the developed prototype products. The population of this research and development was the ethnic group in Tambon Samokhae, Phitsanulok Province. There are research methods including Step 1 : study the cultural capital of the Tai Yuan ethnic group by collecting data in documents and in the field through in - depth interviews, focus group meetings, and using content analysis. Step 2 : Develop products from the cultural capital by using design thinking processes by designing products in the categories of clothing and decorative items. Step 3 : Evaluate the developed prototype products according to community product standard criteria and evaluate from the satisfaction of those interested in the prototype products using a satisfaction questionnaire. Analyze the data using descriptive statistics. The results revealed that the selected cultural capital of the Tai Yuan ethnic group consisted of the tradition of the ordination ceremony with wooden horses carried by people to the rhythm of musical instruments, and the culture of dressing in navy blue indigo-dyed shirts with red stripes, black red and green sarongs, sash, and red Sai-pla-lai loincloth. To use this knowledge to design and develop products such as clothing and accessories to be souvenirs. It was also found that the product design and development included images of Thai Yuan clothing patterns, wooden horse patterns, and Thai Yuan style dressing products. In addition, the evaluation of the prototype products showed that characteristics of the products met the community product standard criteria and received a high level of satisfaction.

Keywords: Design Thinking, Products Design, Tai Yuan, Cultural Capital, Phitsanulok Province

Introduction

Creating added value from cultural capital in the community is a driving mechanism that will promote the people's quality of life and the strength of the community; this is in line with the national strategy in terms of building competitiveness that focuses on enhancing the country's potential based on the concept of expanding the past by looking back to the economic roots, identity, culture, traditions, way of life, and the distinctive features of diverse natural resources by applying them together with technology and innovation suitable for the context of the modern global

economy and society (Office of the Secretary of the National Strategy Committee, 2020). The set indicators are product expansion, national income, and investment in research and development. Recent study showed that cultural capital management could create value and enhance the community economy based on the concept of creating cultural value (Turee et al., 2024). In addition, the government places importance on promoting Thai cultural products (Cultural Product of Thailand : CPOT) by assigning the Ministry of Culture to carry out a project to create products that use the country's cultural capital to further develop quality cultural products with standards that can compete commercially at the international level. This is a way to continue, preserve and develop the national arts and culture and cultural diversity to stimulate the community to have a sense of conservation and cherish cultural heritage. Thai cultural products cover all 76 provinces, with a variety of types such as clothing, accessories, household items, and decorative items, which can generate income for the community of more than 100 million baht per year (Bangkok Business, 2023). Also, according to the research results on consumer demand for cultural products, it was found that 75.99 percent of the consumers had purchasing experience, and they thought that the top 3 cultural products' strengths were that they were handicrafts, they maintained their identity, and they reflected arts and culture (Ministry of Culture & Chulalongkorn University, 2022).

The Tai Yuan ethnic group in Phitsanulok Province is a community with diverse and distinct cultural capital. They migrated from Ratchaburi Province and settled in Tambon Samo Khae, Mueang District, bringing cultural capital, traditional customs and traditions with unique identities in terms of language, dress culture, local food wisdom, and handicrafts to lead their way of life. These are considered to be highly valuable cultural heritages. However, the current of social changes have affected the local identity of the Thai Yuan people in the Samo Khae community in many aspects, especially the lack of preservation of important culture and wisdom by descendants as well as their migration to work in other areas. This is consistent with the results of the study by Cherdchoo et al. (2020) showing that the Tai Yuan people lacked the inheritance of knowledge from their ancestors' wisdom. For example, their traditional weaving culture was nearly extinct, and they also lacked of the knowledge of creating and developing products for the community. Therefore, the community has established the Thai Yuan Conservation Center in Samo Khae Subdistrict as a learning resource and cultural conservation center for the new generation of Thai Yuan people. They have also started to communicate cultural capital through learning activities and product presentations. However, from the interview with wisdom teacher (personal communication, March 15, 2024), the president of the Thai Yuan group, it was found that the production of products from local wisdom was still not in line with market demand. In addition, the weaving culture was not inherited to their descendants because the weaving process required meticulousness, effort, and ability, so it did not interest the younger generation. Only the elderly group still preserved the original wisdom. It was also found that the number of craftsmen or artisans who created wooden horses used in the Thai Yuan monk procession tradition decreased, and only the models created for display in the learning center were left.

