

# INTEGRATING REGIONAL CULTURAL SYMBOLS INTO URBAN LANDSCAPE FACILITY DESIGN: A CASE STUDY OF NANNING WUXIANG NEW DISTRICT

Chun LI<sup>1</sup> and Akapong INKUER<sup>2</sup>

1 Doctoral Student of Philosophy Program in Visual Arts and Design, Faculty of Fine and Applied Arts, Suan Sunandha Rajabhat University, Bangkok, Thailand; s6258498034@ssru.ac.th

2 Advisor in Visual Arts and Design, Faculty of Fine and Applied Arts, Suan Sunandha Rajabhat University, Bangkok, Thailand; akapong.in@ssru.ac.th

## ARTICLE HISTORY

**Received:** 25 August 2023    **Revised:** 15 September 2023    **Published:** 25 September 2023

## ABSTRACT

This study systematically examines the prominent regional cultural resources of Guangxi to offer innovative materials and guidelines for the thematic design of urban landscape facilities in Nanning Wuxiang New District. Drawing on the historical evolution of Wuxiang New District, the research strategically selects illustrative case studies of urban landscape facilities within the district. Through detailed analysis, the paper expounds upon the pragmatic implementation of regional cultural elements in the area. The primary objective is to furnish valuable insights and references for comparable cities seeking to infuse regional cultural themes into their urban planning and specialized design stages. This approach aims to counteract the proliferation of mundane urban landscape facilities by achieving a nuanced integration of regional cultural narratives, contributing to more vibrant and engaging urban environments.

**Keywords:** Regional Cultural Symbols, Culture symbolism, Wuxiang New District, Urban Landscape Facilities

**CITATION INFORMATION:** Li, C., & Inkuer, A. (2023). Integrating Regional Cultural Symbols into Urban Landscape Facility Design: A Case Study of Nanning Wuxiang New District. *Procedia of Multidisciplinary Research*, 1(9), 43.

## INTRODUCTION

Nanning is the capital city of the Guangxi Zhuang Autonomous Region, and also one of the capital cities of the five provincial-level ethnic minority autonomous regions in China. Often referred to as Yong, it is known as the "Green City of China" and is the permanent host city of the China-ASEAN Expo. By the end of 2022, the population of Nanning city had reached 4.24 million, making it one of the 13 Type I major cities in China. To implement the Beibu Gulf Economic Zone and other national strategies, Nanning officially launched the development and construction of the Wuxiang New District in 2006. The planned area is approximately 200 square kilometers, with the construction goal of "creating a new Nanning". In November 2019, Guangxi implemented a strategy to strengthen the capital, proposing to make Nanning an eco-livable city with strong Zhuang ethnic characteristics and subtropical style by 2035. The construction of the urban landscape and appearance of the Wuxiang New District has entered its best period.

Regional culture, also known as ethnic culture or ethnic symbols, has obvious symbolic features and high artistic value. It is a high-level summary of various cultures produced by a nation during its development process, providing rich creative materials for regional design in urban and rural construction. There are twelve resident ethnic groups in Guangxi, with the number of ethnic minorities ranking first in the country, and its regional cultural resources are very abundant. Because Guangxi is mainly composed of mountains and hills, combined with numerous rivers, different areas have been naturally divided into many regions of different sizes. The economy and social development of these areas were relatively independent in the past, which prevented the formation of a more unified culture. This is one of the main factors contributing to the rich and varied regional culture in Guangxi. Guangxi's regional culture can mainly be divided into three categories: material culture, intangible culture, and natural landscape resources. Material culture includes bronze drums, Huashan rock paintings, and embroidery balls, drum towers of the Dong ethnic group and wind-rain bridges. Intangible culture is represented by Zhuang brocade skills, Liu Sanjie ballads, Zhuang music poem, and Baeuqloegdoz. The natural scenery of Guangxi is represented by the world-famous Guilin landscapes and Detian Waterfall scenery. These rich and colorful regional cultures provide a wealth of creative inspiration and source material for urban and rural construction in Guangxi.

