Research on Pingyao Lacquerware Based on Experience Design

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ABSTRACT
Due to the continuous development of social and economic forms, most of the traditional handicraft forms of industry have been more challenged in the wave of development, and the world UNESCO and the Chinese government have made great efforts. In recent years, the state has promoted cultural confidence, encouraging people to re-focus on the spiritual connection with culture while satisfying their material needs. The trend of great attention to traditional culture and the continuous development of tourism have brought Pingyao lacquerware, a representative traditional handicraft, back to the public's attention. As one of the intangible cultural heritages, it is in urgent need of attention and protection due to the complexity of the craft and the difficulty of passing it on. Nowadays, the experience economy has become the trend of the times, and tourists are not only looking for material products or simple services but are also more and more concerned about their experience in travel activities. Therefore, it is essential to satisfy the personalized experience needs of tourists in the region of Pingyao regarding the lacquerware experience. Given this, this study takes Pingyao lacquerware as the object of research based on the theoretical background of experience design to explore new development paths for Pingyao lacquerware from the perspective of experience.

KEYWORDS: Experience design, Pingyao lacquerware, Handicrafts

1. INTRODUCTION
In China, traditional handicrafts are rich in variety and have a long history, which has profoundly affected people's lives and reflected the social conditions at different times. These handicrafts not only show the deep genes of Chinese culture but also represent the wisdom of human understanding and utilization of nature for thousands of years. The rapid rise of modern industry and the continuous advancement of socialist modernization pose a significant challenge to the development of traditional handicrafts. They are gradually drifting away from people's modern lives, but their cultural and spiritual significance is still valued. Perhaps they are no longer the main force of economic growth, but as the cornerstone of Chinese culture, its protection and development are still particularly critical (Wu et al., 2015). UNESCO and the government of China have made great efforts to this end (Xue, 2019). In 2003, UNESCO published the Convention for the Protection of Intangible Cultural Heritage. The Chinese government subsequently promulgated policies and measures, such as the Opinions on Strengthening the Protection of Intangible Cultural Heritage in China in 2005 and the China Traditional Craft Revitalization Plan in 2017, actively exploring practical ways to inherit and revitalize traditional crafts. Pingyao lacquerware, one of China's critical traditional crafts, is constantly being explored. The Regulations on the Protection of Pingyao Lacquerware and Painted Art came into effect on October 1, 2023, focusing on the protection and management system, personnel training mechanisms, protection and preservation measures, publicity and promotion, and fully escorting the inheritance and development of intangible cultural heritage. These behaviours let us see the efforts of Pingyao traditional lacquerware handicrafts to self-activate.

Lacquerware is an integral part of traditional folk crafts in China and an indispensable utensil in the daily life of ancient people. China was the first country in the world to know lacquer trees, discover lacquer, use lacquer, and invent lacquerware (Yang & Zhang, 2018; Yu, 2023); as early as 7,000 years ago, during the Hemudu culture period, the ancient people in China accidentally brushed the sap of a sumac tree on the food container and found that its surface would become very bright and complex, resulting in lacquerware (Li, 2017; Yang & Zhang, 2018; Wang, 2022). According to historical records, the history of Pingyao lacquerware can be traced back to the Spring and Autumn Period and the Warring States Period. As an international tourist and cultural city, UNESCO identified Pingyao's ancient city as a world cultural heritage in 1997. Xue (2019) pointed
out that Pingyao ancient city was listed as a world cultural heritage by UNESCO, which made Pingyao lacquerware known to people worldwide, promoting the development of Pingyao lacquerware to some extent.

Pingyao Lacquerware, one of China’s four largest lacquerware brands, still needs to solve the problems of complicated technology and complex inheritance problems. Nowadays, the experience economy has become the trend of the times. Tourists to Pingyao are not only pursuing material products or simple services but also paying more and more attention to their experiences during their travel activities, providing new ideas for activating and developing Pingyao lacquerware. Therefore, it is essential to understand the demand for a personalized experience for Pingyao regional tourists for lacquer (Dong, 2017). Through this study, the researcher tries to find a development strategy for experience design of Pingyao lacquerware, so as to make it easier for people to recognize lacquerware and lacquerware culture, to improve the public’s sense of identification with traditional culture, to expand the scope of Pingyao lacquerware’s influence, and to promote the protection and inheritance of intangible cultural heritage. In addition, it bridges the gap in current research on the combination of Pingyao lacquerware and experience design. While broadening the cultural inheritance of Pingyao lacquerware, it will provide a reference for the innovative development of other traditional handicrafts.

