

The Research on the Development of Cultural Heritage: Innovative Design of Gambiered Guangdong Silk in Foshan

Xianke Zhou, Chanoknart Mayusoh,
Akamong Inkuer and Pisit Puntien

Suan Sunandha Rajabhat University, Thailand
Corresponding Author, E-mail; s63584948013@ssru.ac.th

Abstract

Background : Foshan, located in Guangdong Province, China, boasts a rich tradition of Gambiered Guangdong silk dating back to the Ming Dynasty. Initially exported to Southeast Asia, Hong Kong, and Macao, this silk faced a decline due to competition from inexpensive synthetic fibers. Government interventions briefly revitalized the industry, yet market challenges persisted. In 2008, its dyeing and finishing techniques were designated as a national intangible cultural heritage, highlighting its cultural significance.

Aims : This study explores revitalization strategies through innovative design and plant dyeing experiments. Consumer preferences indicate a demand for diverse colors and improved pattern designs.

Methodology: Through literature review, field investigations, and experimental methods, the study gathers insights into historical production techniques and contemporary consumer perceptions.

Results: By adapting traditional craftsmanship with modern technological enhancements, the aim is to restore market appeal while safeguarding cultural heritage. The research underscores the importance of adapting heritage crafts to modern demands for cultural sustainability and economic viability.

Conclusion: Findings emphasize the potential for Gambiered Guangdong silk to regain prominence in the textile market through strategic innovation and cultural adaptation. This approach not only preserves a distinctive cultural legacy but also aligns it with contemporary market dynamics, ensuring its relevance and continuity in a globalized era.

Keywords: Development of Cultural Heritage; Innovative Design; Gambiered Guangdong Silk; Foshan

Introduction

Foshan is an ancient city located in the Pearl River Delta impact plain in Guangdong Province, China. It has a well-developed water system, a prosperous culture, and a developed economy. It has a long tradition of "raising silkworms and reeling silk" in history. According to historical records, Guangdong began to produce and export gambiered Guangdong silk as early as the Yongle period of the Ming Dynasty in China in the 15th century. In the 1940s and 1950s, Gambiered Guangdong silk was sold well in Southeast Asia, Hong Kong and Macao, and became a fashionable clothing material in the local area. However, since the 1970s, a large number of new textile fiber products with a wide variety and low prices have emerged, while gambiered Guangdong silk takes a long time to make, is costly, and has only two monotonous colors of black and brown, which has caused the gambiered Guangdong silk market to shrink

and the industry to decline. Later, due to government support, the gambiered Guangdong silk industry prospered for a while. However, due to market and sales reasons, the prosperous situation did not continue. In order to save this traditional cultural skill, in 2008, the "Gambiered Guangdong Silk Dyeing and Finishing Technique" was included in the second batch of national intangible cultural heritage protection list by the Chinese government.

The single color, lack of fashion and high price of gambiered Guangdong silk are important reasons for the decline of gambiered Guangdong silk. Nowadays, although gambiered Guangdong silk has a smaller and smaller market share, the country attaches great importance to its protection and inheritance, hoping that it can continue its glory, so it is also the responsibility of gambiered Guangdong silk researchers. Considering the sustainable development of gambiered Guangdong silk, researchers choose to give full play to its advantages and improve its shortcomings, improve the fabric (dyeing and pattern design) of the intangible cultural heritage gambiered Guangdong silk, and innovate the design and research of related products and promote their dissemination.



Figure 1 Gambiered Guangdong Silk
Source: Researchers

Research Objectives

1. To study history and production research of Foshan Cultural gambiered Guangdong silk
2. To design with a pattern design with gambiered Guangdong silk as the raw material.
3. To design modern clothing and derivative products with gambiered Guangdong silk innovatively.
4. To test the design of gambiered Guangdong silk fabrics and evaluate the design effect of related products.

