

# Cultural Interaction, Dissemination in Ethnic Tourist Destinations: Cultural Identity and Symbol Construction—A Case Study of the Old Town of Lijiang

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**Abstract:** Research on cultural interaction and dissemination in ethnic tourist destinations is of great value for protecting and promoting local cultures. To clarify the impacts of cultural identity and symbol construction on cultural dissemination in ethnic tourist destinations, and identify the characteristic elements and key influencing factors of cultural interaction and dissemination in such destinations, this paper uses field investigations, literature reviews, and expert interviews to summarize and classify the relevant elements and factors. The Term Frequency-Inverse Document Frequency (TF-IDF) algorithm and cluster analysis are employed to extract keywords and conduct frequency analysis, identifying key influencing factors such as ethnic culture, ethnic music, and ethnic architecture. The Old Town of Lijiang, with its unique Dongba culture, traditional architecture, and Naxi ancient music, has become a paradise for numerous domestic and foreign tourists. Therefore, this paper selects Lijiang as a specific case study. Based on the mechanism of cultural interaction and dissemination, field investigations are carried out to refine cultural symbols and design features, further improving symbol construction. According to the identified influencing factors and symbol construction, participatory cultural experience activities are designed in cooperation with local communities to enhance cultural interaction, dissemination, and identity. In the experimental part, pre-test and post-test designs as well as cross-sectional survey designs are adopted. Domestic and foreign tourists visiting Lijiang are randomly divided into an experimental group and a control group. Through questionnaires, 85% of the tourists who participated in the cultural interaction activities designed in this paper indicated a higher awareness of Lijiang, and 75% were willing to spread Lijiang culture to others. This verifies the positive impacts of ethnic culture, ethnic music, and ethnic architecture on the culture of ethnic tourist destinations.

**Keywords:** Ethnic tourist destination; Cultural interaction and dissemination; Cultural identity; Symbol construction; Old Town of Lijiang

## 1. Introduction

With the development of the times, people's demand for tourism has increased. Ethnic tourist destinations, with their unique characteristics, have gradually attracted a large number of tourists. However, in the cultural dissemination and exchanges among ethnic tourist destinations, problems such as ambiguous cultural identities and lack of symbol construction are common, which directly affect the protection and inheritance of local cultures. In this context, a systematic study on the mechanisms of cultural exchanges and dissemination in ethnic tourist destinations helps to enhance cultural identity and improve the effectiveness of symbol construction.

Ethnic tourism is a project with strong ethnic characteristics and customs [1-2]. It not only helps to increase local revenues but also promotes cultural interaction and dissemination [3-4]. Ethnic tourist destinations are closely related to ethnic tourism. Currently, many scholars have conducted research on their development. Hu Y [5] mainly focused on the organizational communication issues of ethnic tourism in Southwest China and proposed a participatory approach to promote the development of ethnic tourism through organizational communication. The research pointed out that interactive communication can enhance the participation and satisfaction of local community members, facilitate

the sustainable utilization of tourism resources, and improve the quality of tourism products. JIA Y [6] evaluated the rural settlements in mountainous ethnic tourist destinations by constructing a resilience assessment index system. The results showed that the resilience of rural settlements is affected by economic development, ecological environment, and social and cultural factors. Li H [7] comprehensively reviewed international ethnic tourism research, summarized the current research status, development trends, and key issues. This research mentioned that ethnic tourism research covers multiple dimensions such as tourism development models, impact assessments, cultural heritage protection and transmission, and tourism market promotion. It also proposed that future research should strengthen interdisciplinary cooperation, pay attention to the sustainability of ethnic tourism, and improve tourism quality. Wang G [8] took the characteristic restaurants in ethnic tourist destinations as the research object and discussed the status and functions of cuisine in attracting tourists. The research found that characteristic restaurants create unique food experiences for tourists through the supply of regional specialty products, enriching the tourism projects in ethnic tourist destinations. Pang Zhaoling [9] analyzed the changes in tourists' trust in ethnic tourist destinations and the response strategies of various parties. The research found that tourists' trust in tourist destinations varies in different situations such as cultural characteristics, travel experiences, and service levels. The response strategies of stakeholders such as tourists, local residents, and tourism operators to trust changes include improving service quality, enhancing cultural interaction, and improving tourism facilities. LI Y [10] pointed out the challenges and opportunities faced by ethnic tourist destinations in their development, providing valuable insights for achieving their sustainable development. Small foreign enterprises play an important role in local integration, and a favorable growth environment needs to be created. The development of ethnic tourist destinations should attach importance to the continuation of cultural traditions, the improvement of tourism service quality, and the principle of sustainable development. The above scholars' research shows the current situation of ethnic tourism and research methods, but the introduction of cultural interaction and dissemination in tourist destinations is insufficient.

