

Design and Application of Traditional Craft in Cultural and Creative Products -- Taking the Hubei Provincial Museum as an Example

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Abstract: Traditional crafts are an essential part of Chinese traditional culture. Design and production with cultural and creative products as the carrier and combining with traditional crafts can enrich the design connotation of products, improve the homogenization of cultural and creative products, and contribute to the inheritance and development of traditional crafts. Taking the cultural and creative products of the Hubei Provincial Museum as an example, this paper analyzes the application status of traditional Chinese crafts in the museum's cultural and creative products, puts forward the innovation from the three aspects of modeling function, technology, and material, and respectively discusses how to create the traditional crafts and cultural and creative products that meet the modern aesthetic and practical needs.

Keywords: Traditional Crafts, Cultural and Creative Products, Museum Cultural and Creative Products

1. Background

Cultural and creative products rely on modern science and technology, cultural connotation and creative design, and have the characteristics of aesthetic, functional and cultural connotation. In recent years, the policy of cultural and tourism integration has accelerated the development of cultural and creative industry and expanded people's demand for cultural and creative products. As the carrier of communication of culture and education, its cultural and creative products are the close link between museum culture and the general public, so as to enhance the influence of museum culture. Nevertheless, at present, the overall museum cultural and creative products lack a certain sense of design and practicality, and the category homogenization of products is serious, and the depth of integration of some products and museum cultural relics resources is not enough.

Therefore, integrating traditional crafts into the design of museum cultural and creative products, provides a new direction for the design and development of museum cultural and creative products through the combination of application of traditional craft modeling functions, processes and materials, and it is also of great significance to the inheritance and development of traditional crafts.

2. Characteristics and Current Status of Museum Cultural and Creative Products

2.1. Characteristics of the Museum's Cultural and Creative Products

Museum of culture and products refers to the products derived from the museum collection. It inherited the original collection items form style, meaning, design elements and symbols, and integrated the original collection items of art value into the creative products with the creative design to form both rich cultural implication and practical function of products.^[1] Therefore, museum cultural and creative products should be combined with educational connotation, cultural dissemination, artistic and commercial characteristics.

As shown in Figure 1, through literature research and comparative analysis of the cultural and creative products sold by major museums in China, the current museum cultural and creative products are divided into five types: publishing products, collection copies, cultural and creative derivatives, digital cultural and creative products, and experiential cultural and creative products.








Type	Characteristic	Product Instances
Publisher	The compilation of books, atlas and audio products introduce and show the museum's characteristic collection and research results in system.	 <p>a. Hubei Provincial Museum Cultural and creative store books</p>
Copies of Collection	The characteristic cultural relics in the collection of museums are copied and restored, which are divided into high imitation products and general imitation according to different materials and techniques.	 <p>b. A replica of the green glazed beam inverted pot of Shaanxi History Museum</p>
Cultural and creative derivatives	According to the characteristics of the museum, different cultural elements are extracted for creative design, and different carrier forms and derivative products related to human life are developed, which has beautiful and practical characteristics.	 <p>c. The "I Know" adhesive tape at the National Palace Museum in Taipei</p>  <p>d. The Palace Museum's auspicious Youjia headset case</p>
Digital cultural products	Combined with digital technology, through mobile application, online websites and other media, the cultural and creative products in the form of electronic products show the museum's culture, collections and stories.	 <p>c. "The Forbidden City 365" published by the Palace Museum</p>
Experience-oriented cultural and creative products	Through multimedia, VR, or performance, production technology and other technologies, the interactivity and experience of cultural and creative products are enhanced, and the spiritual and cultural needs of the audience are met from the visual, auditory and sensory aspects.	 <p>d. Chime-bells from the Tomb of Marquis Yi of the Zeng State playing at the Hubei Provincial Museum</p>  <p>g. Dunhuang Secret Land- -Song Chao VR Interactive Exhibition</p>

Figure 1: Analysis of the characteristics of museum cultural and creative products

