

# Research on the Experience Design of Sansu Culture Based on User Experience Maps

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## ABSTRACT

**Objective:** The purpose is to promote the spread of Sansu culture and enhance users' sense of participation and satisfaction in cultural experience. This study takes Sansu culture experience design as the research object, aiming to explore how to analyze the needs, pain points and emotional fluctuations of different user roles in the process of cultural contact through user experience map tools, so as to guide the design improvement of cultural creative products and experience models. **Methods:** Firstly, combining the core value of Sansu culture, analyzing its social influence and cultural connotation, and identifying the needs and pain points in the process of Sansu culture experience combined with user research; secondly, obtaining the behavior data and emotional feedback of users in the process of cultural experience through questionnaire survey and user interview; finally, constructing a user-centered experience map, and designing an experience mode combining online interaction with offline physical objects. **Results:** The study shows that the user experience map can effectively identify the pain points and expectations of users in cultural consumption, providing accurate basis for the design of Sansu cultural experience; the combination of online and offline experience helps to enhance the interaction and immersion of cultural communication. **Conclusion:** This study can provide reference for similar cultural experience design, better meet the needs of modern users, and create new communication forms and cultural values for traditional culture.

**Keywords:** User experience map, Sansu culture, User experience, Cultural and creative product design.

## 1. INTRODUCTION

The protection and inheritance of traditional culture is one of the important issues in contemporary cultural revival. Under the background of rapid development of information technology and experience economy, how to transform traditional culture into experience products that meet the needs of contemporary users has become a key path to promote cultural dissemination. Sansu culture is an important part of the excellent traditional Chinese culture [1], which is extremely rich in historical style and spiritual value. However, how to fully explore and activate the intrinsic value of Sansu cultural resources in the context of multicultural patterns and technological changes, so that it can show new vitality in the development of society, has become a key issue that needs to be solved urgently. User experience map, as a user-centred design method [2], provides

new ideas for optimizing cultural communication paths and enhancing user participation. Taking the Sansu cultural experience as the entry point, this study explores the innovative design mode combining online interaction and offline physical production from the construction of user experience map. By adapting to the psychological needs and behavioural habits of users, it redefines the way of experiencing Sansu culture and provides a reference for the inheritance and dissemination of Chinese culture and tradition.

## 2. RELATED CONCEPTS AND RESEARCH

### 2.1 Sansu Culture

#### 2.1.1 Connotation of Sansu Culture

The “Sansu Culture” refers to the three literary figures of the Northern Song Dynasty, Su Xun, Su Shi and Su Zhe, and the cultural heritage they left behind. From the literary dimension, the Sansu outstanding poems, prose and other literary creations are regarded as “the peak of Song literature”; from the philosophical point of view, the writings of the Sansu embodied Confucianism's sense of family and country, and at the same time, compatible with the profound thinking of Taoism and Buddhism [3]. Sansu culture, especially Su Shi's works, covers a wide range of themes from farming, nature to aesthetics, life, etc., showing a distinctive regional imprint and the enduring philosophy of traditional Chinese culture. As the core inheritance place of Sansu culture, Sansu Ancestral Hall has preserved rich cultural sites, poems and inscriptions, calligraphy and paintings, etc., which are important physical carriers for exploring Sansu culture [4].

#### 2.1.2 The Current Situation of Sansu Culture Dissemination in Modern Context

Facing the wave of modernisation and globalisation, the promotion and inheritance of Sansu culture is facing new challenges. At present, Sansu culture is mainly disseminated through book publication, memorial hall display, large-scale exhibition activities and traditional media reports, but these methods are relatively single and lack a sense of formality and attraction for contemporary audiences, especially young groups. In recent years, the development of digital technology has injected new momentum into the dissemination of Sansu culture, such as cultural short video platforms, academic open courses in colleges and universities, as well as digital guided tours, which have gradually transformed Sansu culture into a popular form of knowledge. However, the current communication focuses on the vertical decomposition of content expression, neglecting the holistic cognition and interaction design under the perspective of user experience, resulting in the relative lack of attraction of cultural consumption in mass communication. Therefore, it is crucial to

reshape the communication path of Sansu cultural resources based on user experience theory and communication effect model.