Literature Review

Gambiered Guangdong silk, a traditional Chinese textile with roots dating back to the Ming Dynasty, has faced challenges in modern times due to its high cost and limited color range. This review aims to explore recent efforts in revitalizing this cultural heritage through innovative design and sustainable practices.

Since its inception in the 15th century, Gambiered Guangdong silk from Foshan has been prized for its craftsmanship and cooling properties (Xuhong & Jingjing, 2020). Initially flourishing across Southeast Asia and Hong Kong, its popularity waned with the advent of cheaper synthetic alternatives in the 20th century. Despite governmental efforts to revive the industry, sustained market competitiveness remained elusive (Parente et al., 2012).

Designated a national intangible cultural heritage in 2008, Gambiered Guangdong silk holds intrinsic value as a cultural artifact (Tuttle et al., 2007). However, its single-color palette and traditional patterns have hindered broader market appeal, prompting calls for innovation.

Research Methodology

Research Methodology

The article adopts descriptive research and qualitative research methods.

Literature Research Method: During the research stage, extensive reference materials on gambiered Guangdong silk were collected, including articles, books, pictures, audio-visual materials, and physical objects. The domestic materials collected are detailed due to the unique status of gambiered Guangdong silk as intangible heritage in China. Many documents suggest innovative development opportunities for this heritage (Baum, 2006).

Field Investigation Method: Field investigations were conducted in Foshan, the production area of gambiered Guangdong silk. Visits to the Gambiered Guangdong Silk Museum, sun-drying factories, clothing factories, and specialty stores were carried out. Interviews were conducted with various stakeholders, including intangible cultural heritage inheritors, workers, designers, sales personnel, and consumers. Feedback indicated a desire for richer color options in gambiered Guangdong silk to meet market demands.

Experimental Measurement Method: Experimental methods involved plant dyeing techniques, extracting pigments from natural plants. Materials for dyeing experiments related to gambiered Guangdong silk included plant dyes, experimental tools, and preparatory items. Experiments were conducted on fabric samples of specific sizes, varying plant types, weights, water solubility, temperatures, times, and other factors. Dyeing effects were observed, photographed, and documented on registration forms.

Questionnaire Survey Method: A questionnaire survey aimed to capture participant interests and preferences regarding gambiered Guangdong silk art. The survey, consisting of 15 questions, focused on design directions and purchase intentions related to this art form.

Source of Data

The data sources for this study include:

Extensive literature and document collections on gambiered Guangdong silk, encompassing articles, books, images, audio-visual materials, and physical artifacts.

Field investigations conducted in Foshan, involving visits to key sites such as the Gambiered Guangdong Silk Museum, production facilities, and retail outlets.

Experimental data from dyeing experiments using plant dyes on gambiered Guangdong silk fabric samples.

Responses gathered through a questionnaire survey designed to explore attitudes and preferences towards gambiered Guangdong silk art.

Population and Sampling

Intangible cultural heritage inheritors of gambiered Guangdong silk.

Workers in sun-drying factories, clothing factories, and specialty stores related to gambiered Guangdong silk.

Designers and sales personnel involved in the production and promotion of gambiered Guangdong silk.

Consumers interested in gambiered Guangdong silk products and art.

Sampling methods included purposive sampling for interviews and questionnaires, targeting individuals directly involved in or affected by gambiered Guangdong silk production and consumption.

Data Collecting

Data collection methods encompass:

Gathering and analyzing extensive literature and reference materials on gambiered Guangdong silk.

Conducting field investigations and interviews in Foshan, capturing firsthand insights from various stakeholders.

Performing experimental dyeing procedures on gambiered Guangdong silk fabric, recording and analyzing resulting color effects.

Administering and analyzing responses from a structured questionnaire survey on gambiered Guangdong silk art.

Research Results

1. Tourists' cognition of gambiered Guangdong silk and gambiered Guangdong silk cultural and creative industries

Collect questionnaires to conduct satisfaction surveys on traditional gambiered Guangdong silk related products.