2. LITERATURE REVIEW

2.1 The Development of Experience Design

“Experience design” is developed based on the experience economy (Dai, 2019). Joseph and Gilmore (1999) first proposed the “experience economy” concept. They believe that the most incredible opportunity to create value in the future lies in creating “experience” (Joseph & Gilmore, 1999). This lays a theoretical foundation for the concept of experience design (Wang, 2022). In 2001, Nathan Shedroff first connected the two words of experience and design, and the concept of experience design was put forward, and then the role of experience designer began to appear (Heskett, 2005). Other scholars also affirmed the importance of experience design in their research (Xin, 2011; Norman, 2016). This new design field is produced by transforming social and economic forms (Zhang, 2022). It is essentially designing methodology and design thinking.

In addition, Joseph and Gilmore (1999) also made a detailed division of the scope of experience design (see Figure 1). They pointed out that the experiencer’s participation in the experience involves many dimensions. Generally speaking, the experiencer’s participation and background are the two most important dimensions, and the two are integrated to form four ranges; entertainment, aesthetics, education and escape. Recreational experience consists of attractive and passive participation; educational experience refers to experiential educational activities, mainly attractive and active participation; evasive experience consists of immersion and active participation; and aesthetic experience consists of intrusive and passive participation.

Experience design is another progress of user experience design, which takes the user’s experience as the design object and emphasizes providing users with use memories. The design has gradually changed from focusing on lifestyle to the meaning of life (Qi, 2020). In this process, experience design changes the target design group from users to experiencers and changes the design content from “use behaviour” to “experience itself.” Accordingly, the design method changes from improving use efficiency to changing experience model (Liang & Xiao, 2022). Yang (2020) pointed out in his research that the starting point of experience design is the spiritual demands of the experience, so that the experience can have an interest in and a sense of identity in the experience process through sensory experience or peak experience, and finally make the experiencer achieve unforgettable results (Xi & Jin, 2018; Yang, 2020).

![Figure 1: Experience range](image-url)
2.2 The Layer of Experience Design
Abraham Harold Maslow divides human demands into five different levels in his research, namely, physiological demands, security demands, social demands, respect demands, and self-realization demands. With the gradual enrichment of material conditions and the continuous improvement of the social system, people’s physiological and safety demands have been guaranteed and met, and they have begun to have higher-level demands (Dai, 2019). Norman (2016) divides human cognition of things into the instinctive level, behavioural level, and reflective level from the perspective of cognitive psychology in his research. He believes that the innate part is called the instinctive level. The operational part that controls the daily behaviour of the body is called the behaviour level. The thinking part of the brain is called the level of reflection. The hierarchy of five requirements conforms to a development law of people from the visceral layer-behavior layer-reflective layer. Tourist souvenirs can also better inherit the culture through the satisfaction of these experience levels.

2.2.1 Experience Design at The Visceral Layer
The experience design of visceral layer is an emotional experience that comes before consciousness and thinking, and it is the basis of the first impression of appearance elements (Wang, 2019). It mainly emphasizes that the product’s appearance, colour, material, smell, sound, and other attributes act on the user’s sensory organs so that the user can quickly trigger emotional judgments. A good instinctive experience design will catch the user’s eye for the first time and give it a positive psychological feeling (Liang, 2008). The instinctive level based on Pingyao lacquerware can be in the form of concrete products so that users can enhance their sensory experience in a differentiated experience.

2.2.2 Experience Design at The Behavior Layer
The behaviour layer’s experience design focuses on the product’s functional attributes and use of feelings (Liang & Wang, 2024). It mainly comes from people’s lifestyles, product use, intermediate processes, etc., manifesting in product function, performance, and usability (Xu, 2017). The function of a product defines what it can do, and the performance of the product is reflected in how it completes the defined function. Usability reflects whether users understand the product’s work and achieve the expected effect. Suppose the product meets the demand and brings fun to the experience of using it. In that case, it will be easy to achieve the expected purpose, and it will also produce positive emotions and create an enjoyable, interactive experience.

2.2.3 Experience Design at The Reflective Layer
The reflective layer is existential consciousness and higher senses, emotion, and perception (Li, 2019). This level can blend the realization of experience, thoughts, and emotions. It mainly focuses on the influence of products on people’s emotions, thinking, memory, and other conscious activities, and it is also the easiest to change with the differences in culture, experience, education, and individuals (Wang, 2020). When we notice whether someone’s handbag matches his clothes correctly or whether a suit is suitable for leisure occasions, this is actually the level of reflection. For Pingyao lacquerware, the reflective experience design may include the story, emotion, and culture of lacquerware, as well as paying attention to the connotation and cultural significance of the product. This kind of product mainly conveys cultural connotation through the story of situational method and metaphor so that the experience can recall the previous scene when he returns to his residence (Li, 2019).

