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Environmental Design Evaluation and Renewal of Chinese Archaeological Parks: A Tourist Perspective

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Abstract: The study collected 150 questionnaires from each of the 15 archaeological parks in China, evaluated the environmental design problems that affect tourists' travel experience from the perspective of tourists, and used the Kruskal-Wallis test and one-way ANOVA to explore the correlation between the three characteristics of archaeological parks and design problems, and finally proposed improvement suggestions. The literature review provided a theoretical basis for establishing the evaluation framework of the environmental design of archaeological parks and summarized the design problems that often occurred in previous archaeological parks. The results showed that tourists were mainly dissatisfied with the interpretation and display system, facility construction, landscape control, traffic organization, etc., and the geographical location and area of archaeological parks had a significant impact on some problems. The study reveals the importance of regular environmental design assessment and update for heritage parks. The study had implications for how archaeological parks formulate long-term plans, environmental design evaluation, renewal designs, and optimize management, which can enhance tourists' travel willingness.

Keywords: tourist perspective, archaeological park, environmental design evaluation, renewal design

1. Introduction

Archaeological parks are a type of public space that integrates tourism and culture, which not only protects and displays the archaeological site and its background environment but also provides various functions such as scientific research, education, recreation, etc [1]. In China, culture is a part of the key economic commodity strategy, and the practice of promoting economic development by using the cultural heritage plus tourism model is particularly strong [2,3]. However, many archaeological parks have declined prematurely due to unreasonable tourism development design [4,5] and with the changes in time and public demand, the response to the presentation of the site has also changed, and archaeological parks are also facing many new challenges [6]. Therefore, it is necessary to monitor and manage archaeological parks in real time and pay attention to their design renewal.

The environmental design of archaeological parks needs to respect the natural environment and the authenticity and integrity of cultural and historical landscapes, use artistic methods and engineering techniques, and create physical environments and visual effects conducive to the protection and display of the site and its background environment while meeting social development

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needs [7,8]. At the same time, as a type of heritage tourism, a good tourist experience is the core of archaeological park design [9,10]. At present, some studies advocate a tourist-oriented approach to the design and management of archaeological parks, but there are few related literature, especially in China, more from a professional and supply perspective to analyze the design problems of archaeological parks [11-13], few have paid attention to the perspective of visitors Moreover, most studies have focused on single or specific cases of archaeological parks, rather than conducting a comparative analysis of different types of archaeological parks.

This study constructed an evaluation framework of environmental design content for archaeological parks, collected 150 tourist questionnaires from each of the 15 archaeological parks in China, and used observation method, questionnaire survey method, content analysis method to collect and analyze data: evaluate the environmental design issues that affect tourist experience, and use one-way analysis of variance method and Kruskal-Wallis test to explore the impact degree of three characteristics (area, geographical location, resources and uses of the archaeological sites at the modern level) on these design issues. This study explored the necessity and feasibility of design renewal and evaluation for archaeological parks, provided direction and improvement suggestions for design renewal for archaeological parks, and proposed issues that need to be paid attention to for the design of future archaeological parks with the same characteristics.

2. Literature Review

2.1. Environmental Design of Archaeological Park: A Comprehensive Framework

According to the environmental design evaluation framework proposed by [14], the evaluation of the environmental design of the archaeological park needs to consider all the following factors: the setting, users, proximate context, design process, the social-historical context. Therefore, before conducting a specific analysis, we need to have a comprehensive understanding of the design process, design ideas, design content, design background, and other aspects of the archaeological park, and analyze the opinions of users based on this information.

First of all, a clear workflow is the premise of the environmental design process [15]. [16-18] proposed a reference design process, which first analyzes the significance, characteristics, and value of the site in the preliminary stage, then determines the core value orientation and overall layout of the archaeological park, and then designs the archaeological park, restoring the function, form and historical relationship of the site, and introducing new themes. [19] proposed a more complete design process for archaeological parks from the planning process-design process-management process. Compared with other literature, it proposed attention to the subsequent management of archaeological parks, including landscape, facilities, visitors, scientific research management, and so on. By comparing and analyzing this literature, we can find that the design process of archaeological parks has formed a relatively consistent and complete framework.