In the first part, in terms of background, women are the majority, accounting for 76%; in terms of age, they are mainly in the two age groups of 46-60 and 61 years old or above, accounting for 92% of the total number; in terms of education, they are mainly concentrated in high school education or above; in terms of occupation, the majority are businessmen, accounting for 56%, in fact, they are civil servants and public institutions, and there are almost no students; in terms of income, they are mainly concentrated in the middle and high-income groups with an annual income of more than 100,000 yuan.

In the second part, in terms of cognition and use, the main channels for understanding are shopping malls and friends' introductions; the reason for not buying is that the most common choice is a single and dull color, accounting for 91%, while the options of old patterns, old and outdated styles, and expensive prices also account for a high proportion; when asked whether the colors of gambiered Guangdong silk need to be diverse, 94% chose diverse, and whether the traditional gambiered Guangdong silk patterns need to be improved, the most choose very necessary, accounting for 87%, and do you think that gambiered Guangdong silk products need innovation and development, the most think very necessary, accounting for 82%.

In the third part, regarding the evaluation form of each module of gambiered Guangdong silk, most people thought the craftsmanship was very good, accounting for 88%; most people thought the color was relatively poor, accounting for 77%; most people chose the pattern as average; and most people chose the shape as average.

2. Views of gambiered Guangdong silk inheritors and designers on the sustainable development of gambiered Guangdong silk

Through one-on-one or group interviews with many gambiered Guangdong silk national, provincial and municipal intangible cultural heritage inheritors from the origin of gambiered Guangdong silk, textile professors from South China Agricultural University, fashion design professors from Guangzhou Academy of Fine Arts, and well-known fashion designers from industry enterprises, their main consensus is that gambiered Guangdong silk intangible cultural heritage has complex craftsmanship, fine workmanship, cool fabrics, and many advantages, but it does have shortcomings such as dull colors, high prices, old styles, monotonous patterns, fewer related cultural and creative products, and a narrow audience. However, gambiered Guangdong silk is a treasure of our national culture and cannot be abandoned. Efforts should be made to improve color, pattern design and product design so that gambiered Guangdong silk can integrate modernity, technology and fashion, keep pace with the times, and go global.

3. Plant dyeing experiment and its results

The traditional gambiered Guangdong silk dyeing and finishing process has no chemical additives and is green, environmentally friendly and health-care. The front of the fabric is black and the back is brown, and the color is relatively simple. Although some brightly-colored gambiered Guangdong silk have been newly launched on the market, it is understood that many of them use modern post-processing processes such as chemical printing and dyeing, which do not conform to the concept of nature and environmental protection. Therefore, I purchased a large number of equipment and materials for dyeing experiments, and dyed the gambiered Guangdong silk with black front and brown back with plants. The dyes selected are all natural plants, most of which are Chinese herbal medicines, which have the effects of clearing heat and detoxification, health care and health preservation. In ancient China, plant dyeing mostly used minerals such as alum ($KAl(SO_4)_2 \cdot 12H_2O$), green vitriol ($FeSO_4 \cdot 7H_2O$), and blue vitriol ($CuSO_4 \cdot 5H_2O$) with good dyeing effects in the selection of mordants and fixatives. However, these minerals contain heavy metals and are harmful to the human body. Therefore, this experiment gave up using these substances as mordants and fixatives. Instead, considering that gambiered Guangdong silk is a silk product, silk is more friendly to acidic substances, and most plant dyes are also acidic, so choosing natural plant dyes to dye gambiered Guangdong silk has inherent advantages and better dyeing effects. At the same time, choosing edible acidic substances such as rice vinegar as mordant and fixative can improve the color saturation and color fastness of dyeing. Through this experiment, a variety of brighter colors were produced, laying the foundation for subsequent pattern design and product design.

First, prepare the following materials and tools: gambiered Guangdong silk fabric, undyed white silk, 15 representative natural plants (plants in five colors, including blue, yellow, green, red, and purple), PH test paper, measuring cup, rubber gloves, electronic scale, basin, chopsticks, thermometer, scissors, ruler, water, rice vinegar, edible alkali, river mud, steel pot, electronic materials, camera, etc.

