

Multicultural Perception in Urban Public Cultural Spaces -Taking Guilin East-West Street as an Example

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Abstract: The limitations of the public cultural spaces are associated with the multicultural perception and resident experience, especially irrational space planning, poor involvement in the cultural activities, and absence of intelligent management tools. This paper uses the East-West Street, Guilin, as a case study in order to solve these problems. It uses a pilot project to investigate realistic ways to increase the perception and involvement of the neighborhood as a multicultural environment through maximizing the volume of space design, cultural events, and low-cost smart spaces. The paper, in its spatial design, reinstates aspects of the stilted houses in the north of Guangxi and streamlines the architecture of the arcade-like gray areas. On the issue of cultural activities, it brings folk shows, creative market, and community interactive activities. Regarding smart facilities, it implements the use of QR code navigation and mini-program information services to broadcast information about the activities and gather opinions. The qualitative analysis reveals that, following the optimization, visitors rated the neighborhood in terms of the historical and cultural ambiance and walking comfort higher, the sense of belonging and readiness to engage a more active attitude among the residents increased, and the efficacy of managers in terms of space and activity management was enhanced. This suggests that the multicultural perception of historical districts through the synergistic optimization of spatial design, cultural activities, and intelligent facilities can be effective in generating duplicable experience to the renewal and management of the historical districts in other cities.

1. Introduction

As significant transmitters of urban cultural heritage, along with the historical memory of the area, historical districts, with the acceleration of urbanization, also express the needs of modern urban development from a cultural perspective. Nonetheless, due to commercialization and modernism in construction, most of the historical areas have been involved in issues like decreased cultural implications, ineffective use of space, and lack of civic involvement. As a representative

historical area, Guilin East-West Street has preserved some of its ancient characteristics by building replicas of ancient architectures and business streets, yet it is still afflicted with a shortage of various cultural representations, a deficiency of local architectural elements, and a shortage of open spaces experiences.

Based on this, this paper takes Guilin's East-West Street as its research object, exploring strategies for optimizing public cultural spaces and their mechanism of action on the perception of diverse cultures. The research aims to enhance the cultural experience and participation of tourists, residents, and managers through a combination of spatial layout improvements, cultural activity design, and the application of smart facilities, while also providing replicable practical experience for the construction and management of public cultural spaces in other urban historical districts.

2. Related Work

In recent years, the construction of public cultural spaces and their impact on social and cultural experience have become important topics in urban planning and cultural management research. Based on studies of different cities and spatial cases, scholars have systematically explored the role and optimization path of public cultural spaces in urban development from the perspectives of planning layout, cultural empowerment, social identity and digital governance. Fu Yiyi, based on the perspective of national land space, analyzed the current situation of the construction of new public cultural spaces in Zhengzhou, and carried out overall planning and layout thinking of new public cultural spaces. She proposed to create a new public cultural space system in Zhengzhou that not only has cultural connotations but can also produce and disseminate culture, and to create a powerful cultural brand for Zhengzhou [1]. Zhu Fang and Su Qin took the Huangmei Opera performances in Lianhu Park and Jiangtan Park in Anqing as research objects and analyzed the social and cultural significance generation process and identity construction of Huangmei Opera performances in public spaces. They found that different age groups endowed the space with emotional, health and social significance based on the cultural attributes of Huangmei Opera performances, the material attributes of public spaces and the social attributes generated by the interweaving of the two [2]. He Miao et al. took the old city of Nanjing as an example to explore the realization path and mechanism effect of cultural empowerment of urban renewal. The study found that by leveraging the multiple roles of cultural resources such as historical culture, creative culture, and local culture in urban renewal, and through the process of injecting cultural elements, absorbing spatial carriers, and releasing renewal efficiency, urban renewal can be empowered and its quality and efficiency improved [3]. Hu Xuefeng analyzed the important role of public space in cities and dissected the problems in current design and utilization, such as uneven distribution of spatial resources, single function, poor user experience, and lagging management mechanisms. He proposed the concepts of "people-oriented" inclusive design, multifunctional space integration, promotion of social interaction and cultural expression, and sustainable ecological design [4]. In order to achieve a high-level dynamic balance between supply and demand of rural public cultural services, Shao Minghua and Liu Peng constructed a dynamic mechanism for the supply of rural public cultural services from the dimensions of digital technology embedded and driven by multi-governance, content preference, technology acceptance, and network empowerment, and explored the driving factors for improving the quality of grassroots public cultural service supply under the digital background [5]. Existing studies mostly focus on the analysis of public cultural space in a single dimension, such as planning layout, cultural activities, or digital technology applications, and lack systematic collaborative research on spatial design, cultural experience, and perception of multiple groups.