The design of archaeological parks should be composed of multidisciplinary personnel [20]. Because environmental designers are not professionals in archaeology, the environmental design of archaeological parks is prone to problems such as insufficient understanding of the value connotation of sites. Therefore, in the preliminary analysis and evaluation, all contents must be prepared. The preliminary analysis is mainly divided into two aspects: resources and status quo of sites and their background environment, which are specifically: cultural resources analysis, location analysis, social economic analysis, environmental analysis, archaeological research analysis, and management analysis [19-22]. The preliminary analysis needs to fully explore the cultural and historical information contained in sites and their background environment, objectively evaluate the status quo of sites and their background environment and find out the existing problems, advantages, opportunities, and threats of sites and archaeological parks.[19] specifically proposed access and

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cycle analysis for archaeological parks, which raised concerns about the convenience of the transportation network and sustainability of design for archaeological parks. Through preliminary analysis and evaluation, we can fully understand the nature, connotation, scope, and layout of sites and their background environment [23], and provide scientific, reasonable, and innovative basis and guidance for subsequent design schemes.

The specific design of archaeological parks needs to clarify the design principles first, and then carry out specific design schemes. International charters, conventions, and documents have constructed clear and complete design principles for sites [24-27]. Relevant industry standards, methods, and specifications have also clarified the design specifications for archaeological parks. Many literature have also interpreted these guiding documents [5,18,28-30]. Although the expressions of design principles are different, under the principle guidance of design goals are consistent: archaeological park environmental design to ensure that sites and their background environment authenticity and integrity. The design should fully protect and display sites and their background environment value and characteristics under minimal intervention on sites. And ensure that sites and their background environmental protection display urban social cultural economic environment sustainable coordinated development. Archaeological park environmental design needs to follow up on a preliminary planning basis to comply with design principles according to visitor needs experience provide the following aspects of content [31,32]: planning archaeological trajectory display site history culture; establish transportation network facilitate visitor travel guide; create green space square increase visitor rest-activity space; enhance architectural environment coordinate site style atmosphere; add facilities guarantee visitor needs safety; plan land function area introduce education recreation scientific research new functions enrich archaeological park connotation value. The above literature although formed a complete content system did not produce a clear framework. This study refers to the [22,33] literature proposed archaeological park content framework they divided archaeological park content into interpretation display planning overall layout overall landscape planning in three directions each direction of content subdivision.

Archaeological park environmental design's subsequent management is the last step in the design process and also the most easily overlooked step. Subsequent management mainly involves visitor flow management landscape management archaeological research management service facility management community participation management etc [19]. Due to a lack of subsequent management, some archaeological parks appear to landscape greening waste, service facilities, outdated sites, people flow too concentrated, etc.

2.2. Analysis of Environmental Design Issues of Archaeological Site Parks

In recent years, cultural tourism has become more and more popular, and archaeological parks have also become hot tourist destinations around the world [34-36]. As more and more tourists flock in, the problems of archaeological parks also begin to emerge. Compared with foreign countries, China has less analysis of the design issues of archaeological parks from the perspective of tourists. However, as the main consumers and users, we must understand their needs and preferences when we do the environmental design evaluation of archaeological parks [37-39,10]. To understand the views and feelings of tourists on the environmental design issues of archaeological parks, this paper refers to some relevant literature and summarizes the following environmental design factors that may affect the tourist experience:

2.2.1. Imperfect Interpretation and Display System

The interpretation and display system of archaeological parks is the core content of the environmental design of archaeological parks, and also an important issue faced by archaeological parks. Especially

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in China's archaeological parks, the "one park one policy" has not been realized [1], and there is a common problem that the cultural resource value and social benefits have not been fully exerted [13,20,40]. The display means of sites are homogeneous, museums play a key role in archaeological parks, public spaces have less content to visit and participate in, lack of educational content [41], and lack of tourist participation and interactivity [40]. The viewing quality of the site itself is weak, and the display mode of revealing the site is difficult to meet the needs of tourists for obtaining information about the site. Tourists tend to see reconstructed buildings and experience specific and realistic scenes [37]. Archaeological parks can use more image-based display methods to provide relevant information about the site [42], but there are problems such as lack of diversity in display methods and exhibition facilities in archaeological parks, such as only restoring living scenes, simulating archaeological sites, etc., or adopting modern performances that are not coordinated with the atmosphere of the site, destroying the authenticity and integrity of the site [40]. Improving and optimizing the interpretation and display system of archaeological parks is an urgent problem to be solved at present.