Gambiered Guangdong silk itself is a kind of silk. Considering that 85°C is suitable for silk dyeing, the temperature of the natural plant dyeing liquid needs to be controlled by a thermometer. At the same time, considering that silk fabrics are best dyed with acidic substances, PH test paper is needed to detect the PH of the dyeing liquid. When the pH value of the dyeing liquid is greater than 7, it is alkaline, and edible alkali needs to be added to react chemically until the pH value of the dyeing liquid is less than 7, that is, it is acidic before the dyeing experiment can be carried out.

The side of the gambiered Guangdong silk fabric coated with river mud will turn black. This is because the yam juice used to dye the gambiered Guangdong silk is rich in tannins, which reacts chemically with substances such as high-valent iron ions in the river mud and turns black. Many plants in nature are rich in tannin. In order to get rid of the potential risks of a single source of material, this experiment specially selected pomegranate peels rich in tannin to make dyeing liquid to dye undyed white silk and apply river mud to see the final color effect of the fabric.

By using 14 kinds of plant dyeing dyes to dye gambiered Guangdong silk fabric samples, and using 1 plant to dye undyed white silk and apply river mud, the dyeing effect is as follows:

No.	Fabric type	Size (cm ²)	Plant category	Weight (g)	Water capacity (L)	Staining time (min)	Extraction temperature of the dye solution was set at (°C)	Staining was performed at the temperature of (°C)	Medium colorant / color stain	Picture
1	Cloud yarn (black and anti-brown)	5	Indigo blue	100	1	30	100	80	Rice vinegar	

Table 1 Blue category Source: Author

No.	Fabric type	Size (cm ²)	Plant category	Weight (g)	Water capacity (L)	Staining time (min)	Extraction temperature of the dye solution was set at (°C)	Staining was performed at the temperature of (°C)	Medium colorant / color stain	Picture
1	Cloud yarn (black and anti-brown)	5	Cape jasmine	100	1	30	100	80	Rice vinegar	
2	Cloud yarn (black and anti-brown)	5	Amur corktree	100	1	30	100	80	Rice vinegar	
3	Cloud yarn (black and anti-brown)	5	Sophora flower bud	100	1	30	100	80	Rice vinegar	
4	Cloud yarn (black and anti-brown)	5	Rhizoma curcumae longae	100	1	30	100	80	Rice vinegar	
5	Cloud yarn (black and anti-brown)	5	Cortex granati	100	1	30	100	80	Rice vinegar	

Table 2 Yellow category Source: Author

No.	Fabric type	Size (cm ²)	Plant category	Weight (g)	Water capacity (L)	Staining time (min)	Extraction temperature of the dye solution was set at (°C)	Staining was performed at the temperature of (°C)	Medium colorant / color stain	Picture
1	Cloud yarn (black and anti-brown)	5	Gardenia + indigo	100	1	30	100	80	Rice vinegar	
2	Cloud yarn (black and anti-brown)	5	Ay Tsao	100	1	30	100	80	Rice vinegar	
3	Cloud yarn (black and anti-brown)	55	Tokyo violet herb	100	1	30	100	80	Rice vinegar	

Table 3 Green category Source: Author

No.	Fabric type	Size (cm ²)	Plant category	Weight (g)	Water capacity (L)	Staining time (min)	Extraction temperature of the dye solution was set at (°C)	Staining was performed at the temperature of (°C)	Medium colorant / color stain	Picture
1	Cloud yarn (black and anti-brown)	5	Carthamus tinctorious	100	1	30	100	80	Rice vinegar	
2	Cloud yarn (black and anti-brown)	5	Madder	100	1	30	100	80	Rice vinegar	
3	Cloud yarn (black and anti-brown)	5	Hematoxylin	100	1	30	100	80	Rice vinegar	
4	Cloud yarn (black and anti-brown)	5	Polygonum cuspidatum	100	1	30	100	80	Rice vinegar	