Research on cultural interaction, dissemination, and related cultural identity and symbol construction is of great significance in today's society [11-12]. Acculturation is a cultural and psychological change process that individuals experience when in contact with different cultures [13-14]. Ward C [15] discussed how individuals maintain or adjust their cultural identities and how these processes affect their well-being. Stanley M L [16] studied how individuals' cultural identities affect their cognitive processes, especially the accessibility of memory and knowledge, and introduced research results on how cultural backgrounds affect the way people encode, store, and retrieve information and its relationship with cultural identity. Engel J [17] explored the concept of cultural identity in multilocal spaces, which refer to environments where individuals or groups navigate multiple cultural backgrounds simultaneously. This is particularly relevant to people living overseas, indigenous people, and ethnic minority communities. Parker J [18] focused on the relationship between second-language learning and the development or transformation of cultural identity. It proposed a hypothesis that exposure to a new language may lead to changes in individuals' perceptions of their own and others' cultural backgrounds. This research is of particular significance to educators and policymakers in multilingual environments as it provides information for language education practices and curriculum design. The above-mentioned research mainly focuses on cultural identity. Although enhancing cultural identity is essential, it is also necessary to pay attention to cultural interaction and dissemination in ethnic tourist destinations and related cultural identity and symbol construction.

Based on the influencing factors of cultural interaction and dissemination in ethnic tourist destinations, this paper takes the Old Town of Lijiang as an example and constructs an effective cultural interaction and dissemination path from the two aspects of cultural identity and symbol construction. By classifying the cultural elements Lijiang, it is found that Dongba pictographs, Dongba festival activities, Naxi ancient music performances, and historical architectural styles are the key influencing factors of cultural interaction and dissemination. Through field investigations, the cultural element symbols of Lijiang are optimized and designed, significantly improving them in various evaluation indicators. Finally, participatory experience activities are designed, providing strong support for cultural dissemination and tourism development. The results show that cultural interaction is conducive to cultural identity, and cultural identity is conducive to cultural dissemination.

## 2. Influencing Factors of Cultural Interaction and Dissemination

Three methods are selected to collect a large amount of cultural element data from ethnic tourist destinations. The first method is field investigation. Conduct multiple field investigations of ethnic tourist destinations in different seasons, record the time, place, and number of participants in cultural

activities, and make detailed records by taking photos and videos. The second method is literature review. Consult a large number of historical documents, research reports, government documents, and academic papers on ethnic tourist destinations to obtain relevant information on culture, music, and architecture. The third method is expert interviews. Conduct in - depth interviews with cultural experts, scholars, and local residents in ethnic tourist destinations to obtain their understanding and classification suggestions for cultural elements and collect historical materials on cultural inheritance and changes.

After the data collection is completed, conduct preliminary collation and coding to identify the influencing factors of cultural interaction and dissemination. The coding is shown in Table 1 below.

Table 1. Data Coding Table

Number	Main category and code	Subclass and code
1	Ethnic culture(A1)	A1-1: Ethnic festivals
		A1-2: Ethnic religion
		A1-3: Ethnic script
		A1-4: Ethnic ceremony
2	Folk music(A2)	A2-1:Musical performance
		A2-2:Music education
		A2-3:Types of instruments
		A2-4:Names of pieces
3	Ethnic architecture(A3)	A3-1: Building function
		A3-2: Building styles
		A3-3: Building conservation
		A3-4: Building materials

In Table 1, the main categories include ethnic culture (A1), folk music (A2), and ethnic architecture (A3). Ethnic culture is further subdivided into ethnic festival activities, religion, ceremonies, and scripts. Folk music is further subdivided into musical performances, education, types of instruments, and names of pieces. Ethnic architecture is further subdivided into building functions, styles, conservation, and materials.

Taking "China Domestic Tourism Development Report (2023 - 2024)" as a sample, this report contains data such as tourism economic monitoring and early warning data, tourism passenger flow data, domestic tourism sample survey data, and tourism statistical data of various provinces, and conducts statistics on the tourist source market, destination market, and tourism flow characteristics of domestic tourism. The TF-IDF algorithm is a commonly used weighting technique in text mining and information retrieval to evaluate the importance of a word in a document [19-20]. Therefore, this paper uses the TF-IDF algorithm [21-22] to extract keywords. The formula is as follows:

$$IDF(t) = \log\left(\frac{N}{1+DF(t)}\right) \quad (1)$$

where N refers to the total number of documents, and DF(t) refers to the number of documents containing the term t.

Suppose the total number of documents is 500, and the number of documents containing the term and the results of TF-IDF keyword extraction are shown in Table 2 below.

Table 2. TF-IDF Keyword Extraction

Term	N	DF(t)	TF-IDF score
A1-1: Ethnic festivals	500	80	0.79
A1-2: Ethnic religion	500	100	0.69
A1-3: Ethnic script	500	60	0.91
A1-4: Ethnic ceremony	500	120	0.62
A2-1:Musical performance	500	50	0.99
A2-2:Music education	500	100	0.69
A2-3:Types of instruments	500	190	0.42
A2-4:Names of pieces	500	110	0.65
A3-1: Building function	500	110	0.65
A3-2: Building styles	500	90	0.74
A3-3: Building conservation	500	160	0.49
A3-4: Building materials	500	150	0.52

In Table 2, the higher the TF-IDF score, the higher the importance, information content, and discrimination of the term in a specific document. Therefore, the extracted keywords mainly include ethnic festival activities, ethnic scripts, musical performances, building styles, ethnic religion, and music education.