2.3 Pingyao Lacquerware and Experience Design
Pingyao lacquerware is made of natural raw lacquer and is famous for its unique technology of gold painting and artificial palm-pushing light (Fang & Huang, 2017). It looks simple and elegant, feels delicate and smooth, and its surface is like a mirror. The product is made of natural raw lacquer and is still bright and colourful after thousands of years. It has the characteristics of wear resistance, acid resistance, oil resistance, high-temperature resistance, oxidation resistance, corrosion resistance, rust prevention, moisture resistance, insulation and sterilization (Yang & Zhang, 2018). In the aspect of the carcass, it is mostly basswood with excellent material and is not easy to deform. It will be treated bodiless according to the demands of the manufactured device. Finally, in the decoration process, it takes much thought to divide wood tyres, grey tyres, painters, and inlays (Jia, 2020). Each process has commonly used materials to meet different creative demands. Generally speaking, it takes months or even longer to finish lacquerware.

However, in economic development, the traditional Pingyao lacquerware has yet to attract people’s attention, and the complicated technology and the lack of inheritors have also challenged Pingyao lacquerware. However, with the continuous development of Pingyao tourism, Pingyao lacquerware is gradually known by more people (Zhu, 2021), and tourism has brought new vitality to the development of Pingyao lacquerware. Fang and Huang (2017) hold that tourism is an aesthetic process and a self-entertainment process mainly aimed at obtaining psychological pleasure, and its essence lies in aesthetics and pleasure. From this point of view, tourism will eventually be reborn in a cultural and environmental difference. Tourism not only stems from this difference but also is a process of experiencing this difference (Wang, 2020). Therefore, the essential attribute of tourism lies in the spiritual enjoyment of differentiated experiences.
On the other hand, according to the essential characteristics of experience, experience is a participatory behaviour that can provide participants with physical and mental enjoyment and leave unforgettable memories. The essence of tourism and experience are similar. Tourism itself is a primary way of experiencing. Pingyao lacquerware, as the most representative business card of Pingyao ancient city, is undoubtedly one of the best ways to display the charm of experience fully.

3. METHODOLOGY
In this study, through semi-structured interviews with tourists who have experienced Pingyao lacquerware, we can get tourists’ views and build a tourist experience map.

3.1 Data Collection
In May 2023, this study conducted a semi-structured interview with 16 tourists who had experienced Pingyao lacquerware. The interview time for each tourist was 30 minutes at maximum, and all tourists were guaranteed to participate in this study voluntarily. No one except the researcher would view the information collected after the interview.

4. ANALYSIS AND RESULTS
4.1 Semi-structured interview
By collecting interviews with 16 tourists, the demand data of tourists during the experience process was obtained. The researchers obtained the following results by analyzing the collected data (see Table 1). Based on this, the researcher made a tourist experience map (see Figure 2). Through the table information, it can be found that it is difficult for tourists to obtain lacquer information before the experience, to choose experience items, to get close contact with lacquer skills, to have few exhibition areas for works in the experience store, and to have no craftsmen to demonstrate. In addition, in the experience process, it is found that the experience store needs to have a subdivision of the production process, and there is no targeted teaching process. Lacquer is allergic and challenging for the public to touch, the decoration tends to be traditional, and the works are challenging to conform to the public’s aesthetics. Lacquer drying time is long, and the experience items are single. In addition, after the end of the experience, there needs to be more exciting feedback channels; there is a lack of class evaluation, it is difficult to take into account the photos of the experience, and there is a lack of attraction for reviewing again.

4.2 Construct Pingyao Lacquerware Experience Design Strategy
As mentioned before, based on the different demand levels and the order of tourists’ feelings in the process of experiencing lacquerware, the researchers discussed how to construct the experience design strategy of Pingyao lacquerware from three levels: visceral layer, behaviour layer and reflective layer to realize the inheritance of Pingyao lacquerware.

The visceral layer mainly focuses on the initial connection between the experience and the product in appearance; the behavior layer covers the interaction between the experience and the product, including function use, operation mode and sense of participation; the Reflective layer pays attention to the satisfaction of the experience to the cultural, aesthetic, and emotional demands in the process of using the product, which is a gradual process. As experiencers, the first thing they perceive is a visceral layer, followed by the behavioural and reflective layers, but designers are just the opposite. Based on this, researchers try to construct a strategy (see Figure 2).