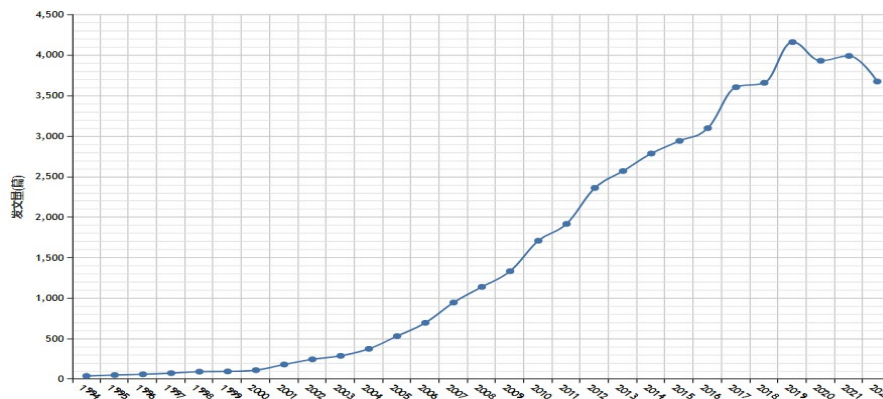
This research aims to analyze the practical application of regional cultural symbols in the design of urban landscape facilities within Nanning Wuxiang New District, focusing on achieving a harmonious blend of cultural identity and functional urban spaces. The primary objective is to furnish valuable insights and references for comparable cities seeking to infuse regional cultural themes into their urban planning and specialized design stages, contributing to more vibrant and engaging urban environments.

## LITERATURE REVIEWS

In 1951, the famous ethnologist Fei Xiaotong, and Huang Xianfan et al. initiated the first comprehensive investigations and studies on Guangxi regional culture by going deep into the ethnic areas of Guangxi. In 1957, Huang completed the first systematic monograph on Zhuang culture and history, "A Brief History of the Zhuang People in Guangxi." This book is regarded as the first-ever work on Zhuang culture and history, and Huang is therefore recognized as the pioneer and founder of Zhuang history research. In 2013, the Guangxi Book of Overview of Chinese Regional Culture, edited by Yuan Xingpei and Chen Jingyu, extended the history of the development of Guangxi regional culture to ancient times, regarded as the Guangxi version of the "regional culture map." Moreover, the book has increased the analysis and research on the characteristics of Guangxi regional culture. Huang Yunfang's "Guangxi Regional Culture," published in 2014, further refined the research results

of Guangxi regional culture from the perspective of communication studies. In 2018, Pan Qi published "Guangxi's Cultural Symbols," in which 113 cultural symbols representing Guangxi's image were purposefully selected, and a variety of Guangxi's regional cultural symbols were displayed in pictures and texts.

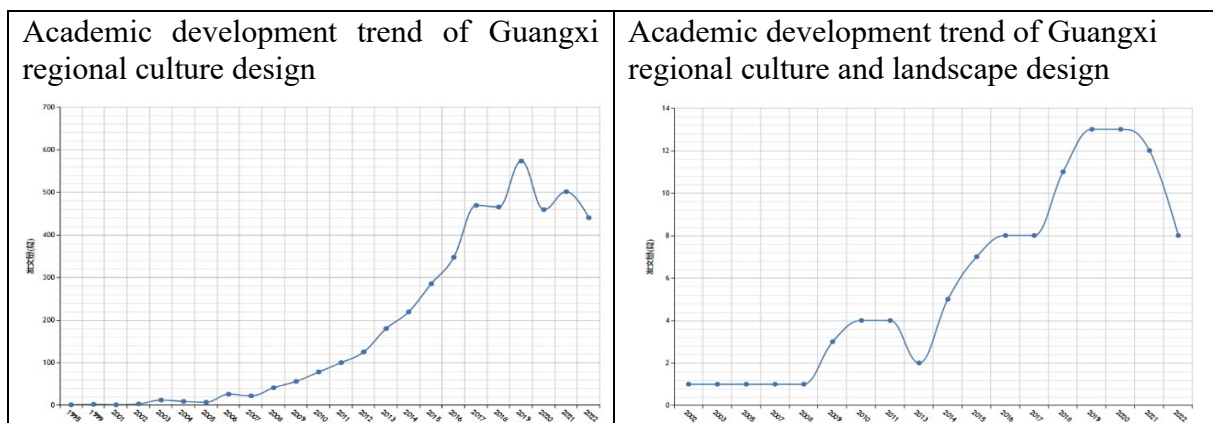
Figure 1 shows the annual research trends of "Guangxi regional culture" in China National Knowledge Infrastructure (CNKI). It can be seen that the interest in Guangxi regional culture had been low before 2000, and has increased year by year since 2000, peaking in 2019. Due to the COVID-19 epidemic, its interest has been decreasing since 2020. The main disciplines engaged in the research of Guangxi regional culture are architectural engineering, literature, art, tourism and other fields, and most of the research results are dissertations, and the research levels are concentrated in technical research, engineering research, application research and policy research.