Conduct frequency analysis on the extracted keywords to determine the frequency of each type of cultural element in different data sources. Identify the key influencing factors according to the frequency. The results are shown in Table 3 below.

Table 3. Frequency Analysis Results

Key word	Code	Frequency
Ethnic festivals	A1-1	7
Ethnic script	A1-3	10
Musical performance	A2-1	9
Music education	A2-2	2
Building styles	A3-2	6
Ethnic religion	A1-2	1

In Table 3, according to the keyword extraction and frequency analysis, the key influencing factors of ethnic culture in ethnic tourist destinations are ethnic festival activities (A1 - 1) and ethnic scripts (A1 - 3), the key influencing factor of folk music is musical performance (A2 - 1), and the key influencing factor of ethnic architecture is building style (A3 - 2).

Ethnic festival activities were mentioned 7 times, and ethnic scripts were mentioned 9 times, indicating the prominent position of ethnic scripts in cultural discussions. Musical performances were mentioned a total of 10 times, the highest frequency among all elements, reflecting its importance in the culture of ethnic tourist destinations. Building styles were mentioned 6 times. Although the frequency is relatively low, it still shows its important role in cultural heritage.

### 3. Practical Paths of Cultural Identity and Symbol Construction

#### 3.1 Mechanism of Cultural Interaction and Dissemination

The Old Town of Lijiang is one of the most popular destinations in ethnic tourist areas. Its ethnic culture [23-24], ethnic music, and ethnic architecture are very representative. This paper selects Lijiang as the research object. The data coding of Lijiang is shown in Table 4 below.

Table 4. Data Coding Table of Lijiang

Number	Main category and code	Subclass	Influence factor and code
1	Dongba culture(C1)	Dongba festivals	C1-1: Dongba festivals
		Dongba religion	
		Dongba pictographs	C1-2: Dongba pictographs
		Dongba ceremony	
2	Naxi ancient music(C2)	Naxi ancient music performance	C2-1: Naxi ancient music performance
		Naxi ancient music education	
		Types of instruments	
		Names of pieces	
3	Traditional architecture(C3)	Historical building function	C3-1: Historical building styles
		Historical building styles	
		Historical building conservation	
		Historical building materials	

In Table 4, Dongba culture (C1), Naxi ancient music (C2), and traditional architecture (C3) correspond to A1, A2, and A3 of ethnic tourist destinations respectively. Dongba culture is further subdivided into Dongba festival activities, religion, ceremonies, and pictographs. Naxi ancient music is further subdivided into Naxi ancient music performances, education, types of instruments, and names of pieces. Traditional architecture is further subdivided into building functions, styles, conservation, and materials.

The key influencing factors of Dongba culture are Dongba festival activities (C1 - 1) and Dongba pictographs (C1 - 2), the key influencing factor of Naxi ancient music is Naxi ancient music performance (C2 - 1), and the key influencing factor of traditional architecture is historical building style (C3 - 1).

Next, analyze from three main aspects how the mechanism of cultural interaction and dissemination in Lijiang promotes the formation of cultural identity and the effective construction of symbols. The specific content is shown in Figure 1.

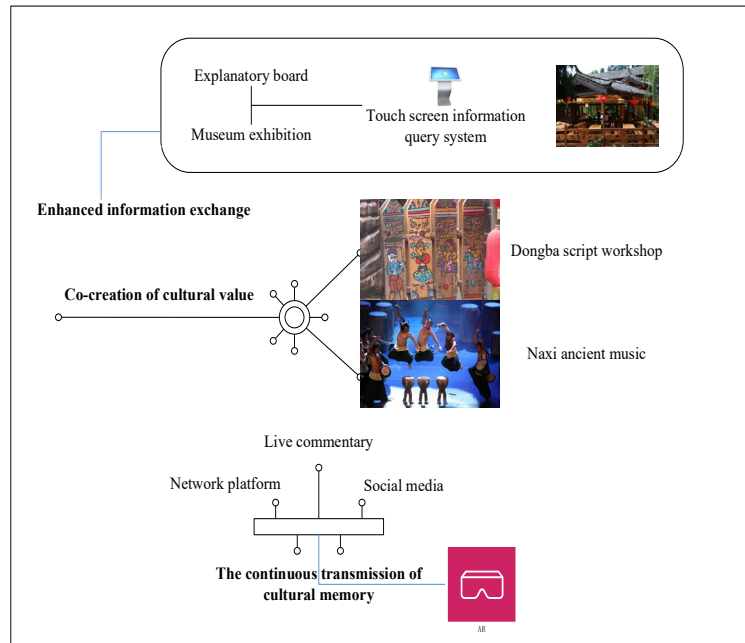


Figure 1. Mechanism of Cultural Interaction and Dissemination

In Figure 1, the enhancement of information exchange is the basis of the cultural interaction mechanism. In Lijiang, effective information exchange is not just one - way communication of information. More importantly, it realizes two - way or multi - way information flow [25]. Tourists can not only obtain knowledge about Dongba culture and Naxi history through traditional methods such as interpretation boards and museum exhibitions but also participate in interactive information exchanges through interactive electronic devices (touch - screen information query systems). This two - way information flow can more effectively attract tourists and increase their understanding and interest in cultural content.