In summary, it can be seen that the cultural capital of the Tai Yuan ethnic group is valuable for creating added value through cultural products that are being promoted. In order to solve the problems of cultural conservation and inheritance, this research applied the design thinking process to develop products from cultural capital. As the design thinking process is like a tool for developing and solving problems creatively together with the participation process from stakeholders, the

research objectives were to study the cultural capital of the Thai Yuan ethnic group to understand the context, analyze the possibilities of both social and business opportunities, and the potential of producers by studying documents and fieldwork using observation, interviews, and group discussions. Then, the products were developed, and the developed prototypes were evaluated.

This research article presents the results of the design thinking process to develop products from the cultural capital of the Tai Yuan ethnic group in Phitsanulok Province, beginning on the study of cultural capital and further development to obtain a prototype product with quality and standards according to the product context. This research provides benefits to people in terms of academic knowledge to integrate the design thinking process to develop products from effective cultural capital, economics to generate income for the community, and social aspects in the cultural network dimension.

Research Objectives

1. To study the cultural capital of the Tai Yuan ethnic group in Phitsanulok Province.
2. To develop products from the cultural capital of the Tai Yuan ethnic group using the design thinking process.
3. To evaluate the developed prototype products from the cultural capital of the Tai Yuan ethnic group.

Literature Review

Design thinking is a process of creative development and problem solving that emphasizes action to find appropriate approaches and methods to solve problems for humans or areas. Therefore, the development of products from cultural capital of the Thai Yuan ethnic group can apply the design thinking process to design and set research objectives in 3 steps as follows, 1) Deeply understanding the problem and the context of the community, especially in terms of tangible and intangible cultural capital through study, interview, group discussion, observation and then analyzing and synthesizing setting a clear framework of issues to select cultural capital for further development. 2) Product development from cultural capital starts with brainstorming , creating development guidelines, analyzing feasibility from concepts, business opportunities, society, community context, potential of the producer group, skills, and then creating a prototype product and 3) Evaluating the developed prototype product by testing the quality to meet the standards before being used for commercial production or being distributed to the market, leading to income generation for the community and preserving the culture of the Thai Yuan ethnic group. This is consistent with the approach to creating value and added value from cultural capital, namely conservation, restoration, application, and reconstruction. In addition, it was found that the design thinking process is consistent with the principles of product development and is in the same direction as cultural capital management, but there has been no concrete integration to develop products from cultural capital. Therefore, this research will apply the knowledge from all three parts to design and conduct research to create new knowledge that will lead to further social, economic, and environmental benefits.

The cultural capital of the Thai Yuan ethnic group reflects the way of life and things that people in the community have created and passed down because they believe that they are valuable and useful for the lives of people in the community. The Thai Yuan ethnic group has a distinct culture

in terms of language, local food wisdom such as finger-shaped rice cakes, weaving, arts and crafts, and clothing culture, especially wisdom in weaving with patterns and stories told through the fabric. The sarong has a red base color and black and green in rows. The Tai Yuan ethnic group in Phitsanulok Province is a community with diverse and distinct cultural capital. They migrated from Ratchaburi Province. The current of social changes have affected the local identity of the Thai Yuan people in the Samo Khae community in many aspects, especially the lack of preservation of important culture and wisdom by descendants as well as their migration to work in other areas. This is consistent with the results of the study by Cherdchoo et al. (2020) showing that the Tai Yuan people lacked the inheritance of knowledge from their ancestors' wisdom. For example, their traditional weaving culture was nearly extinct, and they also lacked of the knowledge of creating and developing products for the community.

