
Study on Color Design of City Street Guide System

Wang Jiahang^{1,2} & Rina Binti Abd Shukor³

¹PhD student, City Graduate School, City University, Malaysia.

²Jilin Jianzhu University, China

³Doctoral supervisor, City Graduate School, City University,
Malaysia.

^{1&2}153628228@qq.com, ³rina.shukor@city.edu.my

Abstract

Introduction: *With the acceleration of the urbanization process, the urban street guide system plays an increasingly important role in modern urban life. As a key link, the color design of the guide system is of great significance to enhance the image of the city, facilitate citizens' travel and enhance the cultural characteristics of the city.*

Methodology: *Through the method of literature analysis and field investigation, to understand the relevant concepts and analyze the problems and shortcomings of the street guide color design in Changchun City. At the same time, drawing on the experience and successful cases of urban street guide design at home and abroad, a series of design principles and strategies suitable for Changchun Street guide color design are put forward.*

Result: *Good color design of urban street guidance system not only helps to enhance visual identity, beautify urban environment, guide and organize traffic flow, enhance user experience and express regional characteristics and cultural atmosphere, but also promotes the friendly image and sustainable development of the city.*

Conclusion: *Conclusion: The design strategies and methods proposed in this study can effectively meet the needs of urban traffic guidance design and improve the quality of life and happiness of urban residents. In the future, further in-depth research and practice are needed, and the color design of urban street guidance system should continue to develop in a more scientific, reasonable and humanized direction, providing people with a more convenient, safe and comfortable urban living environment.*

Keywords: *street guidance, color design, city image.*

Introduction

The color design of city street guide system is an important urban planning work, which is not only related to the aesthetics of the city, but also directly affects the quality of life of the citizens. Good color design of urban street navigation system can provide convenient travel experience for citizens. The contrast and coordination of colors can make all parts of the city form a harmonious and unified whole, thus improving the visual effect and beauty of the city. Setting bright color signs can help citizens quickly find destinations and improve travel efficiency. In urban color design, we not only need to consider factors such as urban characteristics, human environment, and use functions, but also reflect the historical and cultural heritage of the city. Different color choices can create a completely different atmosphere, and reasonable color design can enhance the overall image of the city.

1 City street guide system color design concept

The city Street Guide system is designed to provide accurate and clear guidance information to citizens and visitors, so that they can easily find destinations and navigate urban Spaces smoothly. The design of urban street guidance system needs to take urban residents as the center, understand the needs, behaviors and psychological models of urban residents, and understand their navigation needs and usage habits in the city. Through the research and participation process design of the use needs of urban residents, the guidance system can meet the expectations and needs of urban residents. Guide system design needs to adopt a unified visual language and design elements to ensure consistency and coherence, including color, font, icon, logo and other aspects of the design, a unified visual language makes the guide system easy to identify and understand, and can establish the city's brand image.

Color design refers to the process of using different color elements and principles to create visual effects and emotional experiences in various visual design fields. Color design involves the aspects of color psychology, color contrast, color collocation, color context, color culture and color innovation application. Different color combinations can cause different emotions and associations, and can also form different visual effects. Designers should consider these factors comprehensively, and make appropriate color selection and design decisions according to the needs of specific design projects and target audiences, so as to create a color scheme that is attractive, effectively conveys information and resonates with the target audience.

2 Research status of color design of urban street guide system at home and abroad

2.1 Research status of color design of domestic urban street guide system

In recent years, with the acceleration of urbanization, more and more attention has been paid to the design and research of domestic urban street guidance system. Some cities have begun to try to introduce more humane and personalized design concepts, through the combination of various elements such as color, graphics and symbols, to improve the legibility and beauty of urban street navigation systems.

In terms of urban color planning, from the 1990s, the Capital Planning Commission began to put forward the requirements of color planning for the newly built planning communities in Beijing. In August 2000, in order to meet the investigation of the Olympic Games, Beijing issued the "Regulations on the Management of the Facade of Buildings in Beijing to maintain cleanliness", and gradually whitewashed and cleaned the facade of buildings in some key streets. In 2001, Beijing Ximan Color Culture Development Co., Ltd. cooperated with the Panjin City government in Liaoning province to plan China's first urban color plan. Subsequently, cities such as Wenzhou, Harbin, Nanjing and Hangzhou successively carried out urban color planning. Professor Cui Wei ^[1] pointed out that urban color planning plays a vital role in improving the appearance and quality of cities in China.