**Figure 1** Trends of academic research on topics related to Guangxi regional culture

Source: www.cnki.net

Figure 2 shows the academic trends with keywords searched on CNKI such as "Guangxi regional culture design" and "Guangxi regional culture and landscape design," peaking in 2019. The research results are mostly presented in papers, mainly focused on applied and policy research. The designs most closely related to regional culture include architectural design, landscape design, design research, planning design, and other three-dimensional spatial designs. In addition, due to the wide range of design categories, regional culture has been applied and studied in various two-dimensional designs, such as graphic design and visual communication design.



**Figure 2** Trends of academic research on topics related to regional culture design

Source: www.cnki.net

The research on the topics related to the design of Guangxi regional culture in China can be divided into three stages: 1951-1980 was the initial stage, when scholars, including Fei Xiaotong, mainly worked on basic research monographs and survey reports based on data collected from field surveys from the perspective of ethnography. From 1980 to 2000, it developed slowly, but there were few papers in this period, and almost none of them were related to the design application of regional culture. After 2000, it rose steadily and reached its peak in 2019. The research hotspots of Guangxi regional culture began to increase year by year, and the research on the design application of regional culture expanded to all design domains.

There were 48,329 dissertations on regional culture. Among them, 11,608 are master's and doctoral dissertations, and 498 are on the topics of Guangxi regional culture and ethnic symbols of Guangxi. There were about 51 master's and doctoral dissertations (the above data as of December 2022). The researchers are predominantly teachers, students and researchers from universities within Guangxi. These dissertations are mainly on topics such as landscape design, architectural design, planning and design, cultural and creative product design, and clothing design, covering almost all design fields. The research levels mainly focus on the design approaches, design practices, basic research, conservation strategies, and policy research of regional culture. However, there is relatively insufficient research on the design application strategies and principles of regional culture, and the post-evaluation system of the design application of regional culture.

## RESEARCH METHODOLOGY

### Research Design and Approach

The study examining the application of Guangxi regional culture in urban landscape facility design holds considerable practical significance, contributing to various aspects of urban development:

Providing references and examples for Nanning City in the implementation of specific urban landscape projects: The research findings and recommendations offer valuable insights and inspiration for decision-makers, urban planners, and designers involved in specific projects within Nanning City. By incorporating Guangxi's regional cultural symbols, these projects can embody the distinctive characteristics of the region, fostering a sense of place and cultural identity

### Data Collection Methods

Multiple data collection methods are employed to gather relevant and reliable information for the research. These methods include:

- 1. Document Analysis:** Comprehensive analysis of existing literature, academic papers, reports, and relevant documents is conducted to gain insights into the theoretical foundations, previous studies, and best practices related to regional cultural symbols and their integration in architecture and landscape design.
- 2. Interviews:** Semi-structured interviews are conducted with key stakeholders, including architects, landscape designers, urban planners, government officials, and representatives from cultural and heritage organizations. These interviews provide valuable perspectives, experiences, and insights on the challenges, opportunities, and best practices related to the incorporation of regional cultural symbols.
- 3. Site Observations and Surveys:** Site visits to select architectural and landscape projects within Guangxi are conducted to observe and assess the practical application of regional cultural symbols. Surveys are also administered to collect quantitative data on public perceptions, preferences, and satisfaction regarding the integration of cultural symbols in the built environment.

## RESEARCH RESULTS

As urban structures and social forms continue to evolve, urban landscape facilities tend to show rich and diversified tendencies. They have evolved from initially satisfying functional needs to simultaneously considering aesthetics, contemporary demands, humanistic concerns, and city image. Urban landscape facilities have become the most microscopic integrated carrier and window that reflects local culture, city image, and quality.

The development of Nanning's urban landscape facilities is closely related to the process of urbanization. Through field research on the landscape facilities within the urban area of Nanning, combined with literature research, it can be summarized into three main development stages (Table 1). In the early stage of Nanning's urbanization, most urban landscape facilities did not consider the integration of local culture. However, with the national level proposing cultural revival and emphasizing cultural confidence, ethnic areas have carried out a large amount of practice in applying regional culture to urban landscape facilities, which has been highly recognized by society. At the same time, the "Strengthening the Capital" strategy in Nanning emphasizes building an eco-livable city with strong Zhuang characteristics and subtropical style as the primary goal.