### 2.2 User Experience Map

User Experience Map (UEM) [5] is a utility design tool that focuses on user experience and helps designers to systematically analyse users' behaviours, emotions and possible pain points when they come into contact with a product, service or project. The construction of a user experience map usually includes the following key aspects:

- User Role Analysis: Identifying the core user groups that use a product or service, and performing individual role segmentation;
- Experience Flow Decomposition: Decomposing the complete user behaviour by timeline and marking important contact points;
- Emotional curve description: portraying the emotional fluctuations of users in interactions through qualitative or quantitative methods;
- Pain point and opportunity point analysis: discovering design optimisation paths through user feedback and experience trends.

In cultural experience design, user experience maps help designers bridge the gap between traditional culture and modern narratives from the audience's perspective. On the one hand, it can provide insights into users' detailed needs, for example, in traditional cultural scenes, users often want to obtain a sense of interactive participation connecting history and reality; on the other hand, it provides designers with operational paths for deconstructing the cultural space, for example, how to redefine the combination of the physical exhibition space and the virtual dissemination platform according to the location, time, and user scenarios. Therefore, the application value of user experience maps in cultural experience and cultural and creative product development is gradually becoming apparent.

### 3. CONSTRUCTION AND ANALYSIS OF TARGET USER EXPERIENCE MAPS

#### 3.1 Sansu Cultural Experience User Role Definition

In the field of cultural consumption, the reasonable division of user roles is an important basis for promoting the optimisation of communication and experience design [6]. In order to scientifically define the target users of Sansu cultural experience, this study comprehensively applies qualitative and quantitative research methods and conducts cluster analysis on the research data. Firstly, through interviews and questionnaires, a large amount of data on the target users' cultural consumption preferences, participation scenarios, interests and demands, and behavioural patterns are collected; secondly, crowd

clustering analysis and content categorization are used to subdivide the cultural experience users according to the variables of depth of interest, mode of participation, and experience needs; finally, combining the uniqueness of the Sansu culture and the dissemination objectives of the cultural tourism project, several types of core users with typical characteristics are extracted from the data. Lastly, in combination with the uniqueness of the Sansu culture and the communication objectives of the cultural tourism project, several types of core user roles with typical characteristics are extracted from them, which facilitates targeted optimisation in the subsequent design process. Based on this, this study divides the user groups of Sansu culture experience into the following three core roles, i.e., in-depth culture enthusiasts, mass tourists, and educational groups (teenagers) from the four dimensions of user motivation, user behaviour, user goals and user attitudes, as shown in "Table 1".

Table 1. Classification of target users

Style	User motivation	User behavior	User target	User attitude
Deep Culture Lovers	Exploring the depth of cultural knowledge and pursuing the resonance of ideas	In-depth reading of literature, inclination to in-depth explanations, attention to exhibition details	Deepen your knowledge of Sansu culture and intellectual gain and enhancement	Seriousness, preference for systematic and academic presentation, aversion to shallow expression
Public Visitors	Recreation, shallow cultural experience	Spontaneous visits, fragmented understanding, photo-taking, preference for interesting content	Relax and acquire simple cultural knowledge and pleasure	Open and relaxed, preferring interactive and interesting presentations, easily fatigued by academics
Educational groups (adolescents)	Completion of learning tasks (students) or passive participation in activities (children)	Enjoys interactive, playful presentations and has a short attention span	The student body seeks to accumulate knowledge, while children focus on fun experiences.	Active but easily burned out, preferring dynamic and lively education methods

#### 3.2 Sansu Cultural Experience User Experience Map Construction

In recent years, with the continuous development of the cultural tourism industry, the traditional cultural communication method has gradually changed to immersion and experience. User experience map, as a kind of analysis tool focusing on user perspective, can effectively integrate the touchpoints and feedbacks of users in the process of cultural experience [7], so as to provide an intuitive basis for the improvement of cultural communication. For the whole process of Sansu cultural communication, this study divides the user experience into three key phases: the pre-trip exploration phase, the visit and interaction phase, and the cultural memory and continuity

phase. By sorting out the user journey, the user experience map of the target users of the Sansu cultural experience is constructed, as shown in "Figure 1".