According to the analysis, among the museum's cultural and creative products, Chinese creative derivatives and digital and experiential cultural and creative products, are favored by people. Most of the publications are the research results of the museum cultural relics, which are highly academic and not suitable for all people, such as the books related to the Tomb of Marquis Yi of the Zeng State in the cultural creation store of Hubei Provincial Museum (Figure 1a); the collection copies are copying cultural relics and set different prices according to the effect of imitation to meet the different needs of collectors and consumers, such as Shaanxi History Museum, a replica of Celadon Pot With A Loop Handle Bottom In-let (Figure 1b). Compared with other categories, cultural and creative derivatives are rich, involving all aspects of life and serious cultural relics through different creative forms, such as "I know" tape in Taipei National Palace (Figure 1c). The National Palace Museum in Beijing's auspicious Youjia headset

cover (Figure 1d), etc. Digital cultural and creative products have strong communication, combined with the use of modern science and technology, make the museum culture communication in various forms and enhance consumer understanding and interest in cultural relics and culture, in compliance with The Forbidden City 365 (Figure 1e), produced by the Palace Museum. It is based on architecture. The application, switching between two modes day and night, leads people to explore the architectural knowledge and the palace story behind it. The application has also set up a scientific research section, to quickly digest and consolidate the knowledge just learned in the way of passing through it, and become a minor architecture master. Experiential cultural and creative products have strong interactivity, using virtual technology or on-site participation to make an immersive sensory experience and more deeply feel the charm of cultural relics. For example, Chime-bells from the Tomb of Marquis Yi of the Zeng State in Hubei Provincial Museum (Figure 1f) intuitively feels the famous bronze Musical Instruments.another time. For example, the "Dunhuang Secret Scene- -Song Chao VR Interactive Exhibition" (Figure 1g) was created by the cultural and creative team of Shanghai Xi Xi Cultural Communication Co., Ltd., in order to make every viewer enter the Dunhuang Secret Scene Exhibition have a kind of "empathy" with the ancient people thousands of years ago after wearing VR glasses.^[2]

2.2. Current Status of Museum Cultural and Creative Products

At present, in addition to the collection copy, museums around the derivative category products also gradually join the use of traditional technology, such as Suzhou museum Kesi process products of handbags (Figure 2a), Dunhuang academy production of Prajna flower earrings (Figure 2b), etc., with traditional technology into the cultural and heritage of products. However, museum cultural and creative products still have problems such as product homogenization, mechanization of traditional technology, and insufficient practicability of products.



Figure 2: Different museum cultural and creative products

Product homogenization is reflected from two aspects. One is the homogenization of creativity. The starting point of creative design is similar and the characteristics are not distinct. The application of traditional cultural elements is like the appearance, such as blind box cultural and creative products expressed in interesting images, Shaanxi Museum with Tang Dynasty ladies with various images of funny characters (Figure 2c) and a series of folk customs ornaments in Sichuan of Sanxingdui Museum.^[1] Second, the products categories are homogenized. The development of the product is still stuck in the old tourist souvenirs. Almost all museums have metal bookmarks, refrigerator stickers, bottle opener, key chains and other conventional categories. The product materials and expression forms are basically the same, so the products are easy to be copied and replaced by other museums. The mechanized application of traditional technology directly follows the traditional modeling and production methods, and the research on the regeneration and transformation of cultural relics is not deep enough. So far, the modeling of the product is too traditional, although exquisite but the use occasion is more limited. For example, the Palace Museum uses the traditional enamel technology to make a series of jewelry (Figure 2e). The product shape directly uses the traditional phoenix pattern, lacking the sense of design and the sense of The Times, and the suitable customer group range is small. However, the creation of digital and experiential culture is not practical enough. As high-tech references such as digital media and virtual technology have not been popularized to all museums, these two products are relatively few, making it difficult for all viewers to easily feel all the cultural relics of each museum.

In view of these current situations, it can be seen that the differentiation of cultural and creative products in various museums is not obvious enough. The application of traditional technology and modern science and technology has certain limitations, the combination of traditional technology lacks certain new ideas, the creativity retains too many traditional forms, and there is still a large design space on the whole.