Table 4 Red category Source: Author

No.	Fabric type	Size (cm ²)	Plant category	Weight (g)	Water capacity (L)	Staining time (min)	The extraction temperature of the dye solution was set at (°C)	Staining was performed at the temperature of (°C)	Medium colorant / color stain	Picture
1	Cloud yarn (black and anti-brown)	5	Radix lithospermum	100	1	30	100	80	Rice vinegar	

Table 5 Purple category Source: Author

No.	Fabric type	Size (cm ²)	Plant category	Weight (g)	Water capacity (L)	Staining time (min)	The extraction temperature of the dye solution was set at (°C)	Staining was performed at the temperature of (°C)	Medium colorant / color stain	Picture
1	White blank yarn	5	Cortex granati	100	1	30	100	80	River mud, rice vinegar	

Table 6 Pomegranate skin replaced potato stained with mud experiment Source: Author

Through dyeing experiments on gambiered Guangdong silk fabric samples with 14 kinds of plant dyes, the red plant dyeing effect is better, and the other types of plant dyeing show the same color gradient, but the effect is weaker. Therefore, the conclusion is that the plant dyeing effect of gambiered Guangdong silk fabric is not particularly ideal, but it can still be dyed into some colors, which is also an expansion and extension of the original color.

The undyed white silk was dyed with pomegranate peel, the white silk was dyed into a khaki color, and then the river mud was applied to the experiment, and the color did not change significantly. Therefore, the conclusion is that the traditional gambiered Guangdong silk fabric is dyed with yam juice and coated with river mud. For the time being, no other plants have been found to replace yam.

4. Design of a series of cultural and creative products based on improved traditional

Gambiered Guangdong silk craft, including pattern design, design concept, pattern design evaluation, applied design pattern, product evaluation, cultural and creative product design display, etc.