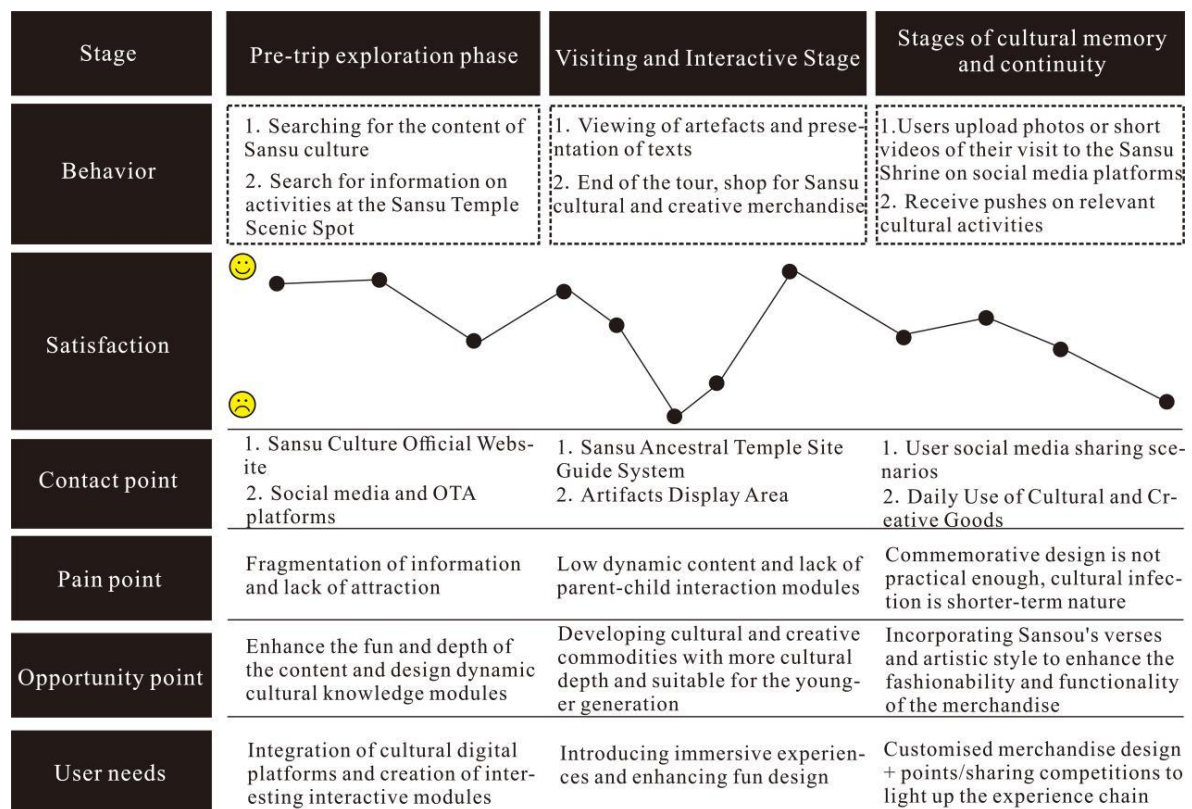


Figure 1 User experience map of the target users of the Sansu cultural experience.

### 3.3 User Requirement Acquisition Based on Experience Maps

The core value of user experience maps lies in resolving the behavioural patterns, emotional fluctuations and demand pain points during user contact through visual means [8]. In this study, the main features of user needs are further explored by dividing users into three types and combining the behavioural experiences of different roles in the exploration, interaction and memory phases. On this basis, the key pain points existing in the process of Sansu cultural experience are analysed in depth and the opportunity points in design practice are identified, taking into account the trend of the cultural consumption market.

