

STUDY ON THE FUNCTION AND STRATEGY OF PUBLIC FACILITIES DESIGN IN THE CONSTRUCTION OF XINYANG CITY CULTURAL BRAND

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Abstract: As an important part of the city, public facilities symbolize the city's image and a good carrier of regional culture. Excellent public facility design plays an important role in the construction of city cultural brands, which can highlight the city's cultural identity and enhance the recognition of cultural brands by shaping the image. However, as an important cultural city, the design of public facilities in Xinyang City fails to highlight the characteristics of the city's cultural brands. Therefore, this study aims to explain the role of city public facilities in the construction of city cultural brands, introduce excellent design practice cases, and then analyze the design status quo of Xinyang city public facilities, to provide targeted strategies and suggestions for the design of Xinyang city public facilities, and finally promote the sustainable development and the promotion of the cultural brand for Xinyang city.

Keywords: Cultural brand, Public facilities design, Strategy, Xinyang city

1. INTRODUCTION

1.1 Research background

With the rapid development of the economy and the continuous deepening of city modernization, city development has shown a certain homogenization phenomenon, and many city constructions have failed to reflect their original unique cultural characteristics, without their own distinctive city cultural brand. A characteristic city cultural brand is established based on cultural development, it is of great significance to enhance the city's image, attract talent, and promote economic development. As an important part of city construction, public facilities can not only provide a convenient and high-quality public environment, but also reflect the cultural characteristics and quality of the city, show the spirit of the city, and play a key role in the construction of cultural brands. Suppose a city wants to have its cultural brand and develop sustainably. In that case, it is important to explore and develop the cultural characteristics of the city and reflect them through the design of public facilities. Every city has its own rich regional cultural characteristics, and Xinyang City, China, as a city with a rich history and cultural deposits, has unique conditions to promote its city's cultural brand. However, there is relatively little research on the role and strategy of public facility design in the construction of the Xinyang city cultural brand. Therefore, it is necessary to carry out relevant research to fill the gap in this field.

1.2 Research Significance

The construction of a cultural brand is of great significance to enhance the image of a city and attract talent. Therefore, it is of great theoretical and practical significance to study the function and strategy of public facilities design in the construction of the Xinyang City cultural brand. First, through in-depth research on the role of public facility design in the construction of Xinyang cultural brand, we can enrich and improve relevant theories and provide new ideas and perspectives for the research in this field. Secondly, the research results can provide a scientific basis and guidance for the Xinyang City government and planning department to optimize the design strategy of public facilities, improve the city's image and quality, and promote the development of Xinyang City's cultural brand construction. Finally, the design of high-quality public facilities can attract more tourists and investment, promote the development of tourism and related industries, and promote the economic prosperity of Xinyang City. Therefore, an in-depth study of the role and strategy of public facility design in the construction of Xinyang City's cultural brand has important theoretical and practical significance and has a positive impact on sustainable development and the promotion of cultural soft power for Xinyang City.

2. LITERATURE REVIEW

2.1 Public Facilities

Urban public facilities, as an important part of modern and future cities, are an important medium for residents to play and enjoy the city's functions. Their setup and design directly affect the play of urban functions and the construction of urban culture.

The concept of public facilities is relatively complex, there is no unified consensus in the world. In general, Wang Yun (2016) believes that there are three concepts and contents in the field of city public facilities: city infrastructure, city furniture, and city public equipment. He makes a detailed classification diagram of city public facilities in a narrow sense. If we mainly look at it from the professional design perspective, Li Zhangchen et al. (2023) briefly classified city public facilities. From a functional point of view, they divide city public facilities into public information facilities (billboards, environmental signage, etc.), public health facilities (garbage cans, water fountains, public toilets, etc.), and public transportation facilities (bus shelters, Bicycle parking facilities, etc.), public lighting facilities, public rest facilities (leisure seats, rest booths, etc.), Public landscaping and skits (pools, fountains, art opuscles, sculptures, etc.)(shown in Table 1).