4.2.1 Enhance Sensory Perception
When designing a lacquerware experience, the first consideration is the integration and optimization of sensory experience, which is very important to enhance the product image and the experience of the experiencer. Sensory experience is based on human vision, hearing, smell, touch and taste, and its application in the design process should consider the balanced and flexible use of sensory elements. Compared with other crafts, the uniqueness of the traditional craft experience lies in its profound cultural connotation and traditional characteristics.

<table>
<thead>
<tr>
<th>Tourist Experience</th>
<th>Visceral layer</th>
<th>Behavior layer</th>
<th>Reflective layer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Craft</td>
<td>Long production cycle, professional strong</td>
<td>Lack of understanding of Pingyao lacquerware process</td>
<td>It is difficult to participate in the production process of Pingyao lacquer, and it needs to be experienced by practice</td>
</tr>
<tr>
<td>Material</td>
<td>Lacquer is allergic and natural carcass is difficult to handle</td>
<td>Due to the materials, the public rarely learns about this process, and the interested people are limited to watching the production videos and articles</td>
<td>Human beings are naturally interested in Pingyao materials</td>
</tr>
<tr>
<td>Color</td>
<td>There are limitations to the traditional hue and color blending</td>
<td>Children and some adults have difficulty appreciating the beauty of traditional colors</td>
<td>The public lacks the influence of traditional aesthetics and needs to carry forward Chinese culture gradually</td>
</tr>
<tr>
<td>Culture connotation</td>
<td>The cultural divide is severe and poorly understood</td>
<td>Lack of publicity, mass culture edification is not enough to need professional personnel to explain</td>
<td>The culture of Pingyao lacquerware is derailed from the public life, and it is difficult to quickly and deeply understand the corresponding historical culture</td>
</tr>
</tbody>
</table>
In the process of experience design, appropriate methods should be adopted to highlight these cultural elements, for example, by guiding the experiencer to understand the characteristics of the process and the way of material treatment and taking the unique aesthetic feeling and experience form of the traditional process into consideration in design. At the same time, product design should integrate traditional cultural elements into modern sensory experiences based on target consumer groups’ demands and specific positioning to create significant sensory effects and form a comprehensive and pleasant sensory experience.

Pingyao lacquerware’s long-standing production technology and delicate ornamentation can be the core of design to enhance the sensory experience. For example, the lustre and texture of Pingyao lacquerware provide users with a unique sensory experience in vision and touch.

In the experience design, this sensory experience can be enhanced by a high-quality visual display, allowing the experiencer to touch the lacquerware with his hands. In addition, emphasizing the natural materials and colours used in the production of Pingyao lacquerware can increase the sensory appeal of the product and convey its eco-friendly characteristics.

### 4.2.2 Personalized customization of experience content

Personalized customized experiences should combine the spiritual and behavioural needs of the experiencers, aiming at meeting their personalized spiritual demands to the greatest extent. In the traditional market structure, the interaction between producers and experiencers is limited. Usually, enterprises produce products, and experiencers buy them based on personal demands, so the relationship between them is not close. Personalized customization strategy centres on the demands of experiencers and develops products to match

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**Table 2: Tourist experience map**

<table>
<thead>
<tr>
<th>Phase</th>
<th>Understand the information</th>
<th>Select materials</th>
<th>Manufacture</th>
<th>Finish</th>
</tr>
</thead>
</table>
| User demand | 1. Obtain information about Pingyao lacquerware.  
2. Understand the process characteristics.  
3. Watch the production process. | 1. Select the carcass of interest.  
2. Understand the production process of all kinds of carcass.  
3. Consider the difficulty of manufacturing the carcass. | 1. Interesting experience.  
2. Understand how to treat the carcass.  
3. Know how to polish paint.  
4. Understand the requirements of dry matrix. | 1. Unforgettable experiences and memories.  
2. The works are beautiful.  
3. The work is practical.  
4. Experience sharing.  
5. Experience store evaluation and feedback. |

| Behavior | 1. Listen-explain  
2. Look-make  
3. Smell-paint  
4. Contact-carcass | 1. Determine the production direction.  
2. Choose materials | 1. Watch the teacher explain the demonstration.  
2. Imitate the teacher’s hands-on operation.  
3. Ask questions and ask for help. | 1. Appreciate the work.  
2. Social network punching and sharing. |