2.2.2. Incomplete Public Service Facilities and Signage Facilities

Archaeological parks should take into account the basic needs of tourists, provide sufficient and reasonable public service facilities, and ensure the accessibility of tourists. However, some archaeological parks have unreasonable design of public service facilities [43,44], such as insufficient seat rest, toilet number does not take into account the gender, age, and other factors of tourist [45]. Some archaeological parks do not take into account the visiting needs and safety issues of special groups such as elderly people, disabled people, children, etc [46]. For example, Termessos Park's trails are slippery and steep, making it difficult and dangerous for elderly people to walk [45]. Such situations affect the tourist experience and satisfaction and do not conform to the social responsibility and cultural value of archaeological parks. In addition, some archaeological parks have unclear signage systems, and lack professional and effective information interpretation and guidance systems [43,45-47]. Archaeological parks should allow tourists to visit on their own without a guide and understand the history and culture of the site [31]. Archaeological parks should fully consider the situation of tourists, have sufficient service facilities [44], professional information, and clear guidance [31,48] to meet their basic needs and cultural expectations.

2.2.3. Loss of Authenticity and Integrity of Sites

Heritage and tourism have always been contradictory. While promoting the cultural, social, economic, and environmentally sustainable development of sites, tourism also brings risks such as over-tourism and loss of cultural value to sites [49,50]. To meet the needs of tourists, some archaeological parks have adopted excessive measures such as landscape management, service facility construction, commercial development, etc., resulting in damage to the authenticity and integrity of sites. For example, some archaeological parks have intervened in wild plants improperly, introduced exotic plants, and destroyed the original landscape space and viewing sightline [40,51]. Landscape diversity is very important, but it should be designed based on existing diverse environmental elements, rather than introducing landscape elements that contrast with existing landscapes [52]. Some archaeological parks have built a large number of antique buildings, hardened ground surfaces, artificial facilities, and other landscape elements within them, while investing less in repairing sites themselves, creating an overly artificial and false effect [53]. Some archaeological parks overemphasize building amusement parks, zoos, and other tourist facilities, weakening the cultural significance of the park [40]. Some studies have shown that tourists care more about the preservation level of sites, and prefer those that have both repaired and retained their original appearance. Excessive reconstruction is

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unnecessary and undesirable, and appropriate reconstruction can better highlight the authenticity and integrity of sites [54]. These artificial changes are unacceptable to those who like and appreciate sites. But insufficient commercial development will lead to insufficient community participation, affecting the social and economic sustainable development of the park [49]. Ignoring entertainment and leisure functions will make some tourists lose interest in visiting [55]. So finding a balance point in the design of commercial areas, leisure and entertainment area, and landscape greening is very important.

At present, the environmental design of archaeological parks faces multiple challenges. It needs to protect the authenticity and integrity of sites while considering the different preferences and needs of tourists, provide enough facilities and tourism experience, and achieve the sustainable development of archaeological parks.