3. Traditional Process and Its Application Status in Cultural and Creative Products

3.1. Characteristics of the traditional process

In the whole development process of Chinese history, traditional craft, as an important part of Chinese traditional culture, has an indispensable historical position. Throughout the development of traditional crafts, the exquisite handicrafts of different periods show the social forms and humanistic atmosphere of different dynasties.^[3] The traditional handicrafts, such as bronze ware of the Spring and Autumn Period, lacquer ware of the Han Dynasty, porcelain of the Song Dynasty and so on, fully show the exquisite skills of ancient China and the ever-changing modeling language. The long-honored traditional craft culture not only reflects people's life quality and production environment at that time, but also reflects people's cultural thoughts, aesthetic taste and values. Bronze shows the beauty of witchcraft in the Spring and Autumn Period; lacquer ware combines the simple personality of the Han Dynasty; and the unprecedented prosperity of various handicrafts, the most brilliant was the ceramic technology, Ding, Ru, Ge, Guan, Jun, the five famous kiln porcelain treasures. Therefore, traditional crafts is the essence of China's thousands of years of culture and art, reflecting the culture of different periods, with distinct national characteristics and inheritance. And the traditional craft has both the use value and the aesthetic value, which is the crystallization of the wisdom of the people in the past dynasties, reflecting the people's beautiful pursuit of material and spirit.

Chinese traditional craft has many different technology and technology, integrate it into the creation of products, help to widen the text and product form, highlight its personalized, strengthen the spread of museum culture, also can inheritance and innovation of traditional craft, expand the application field of traditional technology, make it can smoothly into modern life, continue to realize its aesthetic value and practical function. Below, take Hubei Provincial Museum as an example to analyze the application of traditional technology in cultural and creative products.

3.2. The application status of traditional processes in cultural and creative products

Hubei Provincial Museum is now located in the East Lake Scenic Spot of Wuhan city, Hubei Province, China. It has many cultural relics such as bronze ware, lacquer wood ware, bamboo slips and jade articles. Among them, the most famous one is the sword of King Goujian, Chime-bells from the Tomb of Marquis Yi of the Zeng State, Blue and White plum vase of the four loves in Yuan Dynasty and Human skull fossils from Yunxian County. Hubei Province is the former place of the State of Chu in history. The state of Chu was founded for more than 800 years ago, which created a colorful material culture and spiritual civilization, and laid a foundation for the integration of the north and South Chinese culture and the formation of Chinese civilization. The Hubei Provincial Museum has a large number of archaeological unearthed Chu cultural relics, which greatly enriched people's understanding of the cultural area of Chu.

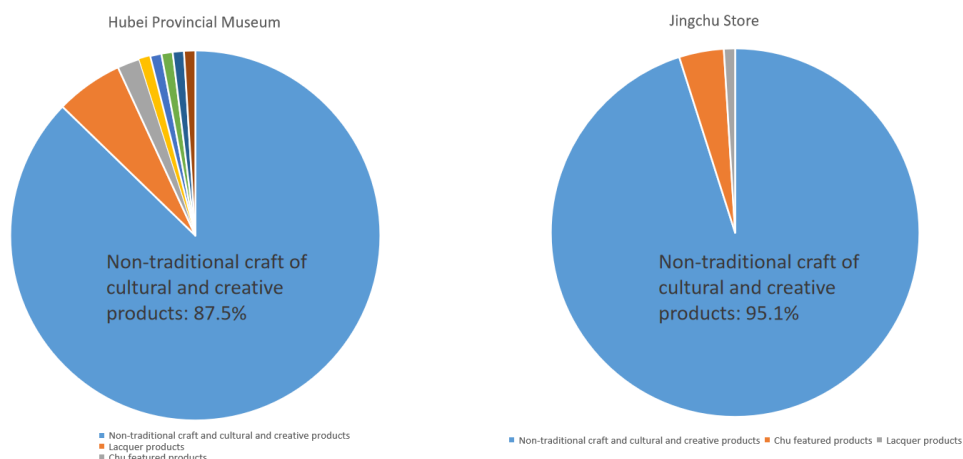


Figure 3: Analysis of the online sales platform products of Hubei Provincial Museum

Although the Hubei Provincial Museum has so many cultural resources, only some of the cultural relics have been developed into cultural and creative products, among which the products designed and produced combined with traditional techniques are not rich. The author investigated the two online sales platforms of cultural and creative products of the official website of Hubei Provincial Museum in

