# Study on the Importance of Green Landscape Design to Urban Public Space

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**Abstract:** With the remarkable improvement of spiritual and material civilization in China, urban public space has become more than a symbol of a city. There are still many problems in the planning and design of urban public space landscape, and there are many unsatisfactory landscape designs. As an important part of urban landscape, green landscape has dual roles of society and ecology. The landscape of each design mode reflects the cultural connotation of the city from the perspective of aesthetics or function. The purpose of this paper is to summarize some of the principles of planning and design, and avoid some design misunderstandings in the planning and design of specific urban public space landscapes. Strive to achieve the harmony between man and nature, and create a pleasant urban public space landscape.

### 1. Introduction

Urban public space refers to the open space between building entities in cities or urban agglomerations. It is an open place for urban residents to conduct public exchanges and hold various activities [1]. Landscape planning is a practical study of solving the economic, ecological and cultural problems at the landscape level by using the principles of landscape science. On the basis of recognizing and understanding the landscape characteristics and values, the overall planning and design of various landscape elements in the region [2]. The aesthetic consciousness of landscape design and the study of green landscape characteristics are still not deep enough, so that the green landscape after design is difficult to meet the regional spatial characteristics [3]. Because the design ignores people's behavioral feelings and is not humanized, environmental behavior is the main research content of humanized landscape design.

Landscape design is to use the principle of landscape science to make overall planning and design of various landscape elements in the region on the basis of understanding and understanding the characteristics and values of the landscape [4]. This requires that the design of green landscapes should take the scientific theories of green science, aesthetics and ecology as the theoretical basis, pay attention to the basic principles of ecological environmental protection, and then adapt to the needs of modern urban development [5]. The rationality of the green landscape and the cultural and inheritance of the social landscape, combined with the local cultural background [6]. The rational use of resources is the starting point and landscape protection is the premise. As a carrier of information, design works of art should express new cultural information in innovative artistic language [7]. Some basic knowledge and methods of psychology can be used to study people's activities in urban space and their response to the environment. The feedback information can be used to guide the construction of urban environmental space.

## 2. Problems in Landscape Design of Urban Public Space

Urban traditional landscape and historic sites are the reflection of the long-term deposit of excellent national culture in the process of urban historical development. Designing art education has doubled the number of students enrolled, but it has not linked the employment problem to the market demand. With the rapid development of cities, traditional landscape and cultural heritage

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have been destroyed frequently. The role of green landscape in modern urban public space is becoming increasingly prominent. In addition to its own visual function, it also has certain ecological benefits and spatial functions [8]. The basic engineering elements are mainly embodied in space, vision, ecology and other elements. Respecting nature and understanding nature are the basic prerequisites for landscape design. Design based on understanding and respecting nature is in line with human needs. Blindly pursuing large-scale lawns, heavy grass and trees, and not paying attention to the actual functional needs of residents are lack of long-term planning landscape design.

The unique social nature of human beings requires that they always need a shelter to shelter from the wind and rain, and of course there is a need for privacy. Due to the non-self-sufficiency of the landscape itself, a series of constraints must be considered. Such as pavement parametric design, ancient landscape parametric design, landscape bridge parametric generation, step ramp integral parametric design, stream shape parametric design, parametric generation of natural plant groups, etc. The idea of passive design is extended to landscape design with a little adjustment. The environment of landscape originally comes from a pure outdoor environment. It will cost a lot to rely on human intervention for a long time to achieve the environment's pleasure. Figure 1 is a modern style landscape design model.



Fig.1. A modern style mountain landscape design model

Expanding enrollment not only can not guarantee the quality of students, but also varies in the level of running a school. In the design process, it is required to ensure that the hard landscape and the soft landscape mainly green should meet the basic requirements of the sense of spatial belonging in proportion to create a more pleasant spatial visual effect for the square. If we want to understand human needs and interpret human nature, we must understand human needs in order to establish a harmonious relationship between human and nature. Urban public space landscape design should emphasize the coordination between man and nature to meet the needs of human beings for the living environment as the ultimate goal [9]. The knowledge that students learn is not only far from the modern design trend, but also has poor comprehensive ability. At present, most of the design art teachers themselves are out of touch with the market, contrary to the trend of modern design art. Emphasis on people-oriented planning and design principles in urban public space landscape planning and design. Emphasizing the harmonious unity between man and nature is the key to environmental landscape planning and design.