Table 1: The Classification of City Public Facilities

Public Facilities	Specific content
Public information facility	billboards, environmental signage, etc.
public health facility	Garbage cans, drinking fountains, public toilets, etc
public transit facilities	Shelters, bicycle parking facilities, etc
public lighting	City park, square, roadside, and other lamps
Public rest facilities	Leisure seats, lounges, etc
Public landscaping and skits	Fountain, art opuscles, sculpture, etc
Others	Public buildings (museums, libraries, art galleries, etc.)

2.2 City Culture Brand

City cultural brand refers to a city in the process of shaping and promoting the brand image through the analysis, refinement, integration of the city's unique cultural elements endowment, That is, a specific, systematic and perceptible brand image with cultural factors as the main component is created based on differentiated brand

elements such as historical and cultural accumulation and cultural industry advantages(Li,2009). Creating a strong city cultural brand can make the city beat other cities in market competition, become the audience's first choice for investment, tourism, residence, and employment, and make the city obtain a broader space for development. The city cultural brand is a special carrier symbolized in the process of city cultural development, which is used to concentrate on showing the city's spiritual style and city culture, and it is also a collection that can best reflect the current characteristics of the city and can best express the city cultural characteristics(Wang,2012). The concept is concise and abstract, mainly highlighting that the brand of city culture is the carrier of city culture. However, some scholars have noted the importance of city culture brands, they offered a Clear and specific definition from a comprehensive perspective. Su Xuan and Li Jinhua (2010) based on Philip Kotler's definition of a brand and combined with the academic research results on city brands, believed that a city cultural brand refers to a name, sign, symbol, or design and other related elements used to identify city culture, and its function is to identify the cultural difference between a city and another city and to make it different from the rival city culture, in the public mind to form an impression, produce the city's culture cognition. From this point of view, the city's cultural brand mainly highlights the city's distinctive cultural characteristics, which are different from other cities and rich in certain cultural values.

2.3 The relationship between public facility design and cultural brand construction

There is a close relationship between public facility design and cultural brand construction. First, the design of public facilities can convey the unique cultural characteristics and brand image of the city through architecture, landscape, and artistic elements. Secondly, the design of public facilities can create a public space with a unique atmosphere and personality, so that residents and tourists can have emotional resonance in it, and deepen the identity of city culture. This sense of identity helps to establish and consolidate the cultural brand, forming loyalty and a word-of-mouth effect. Thirdly, the design of public facilities is one of the important means of shaping a city image. Through design and layout elaborately, we can create a public space with iconic and unique charm, enhance the visibility and reputation of the city, and then promote the construction and development of cultural brands. Finally, the design of public facilities and the construction of cultural brands promote each other and provide support for cultural and creative industries. In short, the design of public facilities plays an important role in the construction of cultural brands. it provides effective means and strategies for cities to build unique cultural brands.

2.4 Correlational research on public Facilities design and City Cultural Brand

At present, there are not many research results on the connection between city public facilities design and city cultural brands, and most of them are only separate studies on city brands or city public facilities. There are a few studies that mention the correlation between city projects, city brand building, city image, and city sustainable development. For example, Yang Lulu (2016) analyzed the general situation of the development of the Shaanxi Tang cultural landscape project in combination with the fourth overall city planning of Xi 'an and clarified the importance and necessity of the Shaanxi Tang cultural landscape project in shaping city's cultural brand. She probes into how Xi 'an can fully and reasonably explore and use the Tang culture to create excellent landscape design works that unite the city culture so that the Tang cultural landscape project in Shaanxi province and the city cultural brand building can promote each other and perfectly combine, to enable the city to complete the important mission of continuing the city culture and highlighting the brand personality. Let us have a deep understanding of the combination of the landscape overall project and the city's cultural brand. There is some research on the application of regional culture in the design of city public facilities, mainly highlighting the importance of regional culture in the design of city public facilities, as Li Ya(2022) discussed the importance of regional culture in city construction. He proposed that by creatively extracting regional cultural elements and combining them with modern design techniques, excellent regional culture could be continued and inherited in city public space design. Through case analysis, he expounds on the concrete design and expression methods of city regional culture and proves that regional culture is very important and necessary in creating personalized city public space.