#### 3.3.1 Pain Analysis

##### 3.3.1.1 Lack of Value Integration of Scattered Information

Searching for information before travelling is the first part of tourists' exposure to culture. However, feedback from many users shows that the current information on Sansu culture is too one-sided, and the content is usually limited to the

geographical background of the Sansu Temple, ticketing information and a rough historical introduction, with a lack of storytelling that can stimulate deeper interest. In-depth culture enthusiasts are looking forward to obtaining systematic background knowledge about the literary value, philosophical thinking or cultural status of Sansu culture in advance; while for ordinary tourists and youth groups, they would like to explore more dynamic and interesting content touchpoints, such as vivid stories of historical events and entertaining interpretive videos.

##### 3.3.1.2 Lack of Interactive Design for On-site Experience

Despite the rich cultural heritage resources preserved in the Sansu Shrine, most interviewees mentioned that the visiting process was too monotonous and boring, stuck in passive acceptance of information input. Ordinary visitors pointed out that the way of explanation is traditional and lacks of interest. Cultural enthusiasts, on the other hand, believe that there is a lack of thematic and in-depth guided tours, for example, object exhibitions often lack contextual supplements or multi-dimensional interpretations,

and the design of the pavilion is not expressive enough in terms of immersive experience, which makes it difficult for users to develop a deep understanding of important cultural connotations, such as the ideological, literary, and spiritual kernel of the Su family.

### *3.3.1.3 Lack of Value Connection for Cultural and Creative Extension*

In terms of the continuity of cultural experience, many users expect to retain a pleasant cultural experience through cultural and creative products after the visit. However, the general problem of the current Sansu cultural and creative products lies in the serious homogenisation and weak cultural relevance. For example, most of the products on the market are mainly in the form of traditional bookmarks and commemorative coins, but lack of design innovation that integrates the 'Sansu spirit' or literary aesthetics. In addition, users generally reflect that the practicality of cultural and creative commodities is insufficient, and the phenomenon that the price does not match the function increases the resistance of users to purchase in the selection process. Teenagers and young users, in particular, are eager for more personalised cultural and creative products that incorporate fun and fashionable elements.

## *3.3.2 Opportunity Point Analysis*

### *3.3.2.1 Creating a Multidimensional Cultural Communication Platform*

In order to solve the problem of dispersed information content in the pre-trip exploration stage, a digital integration platform with interactive visualisation as its core can be built, gathering content resources from literature, history, geography and other aspects to enhance the convenience and interest of users in obtaining information. Through the integration of information and dynamic updating of thematic modules, the platform can provide users with cultural content of high relevance and concern, stimulate their interest in exploration, and enhance the efficiency and coverage of dissemination.

### *3.3.2.2 Dynamic Mobilisation of the User's Sensory Experience*

Service design emphasises the enhancement of user participation, and the sense of interaction and participation is an important direction in the design

of cultural communication [9]. By integrating multi-sensory experience resources, it allows users to touch the core of culture in a dynamic and diversified form, and bring the sense of distance from the historical context closer. This multi-dimensional interactive design can not only improve the vividness of cultural content, but also realise the transformation from passive reception of cultural information to active immersion in the cultural context, further enhancing the depth of cultural communication.

### *3.3.2.3 Upgraded Consumer Experience Incorporating Cultural Values*

In cultural and creative design, attention should be paid to the integration of cultural connotation and modern consumer experience, and the organic combination of functionality and artistry should be realised through innovative design. The design should deeply explore the cultural characteristics and integrate the representative cultural symbols into the details of the product, so that it can not only inherit the cultural value, but also fit the use habits and aesthetic pursuit of contemporary consumers [10]. With this approach, not only can the cultural recognition of the product be enhanced, but also the culture can be deeply associated with the life scene, so that the user can feel the charm of culture in daily consumption, and promote the continuous deepening of cultural dissemination and the continuation of memory.