| Emotional experience | 1. Is the lacquerware fun?  
2. Which experience is the most interesting?  
3. Is it difficult to make?  
4. Can you make a favorite work in a short time? | 1. Is the operation complicated?  
2. Will the work look good? | 1. Can big paint touch the skin?  
2. How to modulate the color?  
3. How to design the pattern? | 1. Are you satisfied with the work?  
2. Is the experience interesting?  
3. Are the photos of the experience process exquisite?  
4. Can we evaluate the service? |

| Pain point | 1. It is difficult to obtain lacquerware information.  
2. It is difficult to choose experience items.  
3. Lack of customer contact.  
4. The experience project is single.  
5. There are few exhibition areas for works.  
2. There is no targeted teaching process. | 1. Lacquer is allergic.  
2. The pattern tends to be traditional, and it is difficult to conform to the public aesthetic.  
3. Paint drying time is long | 1. The lack of interesting feedback channels.  
2. Lack of evaluation of class ending.  
3. It is difficult to take into account the shooting experience photos.  
4. Lack of brand packaging. |

| Opportunity point | 1. Invite lacquer artists to be resident.  
2. Provide real-time viewing.  
3. Design the animation manual of Pingyao lacquerware development history.  
4. Display cabinets exhibition works. | 1. According to the crowd set scheme.  
2. Subdivide the experience items. | 1. Use cashew paint instead.  
2. Adapt digital design to reduce the difficulty of painting.  
3. Choose the carcass with regular shapes to report the practicality of the work. | 1. Provide professional shooting service and give away 3-5 experience photos.  
2. Add anonymous feedback column.  
3. Add an experience wall to post experience photos to increase the rate of return.  
4. Design brand packaging. |
these demands, thus realizing a highly personalized consumption experience. Through the flexible order system and DIY experience, the experiencer can adjust the product according to his preference. This sense of participation and personalized creative activities can significantly enhance the emotional value and satisfaction of the experience with the product. Personalized customization of Pingyao lacquerware can rely on the flexibility of its traditional techniques. Customizing the experience can include choosing different patterns, colours and even the shape and size of lacquerware to meet the personal tastes and demands of the experience.

4.2.3 Experience the Fun Setting of The Theme
Designing interesting experience themes is a crucial strategy to convey the cultural connotation of products and meet the spiritual demands of experiences. The design of the experience theme should follow the principle of providing unique scenes that are different from daily reality and considering the factors of time, region, and material experience. The theme setting should consider space, time, and matter deeply to create a comprehensive and accurate experience. By constructing a consistent storyline to promote all design elements, the theme design should attract the attention of the experience and provide a real sense of experience. In the traditional craft, we can choose the theme based on the traditional characteristics of the craft or the usage scene of the product and design a series of products with widely recognized life stories or themes, which can not only strengthen the connection between the products and the experiences but also resonate emotionally. At the same time, when developing derivative products based on these themes, it is necessary to carefully analyze the degree of matching between cultural orientation and the expected theme of the experience so as to ensure the harmonious combination of innovation and tradition and avoid an uncoordinated sense of experience.

Applying the theme of exciting experiences to Pingyao lacquerware can be realized by creating a theme that combines the history and culture of Pingyao’s ancient city. For example, a series of lacquerware products should be designed with famous buildings or historical events in Pingyao, an ancient city, so the experiencer can feel a historical legend or cultural story while using lacquerware. This method increases the cultural depth of the product and enables the experiencer to feel a richer and more educational experience when buying and using lacquerware.

5. CONCLUSION
Experience design is a design form that adapts to the development of the times under the new economic form, which diversifies people’s lifestyle, working style and consumption. In this era, people began to pursue the satisfaction of spiritual demands, hoped to get beautiful and unforgettable memories from the rich experience process, and also looked forward to the return of traditional culture. Therefore, based on the demands of tourists and the current development status of Pingyao lacquerware, according to the existing theoretical research and cases, this paper puts forward the strategy of integrating experience methods in the inheritance and development of Pingyao lacquerware. This study attempts to help tourists appreciate the true and moving traditional cultural spirit through experience activities. Also, it enables Pingyao lacquerware to find the direction of future development and regain people’s attention. Finally, this study has some limitations. First, the demand will vary from person to person, and different tourists will have different demands for the same souvenir. This study can only discuss the demands of most tourists in the tourist group but cannot cover the demands of every tourist. Secondly, due to the lack of research time, the researcher only studied Pingyao lacquerware’s offline experience design strategy. In the following time, the researcher will design the strategy based on the combination of online and offline. Thirdly, this study involves the contents of many disciplines and
cannot only care for some levels, so there may be some deviations from the conclusions in practice. However, in future research, I hope to fill this vacancy.

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