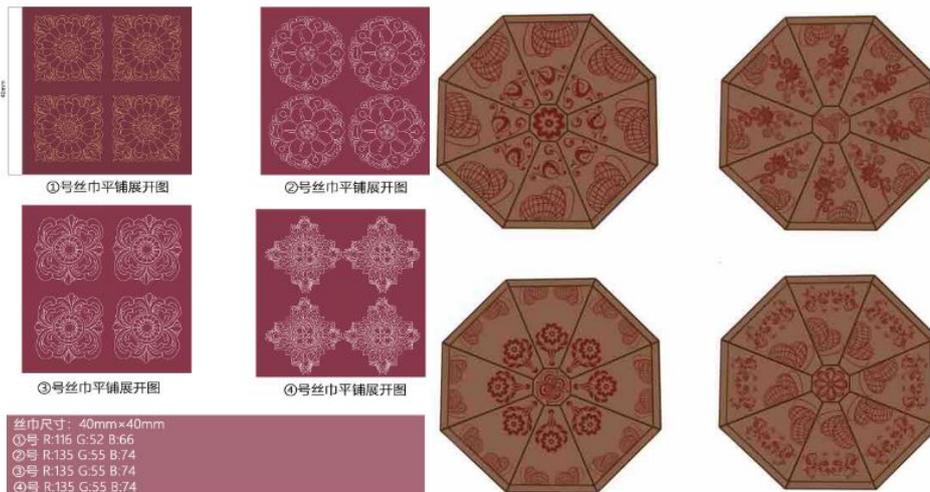


Figure 2 Gambiered Guangdong silk pattern design
 Source: Researchers



Figure 3 Gambiered Guangdong silk pattern design (printing)
Source: Researchers



Figure 4 Gambiered Guangdong silk clothing design
Source: Researchers



Figure 5 Gambiered Guangdong silk clothing design
Source: Researchers



Figure 6 Gambiered Guangdong silk product design
Source: Researchers

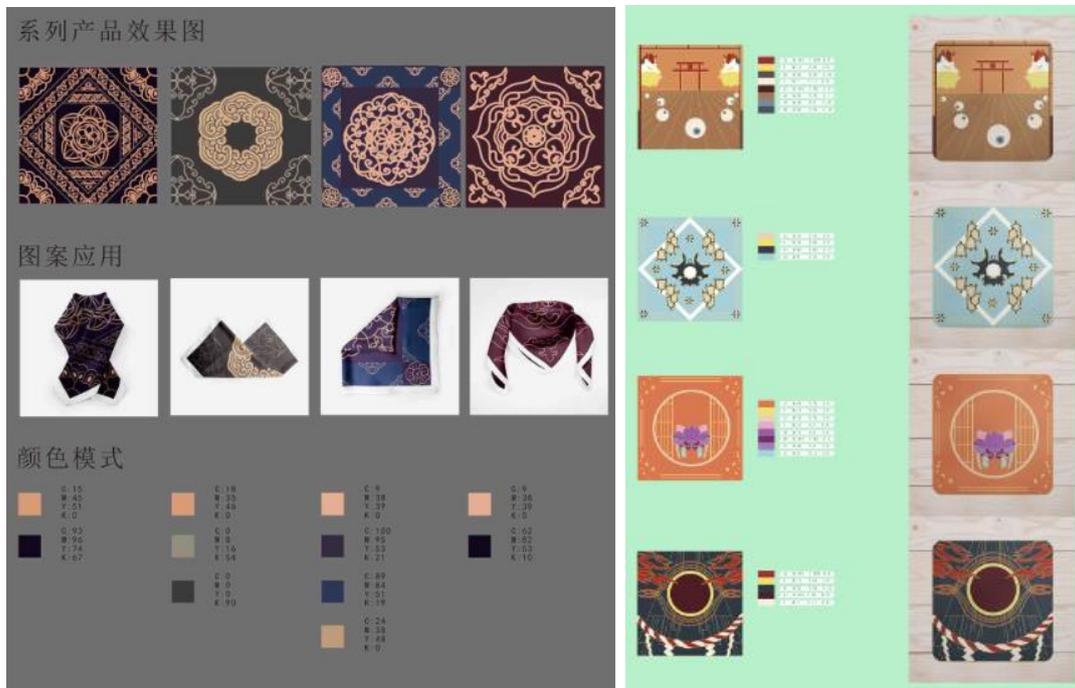


Figure 7 Gambiered Guangdong silk product design
Source: Researchers

Several colors with relatively obvious chroma generated by plant dyeing experiments are preferred. If more colors are needed, other chemical dyes that meet safety, environmental protection and quality parameters can be selected for dyeing. Whether natural plant dyes or chemical dyes, the mature "printing" dyeing process of modern technology is used in pattern drawing and fabric generation.

In terms of innovative design of clothing and other cultural and creative products, the relevant materials are mainly traditional gambiered Guangdong silk fabrics, supplemented by modern gambiered Guangdong silk fabrics with chemical dyeing, as well as other modern materials such as beading, sequins, lace, metal, and other modern techniques such as hot stamping and diamond pasting, and other traditional techniques such as embroidery and weaving. To achieve matching of traditional gambiered Guangdong silk with other materials. Other materials can be traditional gambiered Guangdong silk with a single color, or white yarn, ramie silk, or other natural fabrics such as cotton, linen, wool and silk, or even other chemical fiber fabrics and technological elements. Mix and match by using methods such as "intangible cultural heritage + technology" and "intangible cultural heritage + (other) intangible cultural heritage", so that traditional gambiered Guangdong silk can be more fashionable while retaining traditional essence. To achieve the combination of traditional and modern materials and techniques.