Conceptual Framework

This research is a research and development (Research and Development). The researchers set the research conceptual framework based on the design process concept of Osann et al. (2020) and the community product development process, including the cultural capital value-adding approach of Wanichakorn (2017) to set the research conceptual framework with details as shown in Figure 1.

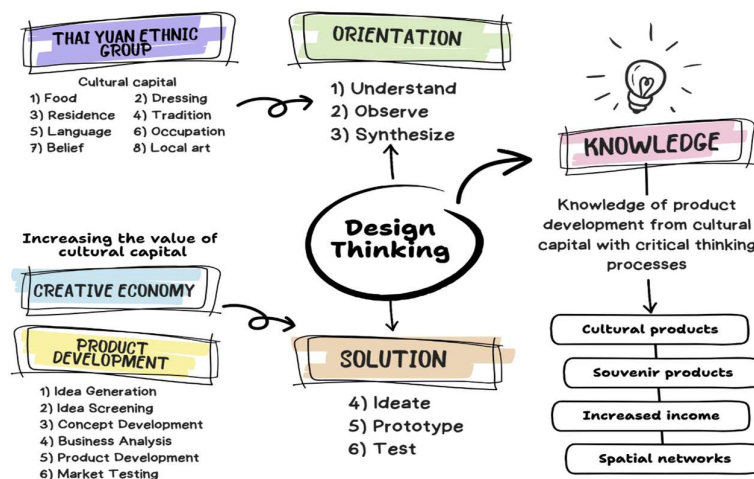


Figure 1 Conceptual Framework

Research Methodology

The area of this research and development covers the Tai Yuan ethnic community, Samo Khae Subdistrict, Mueang Phitsanulok District, Phitsanulok Province. The research process is divided into 3 steps as follows.

Step 1 : Studying the cultural capital of the Tai Yuan ethnic group in Phitsanulok Province

1) The 15 informants included community leaders, local scholars, local wisdom teachers of the Yuan people (considering those who were accepted), community product entrepreneurs, and

community representatives, selected by purposive sampling and then the snowball technique was used to spread the word.

2) The research instruments used were an interview schedule and focus group discussions. The open-ended questions were about community context information, local problems, culture, and traditions.

3) Data collection involved documentary research and field study by using in-depth interviews and focus group meetings about community stories, identity, local wisdom, customs, traditions, distinctive culture, opportunities and possibilities for further development into cultural products.

4) The data were verified by using data triangulation to ensure the accuracy and reliability. First, method triangulation was carried out by using different methods to collect data to study the same information, such as interviews and documentary research. Second, investigator triangulation was conducted by changing the interviewer to see if the data would be the same or different with different interviewers. Third, data source triangulation was undertaken by checking different sources, times, places, and individuals to see if the data would be the same or different when the data were collected differently.

5) The qualitative data were analyzed by using content analysis.

Step 2 : Developing products from cultural capital of the Thai Yuan ethnic group using a design thinking process

1) The information gathered from the field study and focus group meetings was synthesized to determine development guidelines using value creation and added value from community capital through conservation, restoration, and application or reconstruction.

2) The type of products to be designed and developed (based on the criteria of community products) was determined, including clothing and decorative items, as there were groups of community product producers involved and there was an opportunity for development.

3) The products were designed based on local wisdom by setting design guidelines from available community materials and designing patterns from selected prominent cultures to be used to decorate products.

4) The designed drafts were taken to experts to select the most appropriate one.

5) A prototype product was developed from the selected and improved draft.

Step 3 : Evaluation of the prototype product developed from the cultural capital of the Thai Yuan ethnic group.

The evaluation of prototype products was based on two approaches, including evaluation based on community product standards and evaluation based on the satisfaction of interested people towards the prototype products.