3. Materials and Methods

3.1. Research Area

This paper selected 15 archaeological parks as the research objects, which are located in Xi'an, Luoyang, Hangzhou, Yinchuan, and Beijing. These cities are all national historical and cultural cities, with rich cultural heritage and tourism resources, and are models of cultural tourism. These archaeological parks are also important attractions in their respective cities, with high popularity and popularity. The number of comments on Meituan exceeds 4,000, which can ensure the validity and representativeness of the questionnaire survey. The specific distribution is as follows: 6 in Xi'an: Mausoleum of the First Qin Emperor Archaeological Site Park, Xingqing Palace Archaeological Site Park, Daming Palace Archaeological Site Park,Dabaosi Temple Archaeological Site Park, Xi'an Qinglong Temple Archaeological Site Park, Huaqing Palace; 4 in Luoyang: Longmen Grottoes Archaeological Site Park, Sui and Tang Luoyang City Archaeological Site Park (Sui and Tang Luoyang City Jiuzhou Pool Archaeological Site Park, Sui and Tang Luoyang City Tiantang Mingtang Archaeological Site Park, Sui and Tang Luoyang City Yingtianmen Archaeological Site Park); 1 in Hangzhou: Liangzhu Ancient City Archaeological Site Park; 2 in Yinchuan: Shuidonggou ArchaeologicalSite Park, Western Xia Mausoleum Archaeological Site Park; 2 in Beijing: Old Summer Palace Archaeological Site Park, Zhoukoudian Peking Man National Archaeological Site Park. Sui and Tang Luoyang City Jiuzhou Pool Archaeological Site Park, Sui and Tang Luoyang City Tiantang Mingtang Archaeological Site Park, Sui and Tang Luoyang City Yingtianmen Archaeological Site Park are regarded as three independent archaeological site parks in this study.

3.2. Indicator Selection and Data Analysis

First, during the May Day period in 2023 (April 29-May 3), 150 valid questionnaires were collected at each sample archaeological park. The questionnaire used open-ended questions, namely "What do you think are the areas that need improvement in the archaeological park?" To ensure the quality of the questionnaire, the interviewers of this survey were all environmental design professionals. The study constructed a design content table (Table 1) based on the design content framework of archaeological parks derived from previous literature. The table was used to evaluate the environmental design of archaeological parks. Before the interview, the interviewer would understand the design process and design background of the archaeological park, and then use the observation method to record their own experience from a professional perspective, to better record and analyze the answers of tourists.

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Table 1: The content framework of environmental design.

Explanation and presentation planning	Explanation and presentation design	Object Positioning Theme Content Method	
	Explanation and presentation architecture	Display streamline Display layout Important node	
Overall layout	Functional partition	Historic site exhibition area Management service area Reserved area	
	Traffic organization	Entrance and exit Road network design Main roads Parking lot	
	Facility distribution	Exhibition facilities	Location and scale of on-site protection exhibition facilities, site museums or showrooms, etc.
		Identification facility	Location and scale of signs, explanation boards, etc.
		Management facilities	Location and scale of ruins park management center, management room, and safety protection facilities.
		Public service facilities	Location and scale of the tourist service center, kiosk, toilet, viewing pavilion, parking lot, transfer point, trash can, seat, etc.
Overall landscape control	Interior environment, Surrounding environment	Landscape spatial layout	The analysis process of landscape cultural characteristics and natural resources characteristics, and the overall spatial structure of the ruins park.
		Style control of buildings and structures	Style, volume, scale, facade, and architectural vocabulary of buildings and structures.
		Shaping of public environment	Important environmental facilities (identification facilities, sculpture sketches, sanitation facilities, advertisements, etc.), night lighting, green landscape, etc.
Overall building control	Interior space layout	Interior space architecture	
	Interior decoration	Interior furnishings, lighting, etc.	

Data resource: Revised by Author [22,33].

Second, content analysis was used to analyze the questionnaire answers of tourists, and the answers were classified and coded according to the dimensions and indicators of the design content table.

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Finally, this study classified archaeological parks according to three characteristics: modern level of resources and uses of sites: based on demand (poorly preserved sites), Based on resources (well-preserved sites) [56], area: less than 2 square kilometers, 2-20 square kilometers, greater than 20 square kilometers [22], and geographical location: urban built-up area, suburban or urban-rural junction, villages or rural hinterlands, wilderness [5].

After classifying archaeological parks, combined with the classification summary of design problems, a one-way analysis of variance was used to explore the correlation between the characteristics of archaeological parks and design problems, and then the Kruskal-Wallis test was used to verify the results of the one-way analysis of variance for the second time, and finally took the overlapping results.