**Table 1** Three main development stages of urban landscape facilities in Nanning

Periods	Process Speed	Features of Urban Landscape Facilities	Main Types	Regional Cultural Symbolism
1949-1980 (Emerging Stage)	Slow	Primarily meeting the simplest functions	Simple bus stops, street lights, trash bins, simple road signs, etc	None
1980-2000 (Exploration Stage)	Fast	Integrating regional cultural characteristics while fulfilling functions	Bus stops, street lights, trash bins, road signs, outdoor fitness facilities, public benches, newsstands, landscape miniatures, etc.	General
2000-Present (Maturity Stage)	High Speed	Balancing functionality, aesthetics, regional culture, contemporary demands, and city image.	Intelligent bus stops, smart street lights, classified trash bins, road signs, guide signs, outdoor fitness facilities, public benches, landscape miniatures, barrier-free facilities, shared facilities, smart information boards, etc.	High

**Source:** Author

Therefore, the practice of applying regional culture to the design and application of urban landscape facilities in Nanning's Wuxiang New District is in line with the backdrop of urbanization and the active implementation of national and local policies.

### Innovative Design Steps for Incorporating Regional Cultural Symbols in the Urban Landscape Facility

Despite the rich regional cultural resources in Guangxi, not all symbols are suitable for urban landscape facility design. This is because the specific application scenarios of landscape facilities are affected by multiple factors such as space, venue, climate, material, cost, and function. In addition, the types of urban landscape facilities are quite diverse, including both two-dimensional and three-dimensional spaces. For urban landscape facilities that are

primarily two-dimensional, such as road signs, the majority would opt for the Zhuang Brocade diamond pattern. This is due to the numerous advantages of diamond-based designs, such as the simplicity of the shape suitable for a variety of material constructions, controllable construction costs, aesthetically pleasing designs that align with modern tastes, and distinct individual characteristics. This is why Zhuang brocade appears so frequently in most urban landscape facilities and architectural decorations. On the other hand, some complex figurative patterns and some abstract intangible cultural symbols are less used in design due to their lack of concise and intuitive image features and lower audience acceptance. For some three-dimensional urban landscape facilities, such as subway stations, garbage bins, and landscape pavilions, representative symbols with inherent three-dimensional space, such as bronze drums and embroidered balls, can be chosen for innovative design.

Therefore, after establishing the design theme of the urban landscape, it is necessary to collect regional cultural materials according to the specific theme. During the collection process, regional cultural symbols should be selected and matched based on symbols such as the form, function, and environment of the design theme, in combination with the actual craftsmanship of various materials. After matching a certain symbol, hand drawing or computer scheme creation can be performed, and physical models can be made if necessary for scheme deliberation. After discussing the scheme through various channels such as the owner, users, and questionnaire surveys, and getting feedback, reasonable adjustments can be made to complete the final design scheme.

### **Color Application in Urban Landscape Facilities of Wuxiang New District**

Through investigation of the representative urban landscape facilities in the Wuxiang New District, it has been observed that the urban landscape facilities in this area have been permeated with a cityscape design philosophy, which integrates regional cultural themes at all levels, from macro to micro, in both the preliminary planning and subsequent specialized design phases. This is particularly evident within the district's headquarters base, where preliminary planning has been made more unified in terms of color and shape of the urban landscape facilities.

In terms of color, various facilities primarily made of metal adopt a dark green hue, emphasizing Nanning's city image as the "Green City". This is mainly reflected in various street lamp poles, traffic signal poles, bus stops, road signs, direction signs, and external covers for various types of equipment rooms. Other symbols such as road barriers, curbstones, and pedestrian pavement are mainly in dark grey using stone or brick materials, and city roads are paved with black asphalt. The base tones of the city facilities, primarily dark green, dark grey, and black, effectively downplay their presence. For instance, various street lamp poles and traffic signal poles painted in dark green appear more harmonious and unified against the city's grey-toned facades, mainly composed of glass curtain walls. This greatly reduces the messy appearance of the cityscape at the headquarters base (Figure 3). In contrast, pole-shaped facilities in most other areas of Nanning are predominantly white and are extremely eye-catching and overpowering under the intense sunlight. Their varied heights and shapes contribute to a cluttered city interface and disrupt the presentation of a complete architectural exterior. Meanwhile, because the landscape facilities are dark-colored, they visually recede, creating an illusion of disappearance. By switching from white to dark colors, all kinds of green plants and flowers on city streets, with the contrast of dark colors, appear greener and more vibrant, fully highlighting the beauty of Nanning, rich in subtropical style. This is because the dark asphalt road surface and dark landscape facilities serve as the base color, and the various shades of green and flower colors are more contrasted against the dark background. If white facilities were to continue being used, they would stand out more,

and due to the similar brightness with various green plants and flowers, they would not be able to create layered contrast.