1) The sample consisted of 100 people interested in the products in Phitsanulok Province, obtained from the sample size determination of Taro Yamane (with an error of $\pm 10\%$) (Yamane, 1967, as cited in Yuktirat, 2020) using accidental sampling.

2) The tools used in the research were a satisfaction questionnaire and a community product standards assessment form (M.P.C.835/ 2021). The questionnaire was a rating scale format with 5 levels such as very satisfied, satisfied, neither satisfied nor dissatisfied, dissatisfied, and very

dissatisfied. The content validity was checked for the Index of Item Objective Congruence (IOC), which was 0.80 - 1.00. The result of reliability test from Cronbach's alpha coefficient was 0.77.

3) The data were collected by taking the prototype products to be evaluated according to the community product standard criteria and displaying them at Central Plaza Phitsanulok Department Store, and the participants' satisfaction was assessed by using an online questionnaire (Online Questionnaires) via Google Form.

4) The qualitative data were analyzed by using content analysis, and the quantitative data were analyzed by using mean, and standard deviation. The interpretation based on the specified criteria was presented in the form of tables and descriptions.

This research project was reviewed by the Human Research Ethics Committee, Pibulsongkram Rajabhat University. The research project number was PSRU - EC2023/ 054.

Results

The study of the cultural capital of the Tai Yuan ethnic group in Phitsanulok Province.

The results showed that the cultural capital of the Tai Yuan ethnic group living in Samo Khae Subdistrict, Mueang Phitsanulok District, Phitsanulok Province, according to 8 cultural ways, consisted of food, dress, housing, tradition, language, occupation, belief, and local art (as shown in Table 1). Also, the results of the selection from the evaluation of the value of cultural capital to be used as a guideline for product development indicated that the culture of dress and the tradition of ordination using wooden horses of the Tai Yuan people showed a clear identity which was consistent with the community's needs to conserve and further develop.

Table 1 Cultural capital including 8 cultural ways of the Tai Yuan Ethnic Group in Samo Khae Subdistrict.

Types	Details
Foods	Main dishes include Wolffia (green Caviar) curry, sour jackfruit soup, Bon (caladrum) curry, banana stalk curry, bamboo shoot curry with Tiliacora juice, jackfruit stir-fry, stir-fried noodles, lotus stem coconut milk soup, red chili paste, and eggplant salad. Desserts include finger-shaped sticky rice cake, pan-fried glutinous rice cake, tongue-like rice cake, luem-kluen rice cake, and kuea rice cake
Dressing	Female includes wearing a sarong (the sarong has three basic colors which are the colors of their identity black, red, and green) and a navy blue shirt with red stripes, with a hang- pla-lai sash (red cloth with green at the edge, about 1 foot long, which is called sai pla lai because the green, yellow and white stripes are the same size). Male includes wearing Chinese-style shorts, with a navy blue shirt, and a red loincloth with an sai-pla-lai pattern around the waist.
Housing	Thai Yuan houses have a veranda and a place to wash your feet before entering the house. Chalalai (showing that one is a Thai Yuan person)

Table 1 (Cont.)

Types	Details
Tradition	The ordination ceremony using wooden horses carried by people moving with the rhythm of musical instrument.
Dialect	Tai Yuan dialect is similar to the northern Thai or Lanna but with some different vocabulary. The Tai Yuan dialect is rough and abrupt, similar to the Tai Lue and Tai Khen dialects.
Occupation	Agriculture, handicrafts, trade
Beliefs	Buddhism, worships of ancestral spirits, house spirits and household spirits.
Local Arts	Making a wooden horse (the frame is made from large bamboo woven with small bamboo to form a structure similar to a rattan ball, and then paper cutting and drawing are used to decorate it into the shape of a horse) Cloth weaving patterns that are the identity of the Thai Yuan people Making needle flowers and fans from cotton threads

The development of products from the cultural capital of the Tai Yuan ethnic group using the design thinking process.