November 2022 (Figure 3), and screened all its products. Among them, the cultural and creative products on the official website of Hubei Provincial Museum are divided into copies and cultural and creative products, with 11 copies and 104 cultural and creative products; the replicas are combined with traditional crafts, and the cultural and creative products involving traditional crafts account for 12.5%. Taobao store of Jingchu has no collection of copies, showing a total of 102 cultural and creative products, of which the traditional craft products accounted for 4.9%. Some of the cultural and creative products using traditional technology are briefly analyzed, as shown in Figure 4.






Category of the product	Traditional handicraft	Related cultural relics	Cultural and creative products	Application characteristics
Collection of copies	Lacquer craft	Color lacquer mandarin duck box	 a. Wood and lacquer series -- color lacquer mandarin duck box	Reproduce the production techniques of the technology, and restore the shape of the cultural relics.
	Ceramics	Yuan Dynasty blue and white four love figure plum bottle	 b. Four Love Plum Bottle	
Cultural and creative derivatives	Ceramics smithcraft	Ceramic chip	 c. Jewelry Series -- Porcelain Chip Jewelry	The combination of the two processes, cultural and creative jewelry personalized.
	Chu featured production skills	Sachet	 d. Natural combination sachets	Traditional incense matching techniques, the carrier form is traditional.
	Leaf painting	/	 e. Intangible cultural Heritage series -- leaf paintings	The traditional techniques of leaf painting are used to draw, but the expression theme is weakly related to the cultural relics in the collection.

Figure 4: Analysis of the online sales platform products of Hubei Provincial Museum

According to the survey, it can be seen that the cultural and creative products of the two online platforms of Hubei Provincial Museum are not rich enough, with not many replicas, and the proportion of cultural and creative derivatives is relatively high, but few cultural and creative derivatives involve the use of traditional processes. Although the replica of the collection uses traditional techniques, it does not have any innovative design, such as the replica of the blue and white four love figure plum bottles in the Yuan Dynasty (Figure 4b), just to be exactly the same as the original. In cultural and creative derivatives, attention is paid to the creativity and technological expression of products. Combining with traditional technology can expand the expression forms of products, such as porcelain jewelry (Figure 4c). The ceramic jewelry is designed and made through ceramic technology and metal technology, and each one is different. However, there is also the problem of mechanical use of traditional technology, copying traditional modeling, such as natural composite sachets (Figure 4d), traditional spices are often used to carry sachets, and the sachets are one of the daily wearing accessories of the ancients, which is not coordinated with modern daily decoration, and the practicality is limited. Some traditional craft cultural and creative products are not series, and the connection with museum cultural relics resources is weak, such as intangible cultural heritage series products, including pyro, clay sculpture, lacquer, rubbings, leaf painting five traditional craft, but only one each craft, too few products are not enough impact; leaf painting products (figure 4e) using the traditional leaf painting techniques, but the theme of urban natural scenery, and museum cultural relics have no direct link, such products can not display and

spread the museum culture role.

Therefore, the combination of traditional craft and Hubei province museum and product use is not mature enough, need to fully develop the traditional process contained behind the modeling, function, techniques, materials, find the perfect fit between the two, to design both traditional craft elements and modern life needs of the museum and products.

4. Traditional Process and Its Application Status in Cultural and Creative Products

Italian famous designer Sotsa said: "keeping the tradition is not simply repetitive tradition", on the basis of retaining the original characteristics of traditional handicraft, through innovation "redesign" in materials, function, modeling, technology, aesthetic synchronization with The Times is the way to continue the development of traditional arts and crafts.^[3]

Therefore, through the analysis of the current situation of Chinese traditional crafts and cultural and creative products in Hubei Provincial Museum, the author will analyze the modeling function, technology and materials from three aspects, summarize the design and application methods, in order to better promote the traditional crafts and enrich the museum cultural and creative products.