In terms of color design and research of urban street guidance system, Jin Yaqing ^[2] proposed in "Research on Color Application in Urban Traffic Guidance System" that guide colors should be unified with environmental colors, and color characteristics should be used to conduct a holistic and regional analysis of the guide system, so as to meet people's emotional demands and make people physically and mentally happy. Wang Xuejiao ^[3] proposed in "Research on the Barrier-free Color Design of Guidance System for Color-blind People" that barrier-free color design should take into account the special needs of both the general population with normal color vision and the color-blind people, and make the design truly humanistic. Tang Jing ^[4] proposed in "Research on the Design of Guidance System for Elderly Apartments Based on Color Psychology" that the elderly are affected by physiological conditions, their visual perception ability and color discrimination ability are reduced. Therefore, color matching with high safety and strong contrast should be selected from the perspective of color psychology and conform to the principle of age-appropriate color design. In her Research on the Design of Wuhan "City Card" guidance System from the Perspective of Culture, Liu Xiaoying ^[5] mentioned that color is an important element with great cultural expression in the guidance system, which can not only meet the psychological aesthetic needs, but also show the characteristics of regional culture.

2.2 Research status of color design of foreign urban street guide system

The study on color design of urban color planning and urban street guidance system in foreign countries is relatively early. At the end of 1978, Professor Brino started to carry out the urban color planning of Turin, Italy, coordinating the architectural color use of main streets and squares, which is the earliest and relatively complete case of color planning at present. The famous French colorist Jean Philippe Lancelot put forward the concept of "color geography"^[6]. He believes that physical geography and human geography together determine the architectural color of a region or city. It emphasizes that color design should be integrated with the local natural environment and human history. British landscape scientist Professor Mitchell Lancaster proposed the "color landscape theory". In his book *Color Landscape*, he advocated that color should be regarded as an important component of urban landscape, and regional color landscape should be expressed through the overall planning and design of color elements in the environment. In Asia, Japan is the first country to carry out urban color planning. Under the guidance of Professor Lankelo, the Japanese Urban Color Planning completed the "Tokyo Color Research Report" and formed the "Tokyo City Color Planning". In 1992, the Japanese Department of Construction proposed the "Urban Space Color Planning" bill. It is stipulated in detail that the special color planning and design must be approved by the expert committee to take effect, which provides legal protection for creating a good urban color landscape.

The above research theories provide a theoretical basis for the color design of urban street guide system, and emphasize that the overall landscape effect should be considered in the color design of urban street guide system in order to achieve a harmonious and unified urban color environment. Under the leadership of the government, the color planning legal system composed of national laws, local regulations and planning technical guidelines can better guide the color of the city to become more harmonious and orderly.

3 Problems in color design of city street guide system

3.1 Lack of overall planning and guiding ideology

The color design of urban street guide system lacks unified planning and guiding ideology. The density setting of the guide system is not reasonable enough, there is a lot of randomness, lack of overall planning, and do not have a comprehensive understanding of the basic Settings and roads of some densely populated areas. This disorder and random signage seriously affect the overall beauty and practicality of the guide system, resulting in the public easy to feel confused in the use process.

3.2 Color design is inconsistent with urban color construction planning

The color design of the city street guide system is inconsistent with the city color construction plan. As a combination of urban architecture and landscape, the design of urban visual signs needs to match the color spectrum of the city, maintain coordination and unity with the landscape environment color, and be recognized by the users of the city. If the blind pursuit of visual eye-catching and impact is divorced from reality, it will destroy the color planning of the whole city, and destroy the harmony of the color of the whole city.

3.3 Neglect of special groups, lack of inclusiveness

Many urban street guidance systems ignore special groups in their design and ignore social inclusiveness. In color design, the needs of special groups such as the elderly, color weak or color blind are not fully taken into account, resulting in inequity and exclusion, resulting in these groups having difficulty recognizing or misinterpreting guide information.

3.4 Not well thought out, lack of visual needs for night travel

The color design of the city street guide system is not well considered, and the visual needs of night travel are lacking. The design of the city guide sign system is three-dimensional and all-weather. In the design process, the visibility readability under special conditions should be considered, such as the visibility identification distance between pedestrians and vehicles at night and the night driving speed, and the impact of the visual distance of the guide sign plate should be designed and adjusted.

3.5 The speed of renewal is slow, and it is difficult to adapt to urban development and change

Urban street guide system color design update speed is slow, it is difficult to adapt to urban development changes. Urban public guide sign system belongs to the environmental guide system, urban development is changing with each passing day, the urban environment is also constantly changing, and the environmental public guide system is almost unchanged, some guide signs are fuzzy, damaged, faded, etc., unable to provide accurate and clear information, urban development and construction and public environmental guide system disconnection or guide system lag behind urban development and construction.



Source: Collected by the author.

4 Color design principles of city street guide system

4.1 Consistent with urban color planning

The design of urban street guide system should be consistent with urban color planning. As a combination of urban architecture and landscape, the color of the street guide system needs to match the urban color spectrum of the city where it is located, so that it can be more easily recognized by urban users. If the pursuit of visual eye-catching and impact is divorced from reality, destroying the color planning of the entire city, and destroying the harmony of the color of the entire city, such a guide sign system will lose vitality and vitality.