## 3. Basic Principles of Green Landscape Design in Urban Public Space

Nowadays, many urban plazas, city government plazas, street gardens and other public landscape spaces are filled with Roman columns and European architecture. From the perspective of the effect of the scene, if the hard paving area is too large, it is easy to bring a sense of visual monotony, especially in the absence of green texture and color, it can not bring visual beauty. In the landscape planning and design, the landscape should be considered as a whole unit, and the unity of the overall style of the landscape should be pursued [10]. In the overall planning and design of urban public space landscape, planning and design should strive for natural harmony, emphasizing a continuous space and dynamic visual aesthetics that can move freely. Landscape greening maintenance management is an important part of landscape greening construction. In order to

achieve low carbon of landscape greening construction, effective measures should be taken to reduce the cost of buckwheat conservation management.

The sustainable development principle of urban public space landscape planning pursues a coordinated relationship between people and environment, contemporary people and future generations. Landscape overall design should strive for natural harmony, emphasizing continuous space and dynamic visual aesthetics that can move freely. Urban public space has its own characteristics of privacy in nature, which mainly meets the psychological security needs of human activities. Development must be based on the protection of nature and the environment. While focusing on rapid economic development, natural and environmental considerations must be fully considered. The urban environment is the place where human beings live together. The core of the urban environment is people, and the foundation is the natural environment. In the process of shaping the sense of belonging to the space, we should pay attention to the coordination of soft landscape and hard pavement. It is possible to properly construct a tree that can exert the benefits of the green barrier and the green group, or directly use the mosaic form to enable the green to promote the coordination of the landscape.

#### 4. Conclusions

Excellent urban public space landscape design can skillfully design cultural relics and historic sites, and protect cultural relics and monuments from damage as much as possible without affecting urban construction. Green landscape design is an inevitable guarantee to meet the functional needs and ecological benefits of urban public space. In the public space landscape planning to prevent artificially fragmentation of cultural development, we must pay attention to the cultural identity of local residents. In landscaping projects, the application of low carbonization needs to be carried out in every link. To realize the effective combination of landscape greening construction and low carbon concept and technology, and reduce environmental pollution. In terms of regional characteristics, we need to consider its stability, diversity, functional richness and other factors, focusing on the use of specific building strategies to meet the needs of regional urban planning. It is the historic responsibility of landscape architects and environmental artists to create the cultural landscape of urban public space and to protect and utilize the urban cultural heritage rationally.

#### References

- [1] David, Médodie, Follain, Stéphane, Ciampalini R, et al. Simulation of medium-term soil redistributions for different land use and landscape design scenarios within a vineyard landscape in Mediterranean France. Geomorphology, 2014, 214:10-21.
- [2] Polat A T, Akay A. Relationships between the visual preferences of urban recreation area users and various landscape design elements. Urban Forestry & Urban Greening, 2015, 14(3):573-582.
- [3] Liang J, Hu Y, Sun H. The Design Evaluation of the Green Space Layout of Urban Squares Based on Fractal Theory. Nexus Network Journal, 2013, 15(1):33-49.
- [4] Wong G K L, Jim C Y. Abundance of urban male mosquitoes by green infrastructure types: implications for landscape design and vector management. Landscape Ecology, 2018, 33(1):1-15.
- [5] Verderber S. Residential hospice environments: evidence-based architectural and landscape design considerations. Journal of Palliative Care, 2014, 30(2):69-82.
- [6] Coulson, Robert N. Beck, Travis. Principles of ecological landscape design. Landscape Ecology, 2014, 29(4):759-760.
- [7] Seburanga J L, Zhang Q. Heritage trees and landscape design in urban areas of Rwanda. Journal of Forestry Research, 2013, 24(3):561-570.
- [8] Cusa M, Jackson D A, Mesure M. Window collisions by migratory bird species: urban geographical patterns and habitat associations. Urban Ecosystems, 2015, 18(4):1427-1446.

- [9] Li D H, Jiang B S, Li H Y, et al. Design of experiment course "Computer-aided landscape design" based on flipped classroom. Computer Applications in Engineering Education, 2016, 24(2):234-240.
- [10] Perkl, Ryan M. Ecological principles and processes as drivers for landscape design. Landscape Ecology, 2015, 30(4):757-759.