4.1. Model and function innovation of cultural and creative products

Museum wen gen products has been a serious problem of product homogeneity, its fundamental is also the product modeling function lack of certain new idea. in order to better innovation of traditional craft and product, product design must draw rich material from traditional technology, by refining, processing and restructuring the traditional elements to achieve innovation, in order to improve product homogeneity, and promote the inheritance and development of traditional culture.

The innovation of modeling can create a new modeling in line with the modern aesthetic concept by the extraction and transformation of the color, modeling and expression form of traditional elements in the process of traditional creation, and using the design techniques such as local and partial substitution and scattered reconstruction.^[3] Therefore, designers can combine the extracted and transformed traditional elements with the cultural connotation of the collected cultural relics and the current needs of consumers to reprocess and reorganize to innovate the shape of products. Such as Suzhou museum of magnolia series Sue embroidery silver plated platinum jewelry (Figure 5), the extraction of Ming dynasty shen zhou "book" in the shape of magnolia, then use the way of Sue embroidery process performance magnolia bud to blossom charm, will Sue embroidery stereo design, flowers and leaf combination design into a new set of new embroidery jewelry, give a person a fresh and fresh feeling.

Functional innovation is also a method commonly used in redesign cultural and creative products. Traditional technology pays special attention to the functionality of products. In the design of cultural and creative products, its functions are innovated to give them new functions, such as transforming from simple decoration handicrafts to multi-functional products.^[3] And the innovation of product modeling function is affecting each other. For example, the celadon anemone cup produced by the Palace Museum (Figure 6), covers the silver inside through the traditional metal forging process, so that the external porcelain cup has the function of preventing ironing, optimizes the human use experience, and does not affect the shape of the celadon lotus in the cup. At this time, the premise of changing the function of this product is that the modeling design of the product meets the combination of these two processes. The shape mouth is greater than the bottom, and the inner wall is basically smooth, so as to ensure the success of the product production.



Figure 5: "Magnolia" series Suzhou embroidery jewelry Figure 6: Palace celadon bag anemone Cup

In short, the modeling and function innovation of cultural and creative products is helpful to expand the application field of traditional crafts, and strengthen the cultural nature and difference of cultural and

creative products in museums, and simultaneously, innovate in the process of inheritance, and adhere to the tradition in the innovation.

4.2. Technological innovation of cultural and creative products

Museum cultural and creative products in the market are mainly mechanized and standardized for mass production, while the traditional process relies on manual production, which can not be compared with mechanical manufacturing in terms of production time or speed. However, the national uniqueness of traditional crafts is exactly what cultural and creative products need. Therefore, the combination of traditional crafts and cultural and creative products in production is also a breakthrough, which can be innovated from the two application methods.

One way is the combination of traditional process and modern technology, that is, to combine modern technology on the premise of retaining the traditional process core technology in the product manufacturing process, so as to highlight the cultural and process characteristics of the product, enhance the decoration and ensure the production efficiency of the product. For example, when using traditional silk jewelry, part of the structure can be printed with 3D printing technology and combined with manual silk welding. For example, CUIHUA jewelry produced "tapping happiness" silk handbag (Figure 7), the metal accessories adopt the traditional silk inlay process and chisel process, combined with modern reverse molding process to help mass production. Its metal fittings can not only be disassembled as a brooch with decorative function, but also have the practical function of handbag metal buckle. The design and application of traditional crafts in this form is more flexible, and in line with the current aesthetic decoration effect, so that the tradition out of the museum, active in the life of modern people.

The other way is the experiential innovation of the traditional crafts, which integrates the traditional crafts into the experiential production of cultural and creative products, so that the public can have a deeper understanding of the characteristics of cultural relics and feel the culture and charm behind the traditional crafts when making the products. For example, blue and white porcelain painting experience can be opened, and prepare the ceramic billet needed in advance. After completing the blue and white pattern by consumers, consumers can choose to spray glaze in batch, and send it after firing. In this way, we can directly feel the difficulty of blue and white porcelain painting and the exquisite craftsmanship of the ancient people, so as to have a stronger heart of awe when visiting the cultural relics.