The co-creation of cultural value is the key to enhancing cultural identity. In the cultural interaction of Lijiang, tourists are not only cultural consumers but also can become co - creators of culture [26]. By participating in activities such as Dongba script workshops and Naxi ancient music experiences, tourists can jointly participate in the creation process of cultural products with local artists and craftsmen, thus forming a deep - level identity with Naxi culture. This sense of participation and achievement is incomparable to simply watching or listening. It makes culture no longer distant and closed but open and approachable, further deepening tourists' identity and respect for culture.

The continuous dissemination of cultural memory is a necessary mechanism to ensure cultural inheritance [27]. With the help of digital technology, the cultural dissemination of Lijiang is not limited to on - site interpretation and exhibition. It can also reach a wider audience through network platforms, social media, and other means, transcending the limitations of time and space. By developing AR (Augmented Reality) applications, users can experience the historical scenes and cultural atmosphere of Lijiang even at home. The application of this technology greatly enhances the dissemination power and influence of culture. At the same time, this cross - media cultural dissemination strategy also helps to build cross - cultural dialogue and understanding, promoting the resonance of people from different cultural backgrounds with the Naxi culture of Lijiang.

### 3.2 Refinement and Design Optimization of Cultural Symbols

This paper uses field investigations to deeply understand the cultural background and history of Lijiang and refines relevant symbols for the three major cultural elements of the Old Town of Lijiang. The specific content is shown in Table 5 below.

Table 5. Refinement of Cultural Element Symbols

Number	Code	Refining symbol	Design feature
1	C1	Sun, Moon, Mountain, Water	Simplified, Beautified
2	C2	Shang, Jue, Zhi, Yu	Converted to graphics, Representing rhythm
3	C3	Triangle, Circle, Square	Abstract treatment

In Table 5, as a unique cultural form of the Naxi ethnic group, Dongba culture has Dongba scripts as its basic elements [28-29]. These scripts are based on natural symbols such as the sun, moon, mountains, and water. Through the design features of simplification and beautification, they form unique visual symbols. The sun pattern is simplified into a basic circle, with the complex texture of its rays removed, while retaining its core symbolic meaning. The moon pattern is simplified into a circle with a small dot - shadow, emphasizing its outline in the night sky. The mountain pattern is simplified into smooth curves and triangles to form the image of mountain peaks, while maintaining its sense of stability and grandeur. The water pattern is simplified into flowing lines, representing the fluidity and vitality of water.

A rounded contour is added around the simplified patterns to make them softer, reduce sharp edges, and enhance visual comfort. Colors that match the patterns are selected, with blue representing water, green representing mountains, gold representing the sun, and silver representing the moon.

At the same time, Naxi ancient music takes ancient music scores as its basic elements. The four musical elements of Shang, Jue, Zhi, and Yu are transformed into graphics to represent rhythm, presenting a unique artistic style. Shang is designed as a warm circle with small curves inside, symbolizing warmth and hope. Jue is represented by a series of upward - extending curves or triangles, creating a dynamic image that conveys a sense of joy and vitality. Zhi is designed as a stable rectangle with simple and smooth lines, conveying a peaceful and serene atmosphere. Yu is designed as a downward - curving feather - like shape, expressing a sense of sadness and melancholy.

In terms of traditional architecture, geometric patterns such as triangles, circles, and squares in building components are abstracted. Through the repetition, combination, and transformation of geometric figures, visual symbols with both traditional charm and modernity are created. The triangle represents the traditional roof structure. Its lines are simplified, and redundant decorations are removed, leaving only the most basic geometric form. Then, through the repetition of different sizes and angles, a pattern with rhythm and dynamic beauty is created. Circles and squares represent windows and doors. Embedding a circle in a square or arranging multiple circles side by side forms a new visual structure. These combinations not only enhance the identifiability of the symbols but also reflect the unique treatment of space and light and shadow in Naxi architecture. These optimized - designed symbols are widely applied to wall reliefs, door and window decorations, sculptures, and tourist product designs, and are transformed into various souvenirs (keychains, T - shirts), which can not only display the architectural aesthetics of the Naxi ethnic group but also become effective carriers for spreading the culture of the Old Town of Lijiang, as shown in Figure 2.

Figure 2 shows the optimized - designed symbols applied to T - shirts and keychains, enabling the architectural aesthetics of traditional buildings to regain new vitality in modern society and contributing to the tourism industry and cultural inheritance of the Old Town of Lijiang.

To highlight the effectiveness of the symbol design optimization in this paper, a quantitative scoring method by experts is adopted. Ten indicators are selected to evaluate the results before and after the symbol design. The score range for each evaluation indicator is from 1 to 5, where 5 represents the highest evaluation and 1 represents the lowest. The specific results are shown in Table 6 and Table 7 below.