4. Results

The study obtained the following three results: the three characteristics of 15 archaeological parks: area, geographical location, and modern level of resources and uses of sites (Table 2); the design problems that tourists think exist in 15 archaeological parks; the correlation between the characteristics of 15 archaeological parks and the statistical design problems.

Table 2: The classification of three characteristics of archaeological parks.

Name	Geographical location (0: Suburban or Urban-Rural Junction, 1: Urban Built-up Area)	Area (0: Greater than 20 square kilometers, 1:2-20 square kilometers, 2: Less than 2 square kilometers)	Resources and uses of the archaeological sites at the modern level (0: Resource-Based,1: Demand-Based)
Longmen Grottoes Archaeological Park	0	0	0
Western Xia Mausoleum Archaeological Park	0	0	0
Qin Shihuang Mausoleum National Archaeological Park	0	0	0
Sui and Tang Luoyang City Jiuzhou Pool Archaeological Park	1	2	1
Sui and Tang Luoyang City Paradise Mingtang Archaeological Park	1	2	1
Liangzhu Ancient City Archaeological Park	0	1	1
Daming Palace Archaeological Park	1	1	1
Xingqing Palace Archaeological Park	1	2	1
Dabaosi Temple Archaeological Park	1	2	1
Xi’ an Qinglong Temple Archaeological Park	0	2	1
Huaqing Palace	0	2	1

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Table 2: (continued).

Sui and Tang Luoyang City Yingtianmen Archaeological Park	1	2	1
Shuidonggou Archaeological Park	0	1	0
Old Summer Palace Archaeological Park	0	1	0
Zhoukoudian Peking Man Archaeological Park	0	1	0

Source: authors' elaboration.

150 questionnaires were collected from each archaeological park, and a total of 2250 questionnaires were collected from 15 archaeological parks. The data obtained from the questionnaires are analyzed, and the results are as follows (Table 3).

Table 3: Statistics on environmental design problems in archaeological site parks.

Name	Imperfect signage system (%)	Imperfect public service facilities (%)	Imperfect interpretation and display system (%)	Over-commercialization (%)	Over-modernization (%)	Unreasonable landscape layout (%)	Unreasonable traffic organization (%)
Longmen Grottoes Archaeological Park	0.2	0.14	0	0	0	0	0.53
Western Xia Mausoleum Archaeological Park	0.3	0	0.7	0	0	0	0
Qin Shihuang Mausoleum National Archaeological Park	0.4	0	0	0.6	0	0	0.6
Sui and Tang Luoyang City Jiuzhou Pool Archaeological Park	0.03	0.23	0.74	0	0.1	0	0
-Sui and Tang Luoyang City Paradise Mingtang Archaeological Park	0	0.3	0.39	0.39	0.4	0	0
Liangzhu Ancient City Archaeological Park	0.31	0.1	0.69	0	0	0.15	0
Daming Palace Archaeological Park	0.05	0.3	0.95	0	0.1	0.3	0
Xingqing Palace Archaeological Park	0	0.1	0.67	0.15	0.15	0.67	0
Dabaosi Temple Archaeological Park	0.08	0	0.58	0.08	0.45	0	0
Xi' an Qinglong Temple Archaeological Park	0	0.02	0.76	0.12	0	0.25	0
Huaqing Palace	0.19	0.02	0.68	0.05	0.08	0	0

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Table 3: (continued).

Sui and Tang Luoyang City Yingtianmen Archaeological Park	0.07	0.01	0.82	0.07	0.1	0	0
Shuidonggou Archaeological Park	0	0.16	0.64	0.16	0.2	0	0
Old Summer Palace Archaeological Park	0.11	0.11	0.78	0	0	0	0
Zhoukoudian Peking Man Archaeological Park	0.33	0	0.67	0	0	0	0

Source: authors' elaboration.

This study selected design problems that existed in more than 50% of archaeological parks to explore their relationship with three characteristics.The study found that the problems that existed simultaneously through one-way analysis of variance and the Kruskal-Wallis test were:

- Under the condition of test level $\alpha=0.05$, it can be considered that: geographical location has a significant impact on the signage systems imperfection.
- Under the condition of test level $\alpha=0.05$, it can be considered that: the area has a significant impact on the signage systems imperfection.
- Under the condition of test level $\alpha=0.05$, it can be considered that: geographical location has a significant impact on being over-modernized.