Many scholars will apply regional culture to the study of public facility design. Li Haixia(2019) explored the role and application of regional culture in city public facility design, Starting from the development track of the city, she proposed the close connection between the city and regional culture, analyzed the lack of regional cultural elements in the current design of city public facilities from an objective perspective, concluded the urgency of integrating regional cultural elements into the design of city public facilities, and made a new interpretation of the application of regional culture in the design of city public facilities. Summarize the effective strategies for cultural reconstruction in the future. Public facilities not only provide people with some functional information but also a window of city culture. Therefore, it is necessary to deeply explore and apply the cultural elements in the design of city public facilities. Xu Jian(2023) The application of regional culture in public facility design combined with the current application status of regional cultural elements in public facility design to analyze the problems, put forward several application principles that can be followed, and separately discussed the details of regional cultural elements in public facility

design such as materials, colors, shapes and cultural connotations. At the same time, with several specific public facilities design cases, the integration of regional cultural elements is deeply discussed. However, the above studies only mentioned the importance of regional culture in city construction but did not elaborate on the combination of city facility design and city cultural brand. Although they did not mention the city cultural brand, they made a specific analysis of the application of regional cultural elements in the design of city public facilities, which has a certain correlation with the city cultural brand and has a certain reference value. To sum up, there are a lot of research results on the embodiment and application of cultural elements in the design of city public facilities, but no research results have been found specifically targeting the role and strategy of public facilities design in the construction of cultural brands in Xinyang City. Therefore, in the context of today's cities actively promoting their cultural brands, Xinyang, as a famous historical and cultural city, livable city, capital of Maojian, garden city, and other increasing popularity in the 21st century, research on the role and strategy of public facility design in Xinyang's cultural brand construction has theoretical guiding significance and practical value.

3. METHODOLOGY

This research mainly uses the method of case studies, field investigation, simple interviews, and questionnaires. The case study mainly selects some urban public facilities design cases with local characteristics and culture in Chinese cities and analyzes their design implication and cultural connotations. The field investigation, simple interviews, and questionnaires mainly focus on the question of which public facilities in Xinyang city are rich in Xinyang city cultural characteristics and which aspects of Xinyang should strengthen the cultural brand building.

3.1 Case Study

Urban public facilities are the carriers of urban regional culture and an important medium of interaction between people and the urban environment. The public facilities with local cultural characteristics are of great significance in enhancing the city's visual image, clarifying the city's theme, shaping the city's characteristics, and demonstrating the quality of the city's service (Fang, 2017).

The types of public facilities are numerous, and we mainly take the lighting design that we are more familiar with and common as an example. Lamps can not only provide basic lighting services, but also set off the atmosphere. when it does not need their practical function, they can be used as an ornament to decorate the city environment, of course, but also to highlight the city's cultural characteristics, and enhance the city's cultural brand. For example, the streetlights such as the traditional rock sugar gourd,

birdcage (Figure 1), rattle-drum, etc. All of them are unique forms with profound cultural connotations combined with the old Beijing culture. They are both childlike and fit the atmosphere of the old street, giving people full memories. It can also give tourists a little novelty. Even if you are in the street, you can feel the regional characteristics of old Beijing, which not only beautify the function but also achieve a good publicity effect on the characteristic culture of old Beijing (Sun, 2019). In addition, Xi'an, known as the ancient capital of the Thirteen Dynasties, also has some public facilities designed to highlight the cultural characteristics of the city. For example, the lamps in the Lotus Palace of the Tang Dynasty are shaped like palace lamps, and the overall shape is integrated into the eaves design of the Tang Dynasty buildings, highlighting the cultural characteristics of the Tang Dynasty. The antique feeling is very attractive and enhances the charm of the historical and cultural city of Xi'an. Jingdezhen is famous both at home and abroad for its porcelain. The street lights, as city public facilities, are of course also made of local characteristic materials porcelain, forming their unique artistic characteristics. Looking at them alone, they are like a piece of art, which makes people stop to appreciate and have a deep impression.