Figure 2. Symbol Design Optimization and Its Carriers

Table 6. Evaluation Results Before Symbol Design Optimization

Evaluation Indicator	Evaluation Criteria	C1	C2	C3
Cultural Representation	Whether the symbol accurately reflects the core characteristics of the cultural element	3.8	3.9	3.9
Design Innovation	Whether the design is novel and creative	3.8	3.9	4.0
Visual Appeal	Whether the symbol has good visual attractiveness and aesthetics	3.8	4.0	3.9
Identifiability	Whether the symbol is easy to identify and remember	3.8	4.0	3.9
Applicability	Whether the symbol is suitable for application in different media and products	3.8	3.8	4.0
Cultural Heritage	Whether the symbol helps in cultural heritage and education	4.0	4.1	4.0
Emotional Expression	Whether the symbol can effectively convey the relevant emotions and atmosphere	3.9	4.1	4.0
Color Coordination	Whether the color selection is coordinated with the symbol to enhance the visual effect	3.8	3.8	4.0
Simplification Level	Whether the symbol is appropriately simplified while maintaining its core meaning	4.1	3.9	3.9
Contour Treatment	Whether the contour treatment enhances the visual comfort of the symbol	4.0	3.9	4.1

In Table 6, the evaluation scores of the traditional cultural element symbols of Lijiang range from 3.8 to 4.1. In terms of design innovation, C3 leads with 4.0 points, indicating that traditional architecture is more innovative and creative in design compared to the other two elements. In terms of visual appeal, C2 slightly outperforms with 4.0 points, showing strong visual beauty. In terms of identifiability and applicability, both C2 and C3 perform well, with scores of 4.0, indicating that these symbols are easy to identify and suitable for multiple media and products. In terms of cultural heritage, C2 ranks first with 4.1 points, demonstrating its important role in cultural education and heritage protection. In terms of emotional expression and color coordination, C2 also performs excellently, with scores of 4.1 and 3.8 respectively, effectively conveying relevant emotions and atmospheres and enhancing the visual effect. C1 leads in the simplification level with 4.1 points, and C3 leads in the contour treatment with 4.1 points.

Table 7. Evaluation Results After Symbol Design Optimization

Evaluation Indicator	Evaluation Criteria	C1	C2	C3
Cultural Representation	Whether the symbol accurately reflects the core characteristics of the cultural element	4.5	4.3	4.4
Design Innovation	Whether the design is novel and creative	4.2	4.5	4.3
Visual Appeal	Whether the symbol has good visual attractiveness and aesthetics	4.4	4.4	4.5
Identifiability	Whether the symbol is easy to identify and remember	4.3	4.2	4.4
Applicability	Whether the symbol is suitable for application in different media and products	4.4	4.3	4.5
Cultural Heritage	Whether the symbol helps in cultural heritage and education	4.5	4.4	4.3
Emotional Expression	Whether the symbol can effectively convey the relevant emotions and atmosphere	4.3	4.5	4.4
Color Coordination	Whether the color selection is coordinated with the symbol to enhance the visual effect	4.4	4.3	4.5
Simplification Level	Whether the symbol is appropriately simplified while maintaining its core meaning	4.5	4.4	4.3
Contour Treatment	Whether the contour treatment enhances the visual comfort of the symbol	4.4	4.5	4.4

In Table 7, the optimized design of C1 symbols obtained 4.5 points in cultural representation, showing its accurate capture of core characteristics. In terms of design innovation, the symbols of Naxi ancient music led with 4.5 points, indicating the novelty and creativity of their optimized design. The symbols of traditional architecture received 4.5 points in visual appeal, proving their good visual beauty. In addition, the optimized - designed symbols perform well in visual appeal, identifiability, applicability, cultural heritage, emotional expression, color coordination, simplification level, and contour treatment. These scores not only quantify various aspects of the design but also provide clear directions and bases for the continuous improvement of the design.

By comparing the results of Table 6 and Table 7, it shows that the symbol design optimization of the cultural elements of Lijiang in this paper has significantly improved in all evaluation indicators. Overall, after the design optimization, these symbols retain traditional aesthetics while demonstrating the innovation and practicality of modern design, providing strong visual support for the cultural dissemination and tourism development of the Old Town of Lijiang.

### 3.3 Design of Participatory Cultural Activities

In cooperation with the local community, souvenirs such as T - shirts and keychains with different

symbol designs are applied to participatory cultural activities. Interactive games (treasure - hunting games, handicraft - making competitions) with souvenirs as the theme are designed. A storytelling session is arranged to interpret the symbols on T - shirts and keychains and introduce the cultural stories and historical significance behind them to participants. This helps to deepen participants' understanding and identity of local culture, enabling tourists to change from passive information receivers to active participants in cultural experiences, deepening their understanding of Naxi culture and promoting the formation of cultural identity.

In addition to the application of souvenirs, specific activity designs related to Dongba culture, Naxi ancient music, and data - guided tours are shown in Figure 3.

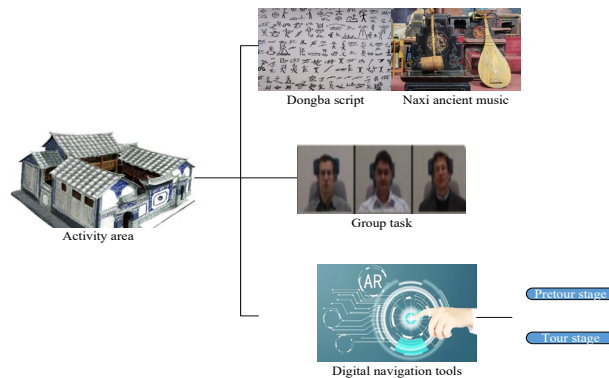


Figure 3. Cultural Activity Design

Figure 3 shows that in the Dongba script workshop in the Old Town of Lijiang, the activity venue is selected in a courtyard with traditional Naxi architectural style (a wooden - structured "three - winged house with a screen wall"), providing tourists with an immersive cultural experience environment. The activity content starts with an introduction to the historical background of Dongba culture and gradually transitions to practical Dongba script writing exercises, allowing tourists to learn and experience in practice.