It was found that the design and development of products from cultural capital of dressing and the ordination tradition of the Thai Yuan ethnic group through design concepts could be designed as patterns and clothing products, including guidelines for using patterns to decorate a variety of products to meet the changing market demands. The details are as follows.

1) The design results of the pattern images were the creation of a cartoon image of the Thai Yuan people's clothing culture, but still maintaining the shape, form and colors that reflected the identity of the dressing. Also, the wooden horses, a symbol of the ordination tradition and a local art work, were used to design a pattern image, as shown in Figure 2 and Figure 3.

SKETCH DESIGN

Thai Yuan Ethnic Group



Figure 2 Patterns adapted from the cultural capital of the Thai Yuan Ethnic Group's dressing.

SKETCH DESIGN

Thai Yuan Ethnic Group

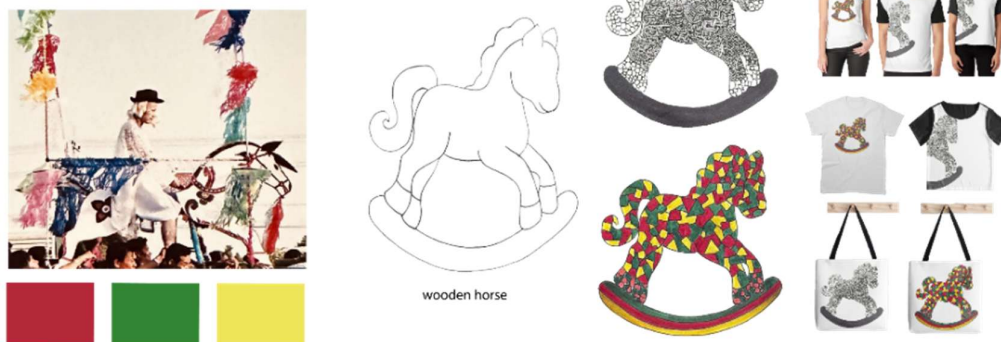


Figure 3 Wooden horse patterns of the Thai Yuan Ethnic Group.

2) The result of the development of the applied Thai Yuan dressing was the use of woven fabric, the identity of the Thai Yuan people, to design and decorate casual ethnic clothing to reflect the dressing culture and make it more contemporary and convenient to wear. As the entrepreneurs in the community had sewing skills, this was an integration of using the community's capital and building participation between the weaving group and the sewing group to distribute income within the community. In addition, in the design and production process, the standard criteria of the community's products were used as a factor in selecting bonding materials. The refinement of sewing and cutting the fabric had to be tight and not easily loose, which was in accordance with the principles of the design thinking process. That is, after the data were analyzed, a prototype product must be made. It started with design 9 product designs, as shown in Figure 4, and then selected by experts to be 3 designs to be used as prototypes, as shown in Figure 5. Therefore, the product design had a simple production process but still showed the pattern of the fabric, the identity of the Thai Yuan people.

SKETCH DESIGN

Thai Yuan Ethnic Group



Figure 4 Sketch design applied Thai Yuan dressing.



Figure 5 Applied Thai Yuan dressing prototype products.

The evaluation of the developed prototype products from the cultural capital of the Tai Yuan ethnic group.

The research results showed that the characteristics of the prototype products from cultural capital, namely the three types of adapted Thai Yuan dressing, met the community product standard criteria by evaluating them using the list of community product standards for women's ready-made clothing (M.P.C. 835/ 2021) in the category of woven fabrics in terms of general characteristics and sewing, namely, being clean, neat, meticulous, consistent stitches both inside and outside, folding the fabric edges, sewing, and cutting the fabric tightly and appropriately, not wrinkled or frayed, unseparated seams, and without sharp-edge binding materials. The evaluation of the prototype products through the satisfaction assessment of those interested in the developed prototype products shown in Table 2.

Table 2 Results of the evaluation of satisfaction with the prototype products.