3. Method

3.1 Characteristics of Guilin East-West Street

The revitalization of the Guilin East-West Street historical district has continued its historical role while preserving its valuable cultural connotations. Under the premise of protecting historical buildings and cultural heritage, the commercial forms of the district have diversified, integrating catering, tourism, retail and entertainment, taking into account both cultural and modern functions. For example, by adding time-honored shops and ethnic characteristic industries, the cultural experience of the district has been enhanced, while avoiding excessive commercial development. The buildings in the district mostly adopt an antique style, partially restoring the style of Ming and Qing ancient buildings, but combined with modern life and consumption patterns, they form a unique atmosphere of time travel. The folk stilted buildings in northern Guangxi are simple and flexible in shape, built against the mountains and by the water, reflecting the harmonious relationship between man and nature. The arcade building form has fully played its advantages in the street-side commerce, the traffic diversion design has improved the smoothness and safety, the extension of the second-floor space meets the needs of commerce and residence, and the setting of gray space has increased the shared space, making the street scenery rich and diverse. The users of the district include tourists, residents and cultural enthusiasts. Different groups have different needs for historical buildings, folk activities and commercial experiences, forming a multi-level cultural interaction experience [6].

3.2 Research Subjects

Buildings along the East-West Street, arcade spaces, public squares, cultural facilities, and commercial formats.

Tourists, local residents, cultural professionals, and neighborhood managers.

3.3 Research Methods

On-site observation: Documenting the spatial plan, architecture, landscaping, distribution of activity and people interaction behavior on the street.

In-depth interviews: The focus of the in-depth interviews is on tourists, residents, and managers as the appropriate people to complete the research on their cultural experience, spatial comfort, and participation needs.

Focus group discussions: In various groups, discussing the recommendations on how to make space optimization, cultural activities organization, and smart facility building better.

Document analysis: Gathering planning schemes, records of activities, and historical data, and layout diagrams of facilities to study how the past and the present have been integrated.

4. Analysis Results

4.1 Results

Local residents indicated that there are notable positive changes in the cultural ambiance, spatial comfort and the feeling of belonging in the East-West Street locality. The general feeling of visitors was that the area was more historical and cultural with the introduction of arcade-style gray spaces and leisure areas contributing to a more comfortable experience of walking. Also, folk performances and markets of creativity enhanced the participatory experience and heightened

interactivity. Inhabitants, conversely, experienced a better quality of convenience in their everyday lives, cultural-related activities, as well as community involvement, enhanced a sense of belonging and identity, which resulted in greater active utilization of cultural spaces. According to the managers, the optimization measures enhanced spatial order and managing of activities, and the rational arrangement of the cultural activities and commercial formats decreased the management pressure, at the same time augmenting the overall cultural worth of the space.

4.2 Factors Influencing Multicultural Perception

4.2.1 Internal Factors

The public's perception of multiculturalism is significantly influenced by individual characteristics, including cultural background, education level and knowledge of history. Different audiences have different levels of understanding and experience of architecture, historical symbols, folk activities and street atmosphere in public cultural spaces due to differences in growth experience and cultural literacy, which affects their participation and cultural identity[7].

4.2.2 External Factors

The physical environment and management mechanisms of public cultural spaces play a crucial role in perception. Spatial design, including architectural style, functional layout, arcade and gray space settings, can enhance visual and behavioral experiences; cultural activities and folk customs displays provide rich interactive scenarios for the public; information dissemination and community participation affect the accessibility and ease of use of facilities. Land scarcity and high land prices may lead to public cultural facilities being located far from densely populated areas, causing spatial and psychological alienation, thereby weakening the effect of cultural perception. At the same time, the efficient use of limited space resources can improve the overall quality of urban development and the balance of spatial functions [8-9].