The Naxi ancient music experience activity in Lijiang invites local Naxi musicians to perform and explain in person, enabling tourists to experience the charm of Naxi ancient music up close. Through the musicians' explanations, tourists can also understand the history and cultural background of Naxi ancient music, ensuring the authenticity and accuracy of cultural dissemination. In the Dongba script workshop, group competitions and cooperation tasks are set up to encourage communication and sharing of learning experiences among tourists. This interaction can increase the sense of connection among tourists and improve the overall participation and satisfaction of the activity.

In the process of developing the digital guide of the Old Town of Lijiang, a user - centered design method [30-31] is adopted. By deeply understanding the needs and habits of tourists, the basic functions and interface design of the application are determined. At the same time, considering the authenticity and richness of culture, the accuracy and comprehensiveness of the application content are ensured. Then, augmented reality technology is selected as the main development tool to provide a novel and interactive cultural experience method by integrating virtual information into the real environment. Finally, multiple rounds of user testing and feedback are carried out to optimize the performance and user experience of the application.

The implementation of the digital guide of Lijiang is mainly divided into two stages: the pre - travel stage and the travel stage. In the pre-travel stage, tourists can download the app in advance to understand the history and culture of Lijiang and its main attractions. In the travel stage, tourists can see the real - time view of the ancient town through their mobile phone cameras, and at the same time, relevant historical information and cultural explanations will be displayed on the screen. In addition, the app also provides practical functions such as route planning and attraction recommendations to help tourists better plan their trips.

This paper also aims to inspire and guide the residents of the Old Town of Lijiang, especially the Naxi ethnic group, to engage in homestay operations, tour - guiding services, and folk story - sharing activities. The integration of this group into the tourism promotion strategy highlights the leading role of residents in cultural inheritance. This plan demonstrates a deep understanding and respect for the protection and promotion of local cultural heritage, aiming to transform local residents into key drivers



of tourism experiences and cultural education.

Special training courses are provided for residents before implementing the tourism promotion strategy to improve their cultural knowledge and service capabilities, enabling them to play a greater role in tourism services and cultural dissemination activities. After successful training, residents share their life experiences and cultural knowledge in the form of story - telling sessions, allowing tourists to have a more direct and in - depth understanding of the life and culture of the Naxi ethnic group. The entire promotion process will be continuously evaluated based on feedback to understand the activity effects, identify existing problems, and make timely corrections and optimizations.

#### 4. Measurement of Cultural Interaction and Dissemination Effects

##### 4.1 Cultural Identity

A pre-test and post - test design is used to evaluate whether different cultural interaction and dissemination strategies have a positive impact on the Naxi cultural identity of tourists and local residents. The experimental group participates in the cultural interaction activities designed in this paper, while the control group participates in traditional activities instead of those designed in this paper. A sample of 500 domestic and foreign tourists visiting Lijiang is selected and randomly divided into an experimental group and a control group, with 250 tourists in each group. The data collection methods include questionnaires and in - depth interviews. A set of questionnaires containing single - choice questions related to the knowledge of Dongba culture, Naxi ancient music, and traditional architecture is developed.

The questionnaire consists of 10 questions, with 1 point for each question and a total score of 10 points. The questionnaires are distributed twice, before and after the cultural interaction activities. Participants who show significant changes in cultural identity in the questionnaires are selected for in - depth individual interviews to obtain more abundant case information. After the data collection is completed, SPSS (Statistical Package for the Social Sciences) software is used for data analysis. The total scores and correct - answer rates of different groups are calculated, as shown in Table 8.

Table 8. Questionnaire Answering Situations of Different Groups

Group		Total score	Actual score
Experimental group	Cultural interaction before the event	2500	1078
	Cultural interaction after the event		2357
Control group	Cultural interaction before the event		1080
	Cultural interaction after the event		1865

In Table 8, the scores of the experimental group and the control group before participating in the cultural interaction activities are very close, and neither is very high. However, the scores of both groups increase after participating in the cultural interaction activities, and the experimental group has the highest score.

Based on the data in Table 8, the score rates of the two groups before and after participating in the cultural interaction activities are calculated, as shown in Figure 4.

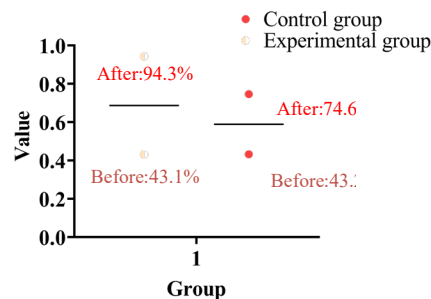


Figure 4. Score Rates Before and After Participating in Cultural Interaction Activities

In Figure 4, the score rate of the experimental group after participating in the cultural interaction activities designed in this paper increased by 51.2% compared with that before the activity, while the score rate of the control group after participating in the traditional cultural interaction activities increased by 31.4% compared with that before the activity.