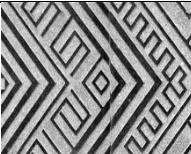




**Figure 3** Dark-colored landscape facilities make the city interface cleaner and tidier  
**Source:** Author

### **Application of Regional Cultural Symbols in the Urban Landscape Facilities of Wuxiang New District**

In terms of shape, Nanning's Wuxiang New District has selected representative regional cultures as the base graphics for the application in landscape facilities, such as Zhuang Brocade, Bronze Drums, Huashan rock paintings, and Embroidery Balls (Table 2). According to the matching of symbols with two-dimensional and three-dimensional spatial forms, combined with the actual spatial scale of a specific landscape facility, various design techniques are used to reinterpret and recreate symbols, and they are systematically applied to various landscape facilities. In particular, the series design based on Zhuang brocade is the most typical, achieving a multi-dimensional and comprehensive inheritance and innovation of regional culture, making urban landscape facilities an important window for fully displaying regional culture (Figure 4).

**Table 2** Three main types of Zhuang cultural symbols were incorporated in the design of urban landscape facilities in Wuxiang New District

<b>Legend</b>	<b>Name</b>	<b>Basic Pattern</b>	<b>Visibility</b>	<b>Design Frequency</b>
	Zhuang Brocade	Diamond, two-direction continuity, four-direction continuity	A+	Extremely high
	Bronze Drum	Central radial, sun, bird, and feathered man patterns	A+	Extremely high
	Embroidered Ball	Sphere with twelve petals cut	A+	Extremely high

**Source:** Author





**Figure 4** Various urban landscape facilities with a Zhuang brocade series theme

**Source:** Author

In the bus stations of the Wuxiang New District, modern design styles are used, and important partial positions are decorated with Zhuang brocade diamond patterns, making the previously overlooked bus stations also full of design details, greatly improving the urban quality (Figure 5). The street signs on the streets also use Zhuang brocade diamond patterns. Some important pedestrian guardrails also simplify and recreate the Zhuang brocade pattern to achieve a safe and beautiful effect. Zhuang brocade patterns are also used for decoration on some direction signs. At the same time, some landscape street lights have also made hollowed-out treatment of the Zhuang brocade pattern. During the day when the lights are not turned on, they are displayed in white, and at night they project special light and shadow effects on the ground through the hollowed-out Zhuang brocade pattern. Some landscape devices placed at important road junctions adopt a more diverse combination of symbols. For example, the landscape sculpture of the China-ASEAN Financial City, located at the intersection of Wuxiang and Kaixuan Road, uses comprehensive symbols such as Zhuang brocade, embroidery balls, and ancient knife coins for creativity. It conveys the metaphor of tripartite confrontation, combined with the logo of the China-ASEAN Expo, to show the image of Nanning city. Furthermore, the signage for the China (Guangxi) Free Trade Pilot Zone located south of Nanning Bridge also incorporates hollowed-out Zhuang brocade symbols through modern design techniques.



**Figure 5** Wuxiang New District bus station with a Zhuang brocade theme

**Source:** Author

Since Nanning opened its first subway in 2016, most of the entrances and exits of various subway lines in Nanning have adopted a uniform shape with Zhuang brocade symbols as the main theme. The shape is beautiful and has both modern and ethnic features, and it is also a model of incorporating regional culture into landscape facilities. The entrances and exits of



various subway stations in the Wuxiang New District, coupled with the dark-colored landscape facilities of the Wuxiang New District in ink green, fully convey the Wuxiang New District's adherence to a systematic design concept in urban landscape facility planning (Figure 6).