Figure 7: The second generation of "Knock for Happiness" series of flower silk handbags of "Cuihua Jewelry"

4.3. Changes of cultural and creative product materials

Current museum wen gen product materials easy to make a stereotype, such as sales of bookmarks most sheet metal, ceramic tea sets, plastic, cultural relics of small ornaments, etc., but actually most products on the function, structure does not need more innovation, just need to change the product material, can achieve different effect.

However, the materials used in traditional processes are more about natural materials, which are quite different from modern artificial materials in terms of color and texture, so the choice of cultural and creative materials can be determined according to the traditional processes selected.

It can be to use a traditional craft material, break the conventional usage, and give people a new visual feeling. For example, Teacher Han Jun from the Arts and Crafts Teaching and Research Office of Wuhan University designed and made the ceramic robot pendulum "porcelain · MIKE" (Figure 8). The robot shape was "reconstructed" and deconstructed from the blue and white four love figure plum bottles of the Yuan Dynasty of Hubei Provincial Museum. Compared with the texture of plastic desktop decorative

ornaments, the touch is completely different and the ceramic material of the robot is also different, which also changes the directional thinking used in ceramics in museum cultural and creative products.

In addition, the traditional craft materials can also be combined with other materials (traditional craft materials or man-made materials) to enrich the expression form of the products, retain the characteristics of the Chinese traditional culture, and strengthen the uniqueness of the products. Wuchang institute of technology of zhang for the teacher design and production of the "jade head copper tea knife" (figure 9), inspired by the jade head copper knife in Hubei province museum, using the jade carving technology and metal technology, material chose the combination of hotan green white jade and copper, hand carved, and jade moist texture is other material irreplaceable.



Figure 8: Porcelain ·MIKE Han Jun



Figure 9: Jade copper tea knife

4.4. Design and application of traditional crafts in cultural and creative products of Hubei Provincial Museum

The sword of Goujian King of Yue, one of the cultural relics of Hubei Provincial Museum, is designed to design cultural and creative products.

The first step is to analyze the current situation of the Jian cultural and creative products of Hubei Provincial Museum. As shown in Figure 10, the products related to Yue King Goujian Jian are mainly replicates and cultural and creative derivatives. There are few kinds of products. The unique diamond lattice decoration is decorated to the products in an embossing way, with conventional materials and without the application of traditional technology, which lays a certain foundation for the design of later products.

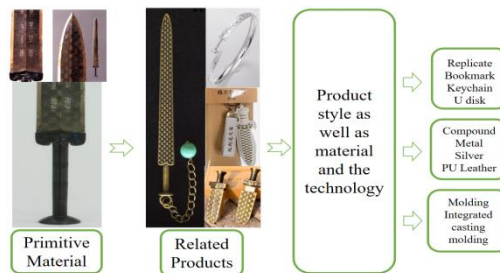


Figure 10: Preliminary investigation of cultural and creative products from Sword of Goujian King in Yue

The second step is to design and sketch the sword of King Goujian of Yue. As shown in Figure 11, the design idea diverges in terms of the extended meaning and appearance of King Goujian sword. This cultural relic is the first choice of the town, souvenirs, from its extended connotation interesting association initially determine the product is the key bag, and the existing cultural products have no similar products; combining the three-stage shape of the sword is clearly pull key bag, add some interactivity, and the surface of the sword, the diamond pattern is a very representative decoration, suitable for the traditional leather carving process to show, the carving process seems to reproduce the exquisite bronze craft, and the leather carving process is only suitable for planting and dyeing leather. According to the key words of the design conception to sketch the shape of the product, the key bag is designed into a more three-dimensional shape, in order to highlight the shape and inlaid decoration of King Goujian sword, the practical metal accessories of the interior are also designed into a hollow shaped sword, and the product echo.