The paired - samples t - test is a statistical method used to compare the data of the same group of subjects at different time points (such as before and after cultural interaction activities) to test whether the differences within the group are significant. The results calculated using SPSS software are shown in Table 9.

*Table 9. t - Test Results of Different Groups*

	t-value	P value
Experimental group	5.36	<0.0001
Control group	3.44	0.001

In Table 9, the t - value of the experimental group is 5.36, and the p - value is less than 0.0001, indicating that there is a significant difference between the data measured at different time points in the experimental group. Specifically, the data of the experimental group changed significantly before and after participating in the cultural interaction activities, and this change is highly statistically significant because the p - value is much lower than the commonly used significance level of 0.05. In contrast, the t - value of the control group is 3.44, and the p - value is 0.001. Although it also indicates a significant difference, compared with the experimental group, its p - value is higher, indicating that although the difference in the control group is statistically significant, the degree may not be as high as that of the experimental group. These results suggest that the cultural interaction activities designed in this paper have a more significant impact on the experimental group.

## **4.2 Breadth of Cultural Dissemination**

In ethnic tourist destinations like the Old Town of Lijiang, evaluating the breadth of cultural dissemination is particularly important for understanding the impact of cultural interaction and dissemination strategies. This paper adopts a cross - sectional survey design, combined with social media analysis and follow - up surveys after cultural activities, to evaluate the effects of different cultural interaction and dissemination strategies in Lijiang on increasing the dissemination scope of cultural information and enhancing cultural awareness.

### **4.2.1 Sample Selection**

Sample 1: 500 tourists at the cultural interaction activity site are selected for a short questionnaire survey to collect their understanding of the activity and their willingness to spread it. Among them, 250 participated in the cultural interaction activities designed in this paper, and the other 250 did not. Sample 2: The social media analysis tool Hootsuite is used to track and analyze the usage frequency and dissemination range of tags and keywords related to the culture of the Old Town of Lijiang. Two months after the cultural interaction activities, an online follow - up survey is conducted on the tourists who participated in the questionnaire to understand whether they have spread the cultural information of Lijiang to others.

### **4.2.2 Data Analysis**

The awareness and dissemination willingness of tourists who participated in the questionnaire survey regarding the culture of Lijiang are calculated. The specific results are shown in Table 10.

*Table 10. Tourists' Awareness and Dissemination Willingness of the Culture of Lijiang in the Questionnaire Survey*

Tourist group	Number of people	Awareness (%)	Communication intention (%)
Visitors participating in interactive activities	250	85	75
Visitors who do not participate in interactive activities	250	45	30
Overall (Participating + not participating in interactive activities)	500	65	52.5

In Table 10, the number of tourists who participated and did not participate in the cultural interaction activities in the questionnaire survey is the same. The results show that 85% of the tourists who participated in the cultural interaction activities designed in this paper expressed a high level of awareness of the culture of the Old Town of Lijiang, while the proportion of those who did not participate was 45%. In terms of dissemination willingness, 75% of the tourists who participated in the activities were willing to spread the Lijiang culture to others, compared with only 30% of those who did not participate. This indicates that the cultural interaction activities designed in this paper significantly enhance tourists' cultural awareness and dissemination willingness, thus contributing to the spread of cultural information in a wider area. Overall, among all the tourists surveyed, an average of 65% showed awareness of the culture of the Old Town of Lijiang, and an average of 52.5% of the tourists were willing to spread the cultural information.

The results of using Hootsuite to track and analyze the usage frequency and dissemination range of tags and keywords related to the culture of Lijiang are shown in Table 11.

*Table 11. Usage Frequency and Dissemination Range of Keywords Related to the Culture of Lijiang on Social Media*

Keywords/Tags		Usage frequency	Spread range
C1	C1-1	498	1243
	C1-2	502	1557
C2	C2-1	650	1650
	C2-2	550	1350
C3	C3-1	367	1076
	C3-2	433	1324

In Table 11, the units of usage frequency and dissemination range are times and person - times respectively. The dissemination range is equivalent to the number of times of forwarding. The usage frequencies of keywords C1 - 1 and C1 - 2 under the C1 cultural element are 498 times and 502 times respectively, and their dissemination ranges reach 1243 and 1557 person - times respectively. As the second group of keywords, C2 shows higher usage frequencies of 650 times and 550 times, indicating that its related content has a wider appeal and influence. The C3 keyword group records relatively lower usage frequencies (367 times and 433 times). These data show that different cultural elements and themes have different levels of audience attention and dissemination effects, reflecting the diversity and hierarchy of the cultural dissemination strategies of the Old Town of Lijiang.

### 4.3 Activity Design Effectiveness

To verify the effectiveness of the activities designed in the practical path of cultural identity and symbol construction in this paper, tourists who participated in the cultural interaction activities designed in this paper and are between 18 - 45 years old are selected to ensure age diversity of the sample. After meeting the age range, tourists with a certain level of cultural literacy and travel experience are further screened to ensure that they can fully understand and evaluate the cultural activities. The experimental tools include a multi - dimensional cultural experience activity manual (activity rules, cultural knowledge points, interactive tasks) and a satisfaction questionnaire (designed to include activity attractiveness W1, cultural knowledge acquisition W2, interactive experience W3, emotional investment W4, and overall satisfaction W5).