4.2.3 Comprehensive Analysis

The formation of multicultural perception is the result of the interaction between internal cognition and the external environment. Public cultural spaces with a rational physical layout, rich cultural activities, and sound management mechanisms can take into account the material, spiritual, and social dimensions, meet the public's multi-level cultural needs, and achieve a unity of use value and symbolic value. By optimizing space, activities, and community participation, historical districts and urban public cultural spaces can enhance the public's perception and identification with culture, and promote the diversified and inclusive development of cultural experiences.

5. Optimization Strategies

5.1 Optimizing Spatial Design

The existing blocks in Guilin East-West Street still have limitations in terms of spatial layout and cultural perception. Some of the antique architectural styles are not well integrated with the local characteristics of Guilin, and the efficiency and interactivity of public space utilization need to be improved. The optimization strategy should integrate smart elements into the spatial design, and use big data and cloud computing to monitor the flow of people, activity preferences and usage frequency in the blocks, so as to provide a scientific basis for the layout of buildings, landscapes and facilities. Combining virtual reality (VR) and augmented reality (AR) technologies, immersive

cultural experience areas can be set up in the blocks, allowing tourists and residents to deepen their understanding of local culture through historical reproduction and cultural interaction, while enhancing the spatial interest and sense of participation[10].

5.2 Optimization of Architecture, Landscape and Public Facilities

In terms of architecture and landscape, the traditional stilted building style of northern Guangxi should be emphasized, preserving the arcade and gray-space design to create a multi-layered visual landscape, allowing the district to reflect modern functional needs within a historical and cultural atmosphere. Various activities requirements in terms of exhibition, folk performance, cultural interactive workshops, and an information guidance system should be provided in the public facilities to make the cultural experience more convenient and rich. In addition, the shelter from sun and rain, diversion of traffic, and flow of pedestrians should also be taken into account to enhance spatial comfort and security, ensuring that even in the condition of a heavy visitation of the historical area, the latter remains in good order.

5.3 Activity Organization and Differentiated Participation Strategies

The cultural functions should be the main stimulator of such activities in the neighborhood, and a reasonable balance of the commercial formats must be made. The cultural experience should be supplemented by restaurants, shopping, and accommodations, whereas the roles of the entertainment activities, exhibitions, and functioning of the time-proven brands should fulfill a central role to enhance spiritual consumption of the neighborhood and its historical belonging. To support the cultural needs of the various groups, differentiated approaches could be used: tourists need to concentrate on the interactive activities and historical study, residents on the daily leisure and involvement in community, and administrators on the organizational order and passing cultural values to the next generations. Via creative activity in the community, innovative markets, and interaction on social media, the involvement of the population and creativity may be improved, building a cultural climate of co-construction, co-governance, and mutual benefits.

5.4 Intelligent Management and Continuous Optimization

The smart management system will be presented, which will further optimize the space and activity configurations by analyzing the real-time data and offering feedback to the citizens, and provide greater flexibility and adaptability of the neighborhood. The model, a combination of a "public-private partnership" and a "private-public assistance" model, will provide that the government, cultural enterprises, and community forces will work together in their operations in granting that social benefits will be prioritized over economic ones and that the cultural functions within the neighborhood will be more sustainable in the long run. Combining smart spaces and exposure to different cultures will make Guilin East-West Street a template neighborhood in terms of the high integration of historical culture, contemporary business, and citizen engagement.

6. Conclusion

This paper takes the Guilin East-West Street historical district as its research object, and conducts a systematic analysis around the multicultural perception of public cultural spaces. By sorting out the historical and cultural background, architectural style, and business formats of the district, as well as the differences in cultural experiences among tourists, residents, and managers, this paper proposes a comprehensive strategy of optimizing space design, innovating cultural

activities, and applying low-cost smart facilities. This study not only provides an operable solution for the renewal of the Guilin East-West Street historical district, but also provides a practical reference for the optimization of public cultural spaces in historical districts of other cities. This study is mainly qualitative in its analysis and lacks long-term quantitative data support; the application of smart facilities mainly considers low-cost feasibility and does not involve high-end technological means. Future research can combine quantitative surveys and experimental data to conduct long-term tracking and evaluation of the effects of different optimization strategies.

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