## **4. DESIGN PRACTICE**

### ***4.1 Sansu Cultural Experience Model***

Based on user experience theory, this study proposes a full-process, multi-touchpoint cultural experience system of "pre-trip exploration - on-site participation - post-trip memory" by exploring the unique value connotation of the Sansu culture and combining digital technology, interaction design and immersive experience methodology. The model is built around three core dimensions: first, technology-driven digital experience design to enhance the modernisation of cultural communication and the convenience of participation; second, situational immersion experience design based on scene construction and emotional resonance to strengthen the audience's in-depth empathy and sense of immersion in the elements of culture; and third, the value empowerment of cultural and creative products to realise the commercial value and multi-directional

transformation of cultural communication through the extension of cultural content. The third is the value empowerment of cultural and creative products, through the materialisation and extension of cultural content, the commercial value of cultural communication and the multi-directional transformation of the sense of identity are achieved. Through this system design, the Sansu Cultural Experience Model attempts to establish a linkage between traditional culture and modern communication, and provides an innovative path for the digital communication and sustainable development of cultural heritage.

## **4.2 User Experience Requirements**

User experience requirements are the core content to be focused on in the design of Sansu cultural experience, which covers tourists' expectations on information acquisition, emotional connection and interactive participation in the cultural experience. The experience requirements of different user groups have their own focus, ordinary tourists expect to perceive the cultural charm in an easy and interesting way, and they pay more attention to immersive interactive scenes and intuitive cultural displays; while culture enthusiasts have a higher demand for in-depth analysis and excavation of cultural connotations, and they expect to get in-depth experience through rich and detailed explanations, academic activities or thematic exhibitions; for the family tourists and the teenage groups, they prefer to have a deep experience through entertaining and educational ways. For family tourists and youth groups, they are more interested in cultural understanding through entertaining and educational ways, such as interesting interactive devices or edutainment experience activities. According to the characteristics of different users' needs and cultural experience objectives, the user experience requirements are summarised:

### **4.2.1 Standardised Claims**

Users' demand for standardisation is mainly reflected in the need for modularisation and productisation of experience content. When cultural experience is combined with knowledge dissemination, complex and fragmented information often makes users' learning or participation passive and time-consuming, so users expect that key cultural knowledge points can be refined through standardised design, and that the interactive experience can be realised in an easy-to-

use and acceptable way. The demand for standardisation is not only a functional need for a form of cultural communication, but also reflects users' expectation of the cross-scenario fun of modular creation, as well as the need for more systematic and logical outcomes. Through the design of standardised modules, users are able to obtain a higher degree of freedom of creative expression from a variety of combinations, while the clear path to completion of the work further enhances the convenience and sustainability of the user experience.

### **4.2.2 Outcome Claims**

Users' concern with outcome claims lies in the ability to obtain tangible outputs as a result of the act of experiencing. This claim itself carries the user's expectation of achievement, memorability and participation value. In the act of cultural dissemination, the materialised output not only strengthens the user's memory of the cultural content, but also has a long-term emotional connection and dissemination significance. If the dissemination of Sansu culture can be combined with the design of materialised outcomes, such as the composition of family shrine imagery, historical scenes and other ornaments through assembling, it will be able to effectively meet the needs of users and provide a long-lasting medium of cultural perception for family and individual users. User-generated works are not only the proof of the experience process, but also the carrier for the long-term retention of cultural symbols.

### **4.2.3 Emotional and Value Appeal**

Users also show a strong demand for emotional resonance in their cultural experience. Connecting with the spiritual core of the Sansu family can stimulate users' self-reflection and sense of cultural identity. By deeply perceiving the historical and spiritual connotations of Sansu culture, users hope to go beyond mere entertainment participation and find a connection between cultural imagery and their personal life philosophy. In the design, this demand can be reflected through the combination of static display and interactive scenes, so as to evoke users' deep reflection on values in the experience situation, and let tourists have deeper resonance with Sansu's thoughts in moving and joyfulness, so as to strengthen the attraction and infectious force of culture.



#### 4.2.4 Innovation and Fun Appeal

With the rapid development of technology, users are demanding more innovation in the experience of cultural communication. Unlike traditional one-way transmission, users expect the experience to become more interactive, interesting and original. The integration of new technologies has gradually changed this demand from an auxiliary means to a core link, which can present the traditional cultural content in a novel form and further narrow the distance between traditional culture and modern users. In the communication of Sansu culture, breaking through the constraints of traditional media, the interesting experience based on technological innovation can undoubtedly attract users' participation more efficiently, and prompt participants to extend it from personal experience to social communication behaviour. Through the innovative means of rejuvenation and intelligence, the social benefit and economic value of cultural communication can be further enhanced.