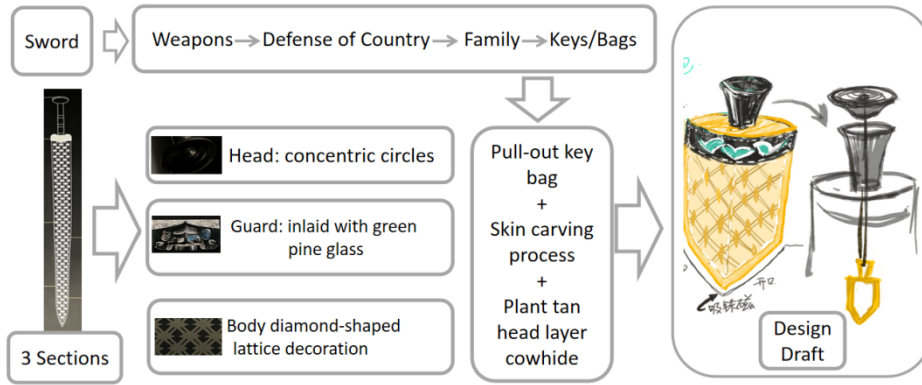


Figure 11: Design process of Sword of Goujian King of Yue

The third step is to make a manual version according to the design sketch. Figure 12 according to the drawings make paper first, and then make cowhide version adjustment version after the material, then hand carved key package sword and sword body on both sides of the decoration, after carving good parts dyeing, in order to achieve the effect of decoration, finally will prepare parts for suture assembly, so the king Ji 'an Ji' an pull type key package made. If mass production is needed, the version of the knife mold can be made by software drawing in advance, and the knife mold cutting can be used to reduce the error, and the machine stitching can be used when sewing, so as to speed up the production and ensure the decoration effect of the traditional technology.

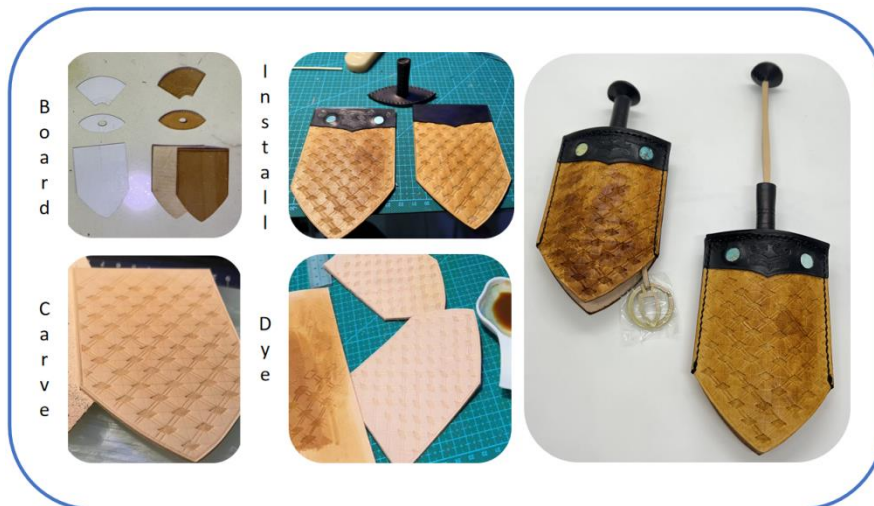


Figure 12: Production process of Yue King Gou Jian sword drawing type key package

The design and development of the whole cultural and creative products, with the performance of the traditional leather carving technology, highlights the decorative characteristics of the cultural relics and the culture contained behind them, and the expression form of the products has a certain degree of novelty, achieving the effect of spreading the museum culture and having both practical functions. At the same time, through the production method of leather carving process, the product can be sold in the form of material package, increase the product experience type production mode, enhance the interest of the product.

5. Summary

The rise of museum cultural and creative industry has provided new opportunities for traditional crafts, opened up a new road for the revival of traditional crafts, reinterprets the historical value of traditional crafts, and makes the relationship between people and traditional crafts, not only can reintegrate into people's life style, but also has social and cultural value. The integration of traditional cultural elements in traditional crafts into the cultural and creative products of museums can bring them a broader development space, expand the cultural influence of museums, and promote the innovative development of the cultural and creative industry.

Acknowledgements

Research results of the 2022 university-level general scientific research project "Research on Cultural and Creative Product Design of Hubei Provincial Museum from the perspective of Arts and Crafts major" (X2022028) in Wuhan College Funding Results of the National Art Fund project "Cultivation of Creative Design Talents for Cultural and Creative Products Based on Jingchu Culture Bronze ware and Turquoise", project number: 2022-A-05- (058) -451

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