Evaluation List	Prototype Products					
	Set 1		Set 2		Set 3	
	\bar{x}	S.D.	\bar{x}	S.D.	\bar{x}	S.D.
1. Indicating the identity of the community/ place	4.50	0.50	4.40	0.61	4.31	0.64
2. Reflecting the use of resources in the community (raw materials, labor)	4.48	0.50	4.32	0.66	4.45	0.55
3. The product design is interesting.	4.75	0.43	4.41	0.57	4.80	0.42
4. The sewing is meticulous, neat, and firmly attached, not easily wrinkled or frayed.	4.22	0.75	4.10	0.77	4.18	0.79
5. The binding materials are of the appropriate colors and sizes.	4.93	0.25	4.83	0.42	4.83	0.37
6 The fabric texture is comfortable to wear.	4.71	0.45	4.63	0.54	4.72	0.45
7. The dressing can be worn on a variety of occasions.	3.49	0.71	3.49	0.71	3.54	0.71
8. Feasibility of production and distribution	4.71	0.51	4.68	0.53	4.81	0.44
	4.47	0.30	4.35	0.32	4.45	0.30

From Table 2, the satisfaction assessment of those interested in the developed prototype products revealed that most respondents were highly satisfied with the prototype product set 1 (\bar{x} = 4.47, SD = 0.30), prototype product set 2 (\bar{x} = 4.35, SD = 0.32), and prototype product set 3 (\bar{x} = 4.45, SD = 0.30)

Conclusion and Discussion

1. Conclusion

The application of design thinking process to develop products from cultural capital of ethnic groups consists of 3 steps including 1) understanding the community context (Understand), especially tangible and intangible cultural capital indicating the identity of the place and reflecting the use of resources in the community through studying, interviews, group discussion, observation (Observe), then analyzing, synthesizing (Synthesize), setting a clear development framework to select possible cultural capital for further development; 2) operating product development, to make the product design is interesting, starting from brainstorming (Ideas) of stakeholders, creating development guidelines, analyzing feasibility from concepts, business opportunities, society, community context, potential of producer groups, skills, then proceeding to create a prototype product (Prototype); and 3) evaluating the developed prototype product by testing (Test) the quality to meet the standards before being used for commercial production or being distributed to the market

2. Discussion

A Design Thinking Process of Developing Souvenir Products from Cultural Capital of the Tai Yuan Ethnic Group in Phitsanulok Province can be discussed as follows.

1. As for the study of the cultural capital of the Tai Yuan ethnic group in Phitsanulok Province to apply for the design and development of products, it was found that the culture of dressing and the tradition of ordination of monks have a distinctive identity that can be disseminated and further developed for the future use. This is because the dressing style of the Tai Yuan people is navy blue shirts with red stripes. Women wear black, red, and green sarongs as their identity colors. Men wear Chinese-style pants and a red loincloth with a sai-pla-lai pattern unique to the Tai Yuan people. In addition, the tradition of ordination of monks uses a wooden horse model, which is a local art made from wood and decorated with drawings and cutting colored paper to create the shape of a horse for use in the procession of monks. This makes their identity distinctive. Furthermore, using the design thinking process to develop the products results in creating cartoon pattern images of the Thai Yuan people's clothing and a wooden horse pattern images that can be used to decorate various types of products. In addition, the developing of the cultural prototype products results in a production of applied Thai Yuan outfits using the identity woven fabric of the Thai Yuan people to design and decorate casual ethnic outfits to reflect the culture of dressing, and it is convenient and contemporary to wear. This may be because the design thinking process is the process used to develop the community and solve problems creatively. This is consistent with the concept of Osann et al. (2020) who argued that design thinking is a creative development process that emphasizes action to find appropriate approaches and methods to solve human or spatial problems. It can be seen that product development begins with a search to study the cultural capital of ethnic groups in order to understand the problem as a way to access people and areas and use observation to define the problem clearly. This is also consistent with Vaide (2023) who stated that observation is a very