### 4.3 Experience Details

In order to meet the multi-level participation needs of users in cultural dissemination and inheritance, this study takes user experience theory as a guide, combines the advantages of modern digital interactive technology and traditional cultural crafts, and designs a systematic, practical and innovative digital cultural experience programme. The experience design closely follows the two core design modules of 'online interaction' and 'offline physical production', and takes the refined interface interaction process design and scenario-based physical production experience as the means to deconstruct and transform the traditional cultural knowledge into a highly immersive and creative interactive system with visualisation of the results. visualised interactive system.

#### 4.3.1 Online Interaction Module Design

As the starting point of the whole experience system design, the core objective of the 'online interaction' is to guide users to deeply understand the knowledge of Sansu culture and motivate them to actively participate through the design of immersive digital interface and multimedia interactive functions. the home page of the APP interface displays the content zones in the form of a dynamic flow of information, including the cultural topics, handicrafts, experience zones and user

community modules. The home page of the APP interface displays content zones in the form of dynamic information flow, including cultural topics, handmade crafts and user community modules. At the same time, the homepage recommendation is updated in real time according to the user's browsing and historical participation data to ensure that the pushed content accurately matches the user's interest, as shown in "Figure 2".



Figure 2 Login interface and home page.

In the block assembly game experience area, users can click into the historical context analysis behind the Sansu culture, deepening the user's emotional experience from the details, as shown in "Figure 3". In order to ensure the cultural learning experience after purchase, users can click to view the high-resolution 3D disassembled structure of the block model after completion of the online assembly, and intuitively understand the whole process of the model assembly with a free rotating perspective, as shown in "Figure 4". Inspired by the classic cultural imagery related to Sansu, all the modules are built-in with strong safety magnets to ensure stable assembly and easy disassembly and reorganisation, inspiring unlimited creativity.



Figure 3 The interface of building block assembly game experience.



Figure 4 Completed building block toys.

#### 4.3.2 Cross-channel Cultural Touchpoints and Community Incentive Design

In order to achieve sustainability and personalised dissemination of culture, the experience design module further improves the cross-platform integration of online and offline cultural touchpoints. After users have completed the online material kit craft or offline course experience, the APP has built-in interactive sharing functions. The 'My' page displays the outstanding works uploaded by users in the community during the month in the form of a submission wall, which includes high-quality photos of objects and short essays on their creations, as shown in Figure 6. In addition, the 'Cultural Communication Points System' has been developed so that users can earn points after uploading their works and exchange them for cultural derivatives when they participate in subsequent activities. The points system was developed directly for the cultural community,

further enhancing user stickiness and deep participation.



Figure 5 Sansu Cultural Experience Workshop interface and 'My' interface.

## 5. CONCLUSION

This study focuses on the dissemination and inheritance of Sansu culture, and through the experience design combining online interaction and offline physical production, it not only achieves the innovation of traditional cultural dissemination form, but also meets the needs of modern users for personalisation, interactivity and immersion. By integrating digital interaction with offline production, this study achieves the compatibility of cultural knowledge dissemination and personalised experience in the user experience. On the one hand, the digital interactive technology significantly enhances the breadth of content dissemination and ease of participation; on the other hand, the design of offline immersive scenarios enhances the depth and authenticity of the user's cultural experience. This organic integration of online and offline experience mode not only extends the reach radius of cultural communication, but also promotes the transformation of traditional culture from static presentation to dynamic communication, and injects a more vivid contemporary charm into the Sansu culture. In addition, the cultural experience design combines education and fun, so that the dissemination of Sansu culture can meet the entertainment needs of tourists while achieving the core goal of cultural inheritance, and provide an innovative demonstration for the dissemination of Sansu culture through the experience mode of 'technology + creation + cultural empathy', which



helps to promote the sustainable development of traditional culture in the digital era. It helps to promote the sustainable development of traditional culture in the digital era. In the future, this model can be combined with more digital technology and folk crafts to further stimulate the deep interaction between traditional culture and modern tourism, and create new possibilities for the dissemination and value reconstruction of Chinese culture.

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