Figure 1. Birdcage Street Lamp (Source:<http://xiaoyayu2000.blog.sohu.com>)

Therefore, as a city planner or designer, it is necessary to perfectly integrate the characteristic culture of the city in the design of city public facilities, so that the two can promote each other from an artistic force, and finally increase the artistic charm of the city, to enhance the cultural brand of the city.

3.2 General Situation of Xinyang City

Xinyang City is a prefecture-level city under the jurisdiction of Henan Province, China. It is in the southernmost part of Henan Province and the upper reaches of the Huaihe River. It used to be a place where Chu culture, Central Plains culture, and Wu culture blended. Zhumadian in the north, Tongbai Mountain in the west, is adjacent to Nanyang; it is connected to Hubei in the south, and Anhui in the east. It is known as the "Three Provinces thoroughfare" and is a strategic place between the Jianghuai River and the

Han River. Xinyang City is one of the important cultural centers of Henan Province, with a rich historical and cultural heritage and folk traditions. The Xinyang area has a rich variety of folk-art forms, such as Xinyang Flower Drum opera, Xinyang shadow play, etc., which show the creativity and artistic talent of local people. There are many historical sites and cultural attractions in Xinyang City, such as Chengyang City ruins, Hubei-Henan-Anhui Red Soviet area, Lingshan Temple, etc..

which attracts many tourists to come for sightseeing and learning. Of course, Xinyang people are proud of Xinyang Maojian tea cultural resources. In general, Xinyang City has a superior geographical location, a long history, and a profound cultural heritage, all of which provide rich resources and opportunities for the city's development and cultural brand construction.

3.3 Problems existing in the design of public facilities in Xinyang City

City public facilities represent the image of a city. As a livable city, the capital of Maojian, a famous historical and cultural city, and the hometown of generals, Xinyang has numerous historical and cultural heritages and folk cultures. However, the design of the city public facilities almost fails to reflect the brand value of Xinyang's city culture, making it impossible to distinguish it from other cities. Through field investigation and simple interviews with some people (the interviewees involved a variety of professions, including teachers, students, doctors, enterprise workers, community personnel, etc.), it is found that Xinyang residents think that few public facilities in Xinyang city can reflect the cultural characteristics of the city, the only one they can think of is Maojian Bridge on the Shihe River. When people face the problem of which aspects of Xinyang should strengthen cultural brand building, the result is shown in Figure 2. Therefore, the design of public facilities in Xinyang City need to attract our attention.

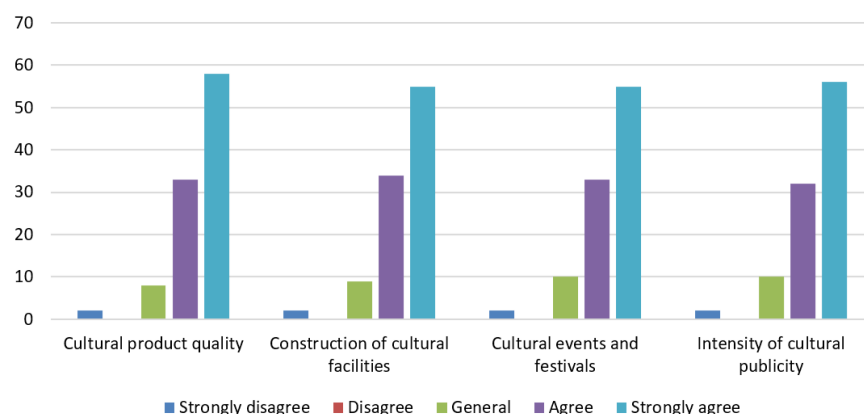


Figure 2. result of aspects of Xinyang should strengthen cultural brand building
Specific data are shown in Table 2.