important method to understand a given social space and it can also be applied to analyze and synthesize real needs, and brainstorm with the participation process of stakeholders to find development approaches. Also, Carella et al. (2023) found that entrepreneurs can adapt the design thinking process as a guideline for product development, create a prototype product, and test it to find the conclusion before it is actually used. Besides, Pratumanechai et al. (2023) studied the integration of knowledge in terms of principles of design thinking with entrepreneurs to develop products from local wisdom of the Koh Lat E Tan community, Sam Phran District, Nakhon Pathom Province, resulting in innovative community products, which have a variety of beautiful prototypes that clearly indicate the type of product, consistent with local wisdom that shows the cultural foundation of the community that emphasizes symbols, culture, beliefs and approaches to the creative process focusing on developing prototypes. Moreover, Turee et al. (2024) applied cultural fund management, cultural product design, T-shirts, bags, and glasses to screen print patterns to create cultural value through thinking processes and participatory processes, beginning from searching for the identity and value of the area with a collaborative network of historians, cultural entrepreneurs, and community product entrepreneurs. This study is also in line with Chaidirek (2022) who argued that the product design guidelines by applying identity in product design by using various methods, such as blending patterns from art and culture, arranging traditional patterns into a new pattern, changing ideas out of the box, modifying the usage and meaning to meet the needs of the target group of product buyers, using representatives of the place or mascot to design the silhouette, pattern, and color aspects.

2. The characteristics of the developed prototype products met the criteria of the community product standard. This may be because in the design and production process, the criteria and requirements of the community product standard were used as a guideline for the development of the products in terms of stories, the neatness of the sewing, the materials used, and the skills of the producers in the community. Besides, the satisfaction assessment of those interested in the developed prototype product revealed that most respondents were very satisfied with the overall prototype products because the product design complied with the criteria for developing Thai cultural products. That is, it had cultural and artistic content, creativity and commercial feasibility, product quality, and aesthetics and usability. The product was interesting, reflecting the identity of the community. The materials used for binding were of appropriate color and size. The fabric texture was convenient to wear, and it was feasible to produce and sell. This is in line with the Ministry of Culture & Chulalongkorn University (2022), which studied the needs of consumers for Thai cultural products and found that the success factors of product development at the community level were the application of cultural stories to products. At the government level, a process must be created to collect knowledge, local wisdom, production steps and methods, and sales to consumers. Also, this study is in line with Santhitiwanich (2024) who further developed the community towards a social enterprise with a design thinking process in Ubon Ratchathani Province and found that, their products could be used in everyday life. It was the selling of culture and arts that could create value and careers for the new generation; therefore, Products that reflect identity should be developed along with creating products that are more specific to the target group. The results of this study are also consistent with the study results of the Ministry of Culture & Chulalongkorn University (2022) which found that the motivating factors and purchasing decisions in terms of products are practicality, and

refinement. The buyers were willing to pay an additional 1 - 10 percent when the product was developed to have desired characteristics. It was also found that popularity influenced the decision to buy if the design was similar to the lifestyle. The study results of the situation and conditions showed that the strengths of cultural products were uniqueness, attractiveness, reflecting the identity of the community, choosing to use local materials to create strength in the community, combining beliefs, traditions, culture, and local wisdom.

Suggestions

1. Design thinking processes should be applied to develop products from the cultural capital of other ethnic groups, such as the Thai Song Dam, Tai Phuan, Tai Lue, Hmong, and Yong ethnic groups, to create added value and value from diverse cultures.

2. Product development should include surveys of marketing data and consumer behavior to provide guidelines for designing and developing cultural products so that the developed products can meet the needs of various consumer groups, leading to production and distribution to generate income for the community.

3. A product development model should be created from the cultural capital of ethnic groups, and the efficiency of the model should be evaluated to create new knowledge that can be used to expand and transfer knowledge and technology in the area

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