**Figure 6** Entrance/Exit of Nanning Metro Station with a Zhuang brocade theme  
**Source:** Author

In addition, in addition to the systematic planning and implementation of landscape facilities, the Wuxiang New District Headquarters Base has also carried out special designs with ethnic symbols on the exterior of some important office buildings. For example, in order to avoid the monotonous appearance of the ubiquitous glass curtain wall, the Wuxiang Headquarters Building has adopted a simplified version of the silver-gray metallic Zhuang brocade diamond pattern in areas such as the top, middle, and podium levels of the building. Through reinterpreting the original Zhuang brocade colors, which primarily consist of the three primary colors in high purity, along with the secondary creation of diamond patterns, the new Zhuang brocade pattern is very harmonious in color and shape with the entire building and the surrounding urban environment, reflecting the modern office building's contemporary atmosphere and becoming a window for promoting regional culture. At the same time, it also highlights the high-quality detail decoration, becoming a model for modern high-rise office buildings to integrate regional culture.

## DISCUSSION & CONCLUSION

Landscape facilities are one of the main components of urban landscapes. They serve as important carriers for reflecting local culture and contemporary needs at the most microscopic level, and they also play a crucial role in showcasing the city's image and detail quality.

By selecting the main landscape facilities in Wuxiang New District as the case study, it can be seen that although Guangxi has rich regional culture, it also needs to filter the regional culture. Simultaneously considering the reality of various landscape facilities, the most representative symbol of Zhuang brocade is selected. Through remixing the original Zhuang brocade colors, re-extracting the Zhuang brocade pattern, and applying design techniques such as Quartet continuous, Two-sided continuous, as well as local enlargement, the most representative symbols of Zhuang brocade are fully incorporated into various landscape facilities, resulting in a serial application. This approach is an effective way to inherit and develop national culture, and to realize cultural confidence. It is also a necessary path for innovative design of local culture. However, this mode of reinterpretation and recreation also has some shortcomings. For example, some overly exaggerated proportions and overly vulgar, unadjusted colors not only fail to convey the meaning of inheritance and innovation, but also damage the aesthetic appeal of the architecture itself, becoming disconnected from contemporary aesthetics.

This article focuses on the study of regional urban landscape facilities from a micro and systematic perspective, while other related studies mainly focus on macro planning or individual case studies. The study of macro level planning strategies has a positive impact on the positioning of early planning, but lacks supervision and effective control over later design and construction. Through detailed design analysis and evaluation at the micro level, it can be more conducive to providing reference value for similar projects in actual design and construction.

## REFERENCES

- Cao, C. L., & Zhu, R. (2023). Research on regional design of urban furniture: Taking Liangxi District of Wuxi as an example. *Design*, 36 (06), 117-120.
- Gao, Y. (2020). Research on optimization design of urban park landscape facilities in Harbin under the influence of regional culture. *Harbin Normal University*.
- Kuang, Q. B. (2015). Study on the cultural symbolism of urban furniture in Nanchong City, Sichuan Province. *Art Science and Technology*, 28 (10), 10+36.
- Li, C. (2010). Exploring the ways to integrate Guangxi regional culture in furniture design. *Journal of Sichuan University of Arts and Science*. 20 (03), 104-105.
- Li, J. H. (2019). Design research of cultural symbols for Guangxi's characteristic regions. *Comparative Research on Cultural Innovation*, 3 (04), 61-62.
- Li, Y. L. (2018). How to enhance cultural confidence in ethnic regions: Taking Guangxi as an Example. *Journal of Guangxi Academy of Socialism*, 29 (05), 75-79.
- Li, Z. J. (2019). Design aesthetics research in contemporary Guangxi regional culture. *China Packaging*, 39 (09), 34-36.
- Ma, X. M. (2017). Study on the strategy of local symbols of landscape facilities. Master Degree Thesis. *Zhejiang Agricultural and Forestry University*.
- Pan, Q. (2018). *Guangxi's cultural symbols*. Nanning: Guangxi National Press.
- Yin, D. C. (2022). Research on road landscape facility upgrading design of new urban area: Taking the headquarters base of Wuxiang New District in Nanning as an example. Master Degree Thesis. *Guangxi University*.
- Zai, X. T. (2023). Landscape facility design based on regional culture of Nanjing. *Design*, 36(08), 2.

**Data Availability Statement:** The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

**Conflicts of Interest:** The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

**Publisher's Note:** All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.



**Copyright:** © 2023 by the authors. This is a fully open-access article distributed under the terms of the Attribution-NonCommercial-NoDerivatives 4.0 International (CC BY-NC-ND 4.0).