5. Inspection and testing

Under the operations of literature collection, experimental measurement, questionnaire survey, classification research, interview records, etc., through a large number of experimental data and design solutions, for SPSS data analysis software, check the consistency between the measurement content and the measurement goals, and determine the determination Met the

measurement target. Compare the effects of before and after research, comprehensively use various equipment and textile and clothing design manuals, the quality was assessed by 5 experts. IOC (Item Objective Congruence) is a method used to evaluate the consistency of test and assessment objectives. IOC is usually calculated through the expert's evaluation of each item. The specific calculation method is as follows: Scoring criteria: Each expert scores each test question according to three levels: -1, 0, and 1. 1: Indicates that the question meets the assessment objective. 0: Indicates that the question meets the assessment objective. -1: Indicates that the question is inconsistent with the assessment objective.

$$IOC = 1 + 1 + 1 + 0 + 1 / 5 = 4 / 5 = 0.8$$

The detailed development of the questionnaire for this study also evaluated its validity. Questionnaire survey by 5 industry experts all questionnaire data were entered into statistical software and sorted and coded by statistical packages to handle missing data and outliers to ensure clean data.

Discussion and Conclusion

Song Hailing's "On the inheritance and development of ramie silk in the perspective of ecological design" (Baum, 2006) discusses the feasibility of gambiered Guangdong silk in terms of fabric design innovation and reference to traditional culture by explaining the practical value, cultural value and economic value of gambiered Guangdong silk under the background of green ecological concept. Shao Qiurong, Meng Zhaojian, Ren Zhonghai and Li Chun's "Dyeing and finishing technology and development of gambiered Guangdong silk" (Shao Qiurong, Meng Zhaojian, Ren Zhonghai and Li Chun,2014) also introduces the dyeing and finishing technology and production process of gambiered Guangdong silk, explores the chemical mechanism of its natural dyeing process, and proposes the development concept of gambiered Guangdong silk's color diversification. Liu Ting and Liu Xin's "Exploration of the current development status of traditional skills under the 'Belt and Road' initiative - taking the dyeing and finishing skills of Shunde gambiered Guangdong silk as an example" (Liu Ting and Liu Xin,2018) starts with the necessity of protecting traditional skills under the "Belt and Road" initiative, and uses empirical research methods to study the current status of gambiered Guangdong silk dyeing and finishing technology. About the application research of gambiered Guangdong silk. Since gambiered Guangdong silk is a local traditional fabric, the practical application of gambiered Guangdong silk is mainly concentrated in Guangdong. Local governments and related practitioners and fashion designers have also held related exhibitions many times. However, the overall theoretical research and applied research are relatively weak. On the one hand, practitioners who have been engaged in gambiered Guangdong silk for a long time are unfamiliar with new media and lack awareness of protection; on the other hand, there is an extreme shortage of practitioners and researchers who master the core technology of gambiered Guangdong silk, which has led to the long-term backwardness of the protection of gambiered Guangdong silk. There are not many applied researches in the field of innovative design of gambiered Guangdong silk. At present, the research results on the systematic analysis and application of gambiered Guangdong silk are relatively weak, and there is also a certain lack of applied research on the correlation between gambiered Guangdong silk and popular elements. Therefore, it is a very valuable and meaningful topic to deeply analyze the value connotation of gambiered Guangdong silk and the difficulties it faces, and combine it with

contemporary popular elements for innovative application. The potential benefits it brings are immeasurable and need further development and research.

The intangible cultural heritage of traditional skills has distinct historical, regional and inheritance characteristics, and is a valuable cultural wealth of the country and the whole society. However, due to the development and changes of society, people's original living environment is changing. Some traditional intangible cultural heritages are gradually losing their survival basis and conditions, and their cultural characteristics are gradually disappearing. Some are even on the verge of extinction under the impact of modern lifestyles, which affects the construction of our national culture. For this reason, many scholars have proposed the view of rescuing, restoring and rebuilding traditional intangible cultural heritage, which is quite reasonable. But in my opinion, instead of letting our modern life cater to the intangible cultural heritage of traditional skills and trying to maintain its inherent state, it is better to properly develop and innovate the intangible cultural heritage of traditional skills, so that the intangible cultural heritage of traditional skills can cater to our modern life. In other words, the intangible cultural heritage of traditional skills should be modernized and transformed to make it close to modern life, adapt to modern life, and find its reasonable space in modern life, so as to achieve the most favorable protection of the intangible cultural heritage of traditional skills.