4.2 In line with the visual harmony between people and the environment

As the largest indicating system in the city, the city street guide system is displayed in different forms and in different ways, or at the end of the city alley, or at the fork of the road, or standing in a corner of the scenic park. It is closely connected with the urban environment and is an important part of the urban landscape. Urban street guidance system is different from urban sculpture art works, to serve the public as the purpose, so the color collocation should be coordinated and unified with the landscape environment color of the area, to avoid the appearance of high brightness, high purity color to dominate.

4.3 Strengthen humanized and inclusive color design

Humanized and inclusive design is one of the trends of color design in foreign urban street guide system. Designers should consider the user's feelings when designing, especially for the color blind and visually impaired people to design special tactile and sound signals, as well as the use of more friendly and warm color collocation, to ensure that the color design can effectively convey information, but also can incorporate other elements such as symbols, shapes and textures to enhance recognition. To create a more comfortable and convenient travel environment.

4.4 Take into account the visual needs of night travel

The design of urban street guidance system is three-dimensional and all-weather, and the visibility and readability under special conditions should also be considered in the design process, such as the visibility recognition distance between pedestrians and vehicles at night. The sensitivity of the human eye for different colors is not the same, the designer should consider the pedestrian and driver at night driving speed on the visual distance of the guide sign design adjustment, in addition to the design of the guide sign made of materials can take some night lighting lights or reflective materials, In the design, the color of the guide sign material and the color use and selection of the information text should also be considered.

Figure 1: Visual guide design with high visibility and recognition



Source: <https://www.sohu.com>

Figure 2: High safety and organizational efficiency guide design



Source: <https://www.chinasigns.com.cn>

5 The significance of color design of city street guide system

5.1 Improve traffic visibility and recognition

The color design of the street guidance system can improve the visibility and recognition of pedestrians to the guidance information. Color design plays a role in visual guidance in the guidance system, which can help people quickly find a destination or a specific place. Through the use of bright, high-contrast eye-catching color combinations, the guiding signs and instructions are in sharp contrast with the surrounding environment, highlighting the guiding signs and signs, taking into account the visual needs of night travel, making them easier to recognize and read in the urban environment, thereby attracting the attention of pedestrians and helping them quickly recognize and understand the guiding information (see Figure 1).

5.2 Improve traffic safety and organizational efficiency

Color design can improve traffic safety and organizational efficiency through different colors. Color design can emphasize important information and priorities in the guidance system. For example, the use of striking red to highlight emergency exits or warning information to help pedestrians quickly identify and take corresponding measures can improve pedestrians' attention and alertness to key information. Different colors can distinguish different traffic flows, which can effectively guide vehicles and pedestrians to go their own way and reduce the occurrence of traffic accidents. For example, on roads in some cities, sidewalks and non-motorized lanes are colored differently to distinguish different modes of traffic, thus improving traffic safety and organizational efficiency (see Figure 2).

5.3 Beautify the urban environment and enhance the urban image

The city street guide system is not only a tool for People's Daily travel, but also an important part of the city image. Different regions have different cultural backgrounds and aesthetic preferences, suitable color design can be coordinated with the local environment, highlight regional characteristics, create a unique urban image and atmosphere, and reasonable city street guide color matching. It can not only reflect the cultural heritage of the city, but also improve the overall image of the city, so that the urban environment is more harmonious and beautiful.

6 Conclusion

Good color design of urban street guidance system not only helps to enhance visual identity, beautify urban environment, guide and organize traffic flow, enhance user experience and express regional characteristics and cultural atmosphere, but also promotes the friendly image and sustainable development of the city. In the future development, the color design of urban street guidance system should continue to develop in a more scientific, reasonable and humanized direction, providing people with a more convenient, safe and comfortable urban living environment.

References

- Cui Wei. (2006) Urban environment color planning and design [M]. Beijing: China Architecture and Construction Press, (11) 225.
- Jin Yaqing, ZHAO Yue. (2016) Research on Color Application in Urban Traffic guidance System[J]. Shenzhen: Modern Decoration, (07): 133.
- Wang Xuejiao. (2018) Research on Color Barrier-free design of guide system for color blindpeople [J]. Chongqing: Packaging Engineering, (12): 54-58.
- Tang Jing. (2023) Research on Design of guidance system for elderly apartment based on Colorpsychology [M] Master's Thesis of Liaoning Normal University, (6): 24-30.
- Liu Xiaoying (2020) Research on the design of Wuhan "City Card" guidance system from theperspective of culture [J]. Chongqing: Packaging Engineering, (5): 300-305.
- Bao Xiaowen, Qiu Huiying. (2018) Foreign practice of urban color planning and its inspiration toShanghai [J]. Shanghai: Shanghai Urban Planning, (4): 115-11.