The satisfaction mean is on a 5 - point scale, where 4.5 - 5.0 represents very satisfied, 3.0 - 4.4 represents satisfied, 2.0 - 2.9 represents average, 1.0 - 1.9 represents dissatisfied, and 0 - 0.9 represents very dissatisfied. The standard deviation is used to measure the degree of dispersion of satisfaction, and the sample size represents the number of tourists participating in the satisfaction survey. The results of the satisfaction questionnaire are shown in Table 12.

*Table 12. Results of the Satisfaction Questionnaire*

Dimensionality	Average satisfaction	Standard deviation	Sample size
W1	4.5	0.7	100
W2	4.3	0.6	100
W3	4.6	0.5	100
W4	4.4	0.8	100
W5	4.7	0.6	100

The satisfaction results in Table 12 reveal that the cultural interaction activities designed in this paper are deeply loved by the participants. The average satisfaction score of the W1 dimension is 4.5 points, which fully reflects the attractiveness of the activity content and the high - level interaction of the participants. For the W2 and W3 dimensions, the average scores are 4.3 and 4.6 points respectively, indicating that the activities not only effectively spread cultural knowledge but also provide productive communication experiences. In terms of W4, the average score of 4.4 reflects the deep participation and emotional investment of the participants in the activities. Finally, the W5 dimension has the highest average score, reaching an extremely high standard. This clearly shows the overall satisfaction of the participants with the activity planning and execution. These data consistently indicate that the cultural interaction activities designed in this paper have achieved remarkable success in all dimensions.

The low values of the standard deviation (0.5 - 0.8) show that the satisfaction of the participants with the activities has a low degree of dispersion, indicating that most participants' evaluations of the activities tend to be consistent. In conclusion, these results verify the effectiveness of the activities designed in the practical path of cultural identity and symbol construction in this paper in different dimensions, providing strong data support for the actual implementation of cultural experiences and

tourism activities.

The Cronbach's  $\alpha$  coefficient is used to evaluate the internal consistency of the questionnaire. The specific results are shown in Table 13. Generally, an  $\alpha$  coefficient greater than 0.7 indicates good internal consistency.

Table 13. Reliability and Validity Analysis of the Satisfaction Questionnaire

Variable/Metric	Reliability analysis results	Validity analysis results
W1	Cronbach's $\alpha = 0.85$	Content validity: expert rating = 0.92, Cronbach's $\alpha = 0.84$
W2	Cronbach's $\alpha = 0.82$	Exploratory factor analysis (EFA): number of factors = 2, explained variance = 60.5%
W3	Cronbach's $\alpha = 0.83$	Confirmatory factor analysis (CFA): goodness-of-fit index = 0.96
W4	Cronbach's $\alpha = 0.88$	Item-total correlation: average correlation coefficient = 0.70
W5	Cronbach's $\alpha = 0.86$	Structural validity: model fit is good, $\chi^2/df = 2.34$
Total questionnaire reliability	Cronbach's $\alpha = 0.84$	Overall questionnaire validity: comprehensive assessment = 0.95

Table 13 shows the reliability and validity analysis results of the satisfaction questionnaire. In the reliability analysis, the Cronbach's  $\alpha$  coefficient of each dimension (W1 to W5) is higher than 0.8, indicating that there is a good consistency among the measurement items within each dimension of the questionnaire, and the reliability is high. The Cronbach's  $\alpha$  of W4 is 0.88, showing a high degree of consistency among the measurement items for evaluating emotional investment to a certain extent. In terms of validity analysis, each dimension also shows different validity verification methods. The expert rating and Cronbach's  $\alpha$  of W1 are 0.92 and 0.84 respectively, confirming the content validity and internal consistency of activity attractiveness. W3 uses confirmatory factor analysis to show a good model fit index (goodness - of - fit index = 0.96), strengthening the structural validity of the interactive experience. The Cronbach's  $\alpha$  of the total questionnaire is 0.84, indicating that the overall measurement tool has good internal consistency when evaluating the satisfaction of cultural activities. Overall, these analysis results not only confirm the rationality, reliability, and validity of the questionnaire within the theoretical framework but also provide solid data support for the research, contributing to further evaluation and improvement of cultural activities.

## 5. Conclusion

This paper constructs a practical path of cultural identity and symbol construction based on cultural elements, symbols, and participatory cultural experience activities, taking Lijiang as a case. It effectively enhances tourists' participation in cultural identity and symbol construction in ethnic tourist destinations. The research results show that through cultural interaction and dissemination, tourists' cultural identity scores have significantly increased, and their dissemination willingness has also enhanced. Although this paper has achieved certain results in theory and methods, there are still limitations, such as a small sample size and a narrow research scope. Future research can expand the sample range and deeply explore the cultural interaction and dissemination mechanisms of different ethnic tourist destinations, hoping to provide more references for the protection and inheritance of ethnic cultures.

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