5. Conclusion

5.1. Environmental Design Problems of Archaeological Parks

The questionnaire data showed that there were still some problems mentioned in the previous literature in the archaeological parks, which seriously affected the tourist experience and willingness. To achieve the sustainable development of heritage tourism, it is necessary to solve the current problems to attract and retain tourists.

5.1.1. Imperfect Interpretation and Display System Planning

The results showed that many tourists said that they would get very little information about the site without the help of guides or interpreters. The common problem of imperfect interpretation and display system planning in archaeological parks includes insufficient exhibition facilities, poor exhibition content, single and rigid exhibition methods, diluted cultural connotation, lack of regional characteristics, weakened educational function, etc., which is consistent with the design problems of Chinese archaeological parks in previous studies [18,20,40,41].

5.1.2. Imperfect Signage System

The signage system problem of archaeological parks is also very serious, which is consistent with previous studies [43,45-47]. Tourists reflected that the information display and explanation of the site was insufficient, such as Zhoukoudian Peking Man Archaeological Park did not explain enough about the cave entrance, which could not meet the tourists' demand for obtaining information about the cave entrance. At the same time, there were also big problems with the signage guidance, such as Liangzhu Ancient City Archaeological Park caused tourists to get lost due to its large area, unclear signage guidance, and few constructed buildings; Qin Shihuang Mausoleum Archaeological Park

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caused tourists to fail to find the exit due to the lack of signs in the commercial area and complex layout.

5.1.3. Loss of Authenticity and Integrity of Sites

Heritage tourism will gradually lean towards commercialization and ignore the most important cultural heritage resources in the process of development. But too much commercial area will cause tourists resentment, which is unfavorable to the economic benefits of tourist destinations. For example, Longmen Grottoes Archaeological Park had too large commercial areas, and they were set on the route that tourists must pass, resulting in tourists spending too much time and energy in the commercial area, reducing the quality of tourist experience.

Tourists generally believe that archaeological parks should maintain their original appearance and oppose excessive modernization and artificial construction, which is consistent with previous studies [54]. For example, Dabaoen Temple Archaeological Park rebuilt a glass tower with a glazed tower, which caused controversy among tourists. Some tourists thought that such a design did not conform to history and damaged the cultural and artistic value of the site. Old Summer Palace Archaeological Park's landscape greening was too regular, introducing some non-native tree species, making tourists feel that the landscape lacked naturalness and historicity.

5.1.4. Inadequate Public Service Facilities

Tourists have basic needs for public service facilities in archaeological parks, but this study found that some archaeological parks had insufficient public service facilities, which affected tourists' comfort and security, which was consistent with previous studies [43,44]. For example, Yuanmingyuan Archaeological Park had an insufficient number of women's toilets, resulting in long queues for female tourists; Longmen Grottoes Archaeological Park had an unreasonable number and distribution of toilets and lacked later management. Many toilets existed but could not be used; Sui and Tang Luoyang City Tianming Hall Archaeological Park had an insufficient number of elevators, making it difficult for tourists to climb to the top for sightseeing. The accessibility of archaeological parks is also very important. Previous studies pointed out that archaeological parks must consider accessibility issues and cover the main areas and attractions of archaeological parks. However, this study found that Longmen Grottoes Archaeological Park lacked accessible facilities, making it impossible for special groups to visit grottoes.

5.1.5. Unreasonable Traffic Organization

The study found that unreasonable traffic organizations caused great trouble to tourists. For example, Longmen Grottoes Archaeological Park's parking lot was too far from the main entrance, and the main entrance was not conspicuous. Tourists had consumed a lot of physical strength when they arrived at the main entrance.