Table 2: The data of which aspects of Xinyang should strengthen

Topic \ option	Strongly disagree	Disagree	General	Agree	Strongly agree	average score
Cultural product quality	2%	0%	8%	33%	58%	4.44
Construction of cultural facilities	2%	0%	9%	34%	55%	4.4
Cultural events and festivals	2%	0%	10%	33%	55%	4.38
Intensity of cultural publicity	2%	0%	10%	32%	56%	4.41
subtotal	2%	0%	9%	33%	56%	4.41

3.4 Analysis of the role of public facility design in the construction of Xinyang cultural brand

The design of public facilities plays an important role in the construction of the Xinyang cultural brand. First, image transmission and cognitive functions, public facilities design through architecture, landscape, and artistic elements to convey the unique cultural characteristics and brand image of Xinyang City. Secondly, it can enhance the sense of identity and belonging. Excellent design of public facilities can create a public space with a unique atmosphere and personality so that residents and tourists can have emotional resonance in it, and deepen the sense of identity of Xinyang City culture. This sense of identity helps to establish and consolidate the cultural brand of Xinyang City, forming loyalty and a word-of-mouth effect. Thirdly, to enhance the experience value and attractiveness, the design of public facilities can enhance people's experience value in Xinyang City. Finally, shaping the city image and brand building function, public facilities design is one of the important means to shape the image and brand of Xinyang City. Through careful design and layout, we can create a public space with iconic and unique charm, enhance the popularity and reputation of Xinyang City, and then promote the construction and development of cultural brands. To sum up, the design of public facilities plays an important role in the construction of Xinyang City's cultural brand. Reasonable design of public facilities can enhance the experience value, enhance the city's image, enhance the satisfaction of residents and tourists, and contribute to the construction of Xinyang city's cultural brand.

4. DATA FINDING AND ANALYSIS

4.1 Architectural style and traditional culture

The design of public buildings can integrate the traditional cultural elements of Xinyang city, such as traditional architectural style and folk characteristics. Using traditional

architectural elements and decoration, the architectural image with Xinyang characteristics is created to show the unique cultural charm of Xinyang city.

4.2 Art installations and folk art

Art installations and folk-art elements, such as sculptures, murals, and carvings, should be added to the design of public facilities to display the rich and diverse folk-art forms of Xinyang City. This can beautify the public space and inherit and carry forward the traditional culture of Xinyang City.

4.3 Public space and festival activities

The design of public facilities can consider the festival activities held by Xinyang City, and provide suitable places and facilities for these activities. For example, a stage or temporary exhibition space is set up in a square or park to accommodate various cultural performances and exhibition activities, increasing the atmosphere and participation of the festival.

4.4 Tourist attractions and guide system

For tourist attractions in Xinyang City, the design of public facilities can be combined with the guide system, set up information boards, signboards, guide maps, etc., to provide tourists with guided tour and interpretation services. This helps to enhance visitors' understanding and experience of Xinyang's cultural attractions.

By combining the design of public facilities with the cultural characteristics of Xinyang city, we can create a unique public space and architectural image, and further promote the construction and development of Xinyang cultural brand.