The development and utilization of the intangible cultural heritage gambiered Guangdong silk is inseparable from the innovative design of gambiered Guangdong silk products, so that more intangible cultural heritage gambiered Guangdong silk products can enter our daily life, such as notebooks, sachets, curtains, gift packaging, shoes, bags, electronic and electrical products, etc. Inspire a new era and life atmosphere, preserve tradition and keep pace with the times, and at the same time increase the dissemination and promotion of Foshan intangible cultural heritage, so that traditional gambiered Guangdong silk can go global. The results of this study can be applied to the development and design of cultural and creative products of other traditional Chinese clothing crafts, providing valuable reference and inspiration for the protection of China's intangible cultural heritage and the research and development of cultural and creative products. By designing gambiered Guangdong silk cultural and creative products, the market value of Xiangyunsha intangible cultural heritage can be enhanced. The cultural concept of gambiered Guangdong silk intangible cultural heritage is transformed into physical product development, emphasizing people-oriented and sustainable development and production, and expanding the scope of product development from handicrafts based on gambiered Guangdong silk traditional crafts to cultural spaces and daily necessities related to gambiered Guangdong silk intangible cultural heritage, so as to enhance the functionality and practical value of cultural and creative products and expand the purchasing demand of customers for gambiered Guangdong silk products. At the same time, actively explore the expression methods, innovative designs and development strategies of various elements of gambiered Guangdong silk intangible cultural heritage in cultural and creative products, so that tourists can obtain cultural products with local characteristics, transform culture into business, and promote the development of local cultural and creative product economy.

The synthesis underscores the need for a balanced approach that respects the heritage of gambiered Guangdong silk while innovatively adapting it to modern contexts. By leveraging its cultural significance and embracing contemporary design principles, gambiered Guangdong silk can continue to thrive as a symbol of cultural identity and economic opportunity.

In conclusion, the thematic elements from the provided texts, highlighting the significance, challenges, and strategic pathways for safeguarding and revitalizing gambiered Guangdong silk as a cherished intangible cultural heritage.

Acknowledgement

Researcher would like to express her sincere to the thesis advisor, Asst. Prof. Dr. Chanoknart Mayusoh for her invaluable help and constant encouragement throughout the course of this research. In addition, the researcher has to give thanks to all lecturers for their assistance: Asst. Prof. Dr. Akapong Inkuer and Asst. Prof. Dr. Pisit Puntien. At the same time, the researcher gratefully thanks to everyone who give great supports. Finally, the researcher would like to express her gratitude to the Faculty of Fine and Applied Arts, Suan Sunandha Rajabhat University for supporting in every aspect.

References

- Baum, T. (2006). Reflections on the nature of skills in the experience economy: Challenging traditional skills models in hospitality. *Journal of Hospitality and Tourism Management*. 13 (2), 124-135.
- Parente, D. H., Stephan, J. D., & Brown, R. C. (2012). Facilitating the acquisition of strategic skills: The role of traditional and soft managerial skills. *Management Research Review*. 35 (11), 1004-1028.
- Tuttle, R. P., Cohen, M. H., Augustine, A. J., Novotny, D. F., Delgado, E., Dongilli, T. A., Lutz, J. W., & DeVita, M. A. (2007). Utilizing simulation technology for competency skills assessment and a comparison of traditional methods of training to simulation-based training. *Respiratory Care*. 52 (3), 263-270.
- Xuhong, K., & Jingjing, H. (2020). *Productive protection of intangible cultural heritage based on the theory of involvement: a case study on the farmers' paintings of XinJi county, Hebei province, China*. SHS Web of Conferences,