5.1.6. Unreasonable Landscape Space Layout

Landscape greening design is an important step to reflect the characteristics and value of sites, but this study found that some archaeological parks lacked long-term planning for landscape greening, reducing tourists' viewing experience. For example, Xi'an Qinglong Temple Archaeological Park used cherry blossoms as its landscape feature, but after the cherry blossoms withered, landscape greening lost its attractiveness. Qinglong Temple did not adjust its landscape layout according to seasonal changes. Xingqing Palace Park underwent landscape renewal in recent years, but tourists reacted differently. On one hand, some tourists thought that the park removed ancient trees, not only

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lacking shade but also modern buildings around entered the viewing sightline, destroying the historical authenticity and ecology. On the other hand, some tourists felt that its landscape style was too similar to Qujiang Pool Site Park, lacking its characteristics. Daming Palace Archaeological Park built a lot of hard paving but lacked rest seats, landscape greening was insufficient, and archaeological parks lacked natural shade places. Liangzhu Archaeological Park's landscape lacked management, and the later landscape was abandoned, resulting in a decline in viewing.

5.2. Correlation Between Characteristics and Design Problems of Archaeological Parks

The study found that archaeological parks located in suburban or urban-rural areas, due to the lack of significant buildings in the internal and surrounding environment, large area, and other factors, led to more confusion and absence of signage systems; the larger the area of archaeological parks, the greater the demand of tourists for signage guidance and site information display, so the larger archaeological parks were more difficult to meet tourists' expectations; archaeological parks located in urban built-up areas, due to higher economic efficiency requirements, were more likely to have excessive construction of modern imitation ancient buildings, artificial landscape and other problems of site authenticity loss.

5.3. Improvement Measures

5.3.1. Tourism Service

Improve public service facilities, meet tourists' basic needs, ensure the accessibility of special groups; optimize traffic organization, set reasonable parking lot location and number, provide convenient public transportation tools, ensure clear main entrance and main road; reasonably layout public space, balance the proportion and distribution of entertainment and commercial areas with site areas, avoid excessive development and commercialization affecting the historical atmosphere and cultural connotation of sites; establish a good signage system, increase the construction of obvious structures, clear and concise signs, explanatory signs, facilitate tourists to obtain information and navigation.

5.3.2. Protection, Interpretation, and Display of Sites

Ensure the authenticity, integrity, and historicity of sites, avoid excessive modernization or imitation of ancient intervention, only restore a few representative attractions when necessary, moderately but not massively use modern technology means for site protection, use as many traditional crafts and materials as possible, maintain the historical and cultural value of sites. Choose plant species that adapt to the landscape characteristics of archaeological parks such as terrain, climate, vegetation, etc., respect and use existing wild vegetation, formulate long-term plant replacement plans, reduce artificial intervention, and ensure the integrity, stability, and diversity of ecosystems.

5.3.3. Urban Level

Cultural heritage is a resource for urban development. It is necessary to place it under urban development planning. The design of archaeological parks should not be isolated or detached from the urban background. Instead, it should integrate into the cultural customs of the city where the site is located. It should be linked with multiple points such as communities, cultural heritage sites, and transportation facilities in the city. It should form multiple cultural routes to disperse tourists. It should reduce the pressure that tourism brings to archaeological parks. It should create multiple cultural stops to protect the authenticity and integrity of sites.

According to the conclusions and suggestions, the supply side of archaeological parks can better understand tourists' needs and formulate corresponding design update plans for archaeological parks.

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At the same time, according to the design problems with the highest correlation of different characteristics of archaeological parks, it can propose design directions that need attention for archaeological parks that will be built in the future. It can improve service quality and park image. It can build sustainable tourism projects.

6. Limitations and Further Studies

The limitations of this study are related to the selection of variables. This study only investigated the design problems that tourists perceive in archaeological site parks during May, when the flow of people is at its highest. However, different problems may exist in archaeological site parks at different times, so future research will expand to investigate at different times of the year. Secondly, this study only examined 15 archaeological site parks, and the results of one-way analysis of variance and chi-square test are limited. Future research will investigate more archaeological site parks to test the universality of the results. At the same time, this study only describes three characteristics of archaeological site parks. Future research will explore the correlation between more characteristic factors of archaeological site parks and design problems.

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