5. CONCLUSION

When we mention a city, we can first think of the characteristic description of the city, for example, when we mention Beijing, we can think of Beijing's courtyard, hutong, etc., when we mention Jingdezhen, we can think of ceramic culture when we mention Paris, we can think of the art capital, etc., of course, when we mention Xinyang, we all can think of the city of Maojian(the name of green tea). So, it seems that most people's impression of a city is about the cultural characteristics of the city, and culture is the most distinguishing thing between a city and other cities. Therefore, in the design of city public facilities, it is necessary to fully combine the local cultural characteristics, find a breakthrough point from the historical culture, regional culture, and other aspects of the city, extract classic regional cultural elements, and skillfully integrate them into the construction of city public facilities, to obtain a new look. For example, different cities in China have different material resources with local characteristics. Local materials can be used as materials in the design of public facilities, which can not only

save costs but also reflect local cultural characteristics. For example, bamboo material can be used as a good means of expression in the design. According to the cultural characteristics of Xinyang City, the design strategy of public facilities can be started with the following strategies:

5.1 The integration and innovation of cultural elements

The design of public facilities should highlight the cultural characteristics of Xinyang City, such as. By extracting some classic elements from these cultural resources and cleverly and innovatively integrating them into the design of public facilities, people can understand Xinyang culture while using public facilities, and have a fresh and unique feeling, which adds to the cultural charm of the city.

5.2 The use of story and emotional resonance

Public facilities design can tell stories and trigger emotional resonance to convey the cultural brand value of Xinyang City. Through sculptures, murals, signs, and other art installations, Xinyang City's history, traditions, and cultural stories are displayed to stimulate people's interest and identity in Xinyang City culture. For example, the famous Sima Guang smashed cylinder in Xinyang and the legend of the late repair can be set as art sculptures in parks or squares, It can let people understand the history and classic culture of Xinyang, and also learn the knowledge and skills we need to master in daily life.

5.3 Interaction and participation experience

The design of public facilities should encourage interaction and participation experience, so that residents and tourists can personally participate in Xinyang cultural activities, of course, but also reflect that human is the main body of city life, the design should consider the different needs of different groups. For example, some interactive installations, performance stages, etc., are set up in parks or squares to provide different groups of people with the opportunity to participate in performances, artistic creations, or traditional activities.

5.4 Sustainable development and environmental protection

The design of public facilities should pay attention to sustainable development and environmental protection, which is consistent with the cultural brand positioning of Xinyang City. Consider the use of environmentally friendly materials, energy-saving technologies, and renewable energy in the design to create green and sustainable public Spaces.

5.5 Community integration and sharing of resources

The design of public facilities should promote community integration and the sharing of cultural resources. By setting up multifunctional public facilities in the community, such as cultural centers, libraries, art studios, etc., to provide residents with places for learning, entertainment, and communication, strengthening community cohesion and cultural sharing. It is believed that through the above strategies, the design of public facilities can more effectively highlight the city cultural brand of Xinyang and enhance the image and attractiveness of the city.

6. DISCUSSION AND PROSPECT

Through the study on the role and strategy of public facilities design in the construction of Xinyang city cultural brand, this paper concludes that public facilities design plays an important role in the construction of city cultural brand. We should pay attention to it and actively explore the design strategy of public facilities to highlight the city cultural brand. As for the future development trend, we can continue to further study the relationship between public facility design and Xinyang cultural brand construction through research, and explore how to highlight the cultural characteristics and brand image of Xinyang city through public facility design. Of course, it is also necessary to encourage innovative public facility design, combine the regional characteristics and cultural elements of Xinyang city, create unique public facilities, and provide citizens and tourists with a good experience and feelings, and it is necessary to incorporate public facilities design into the overall city planning and cultural brand construction strategy, achieve the organic integration of public facilities, and improve the image and quality of the city. Encourage the cooperation and participation of academic circles, design circles, government departments, and all walks of life to jointly promote the development of public facility design in the construction of Xinyang cultural brand and form a multi-party force. Finally, we should pay attention to the sustainability of public facilities design, including environmental protection, resource conservation, and social responsibility, to promote the sustainable development of Xinyang City and the promotion of cultural soft power. Through corresponding guidance and promotion, the design of public facilities will play a more important role in the construction of the Xinyang City cultural brand and make greater contributions to the development and promotion of the city.

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