Research on the construction of tourism sign system under the background of all-for-one tourism——Take Helong City, China as an example

Wenlu Zhao¹ and Guanghu Jin²

¹Wenlu Zhao (1998-), College of Agriculture, Yanbian University, Yanji 133002, Jilin, China
²Corresponding author, Guanghu Jin (1978-), Associate Professor, School of Engineering, Yanbian University, Jilin, China, National first-class certified architect
E-mail: jinguanghu@ybu.edu.cn

Abstract. The tourism sign is a medium between tourists and scenic spots, and a window to open tourist spots. The tourism sign system is mainly to enable tourists within a certain tourism area to obtain corresponding tourism information in a timely manner, including tourism positioning, scenic spot information, play routes and other content, to provide tourists with comprehensive play services. This paper takes Helong City, Jilin Province, China as an example to discuss the planning and setting methods of tourism sign system in minority cities to aim to provide theoretical and practical basis for the application of tourism sign. According to the tourism development framework of "The all-for-one tourism planning of Helong City", it follows the linkage radiation ring of three groups in one belt, cultural relics and ecological farms. Utilize the tourism resources of Helong City to construct a complete tourism sign system based on points, lines and surfaces to achieve a comprehensive three-dimensional network-style boutique tourism route guidance. The perfect tourism sign system provides a series of services, which can effectively help tourists make travel plans and improve the quality of tourists' play.

1. Introduction
With China’s economic development, population increase, and income increase, the development space for China’s tourism development will be extremely broad. The construction and improvement of tourist attractions should pay more attention to the tourism sign system. A complete and scientific tourism sign system can bring tourists a brand new, pleasant and humanized experience which will greatly increase the revisit rate of the scenic area and bring brand effects to the scenic area[1]. The tourism sign system is directly related to the tourist’s play experience and the evaluation of the scenic area. The tourism sign system has become an important part of the scenic area, representing the image, resource characteristics and service concept of the scenic area. Building a complete and effective tourism sign system is of great help to improve the services of tourist attractions[2].

This study selected Helong City, Jilin Province, China as a sample. Helong City is located in Yanbian Korean Autonomous Prefecture, the largest Korean settlement in China. As of the end of 2019, the Korean population of Helong City was 82,771, accounting for 50.3% of the total population of Helong City. The tourism industry in Helong City is one of the representatives of China’s ethnic minority tourism development. It has good tourism resources, as shown in Figure 1 and Figure 2, from 2015 to 2019, Helong City’s tourism revenue and number of tourists increased year by year. Tourism
in Helong City has developed rapidly. In addition, Helong City is located in the northeast border, with a strong ethnic customs. The tourism industry is one of the important industries of Helong City. The planning and design experience of tourism sign can be used as a typical case to promote to cities in ethnic minority areas across in China.

2. General situation of tourism resources in Helong City
Helong City is located in the southeast of Jilin Province, in the south of Yanbian Korean Autonomous Prefecture, at the foot of Changbai Mountain, on the north bank of the upper reaches of the Tumen River and across the Tumen River from the Democratic People’s Republic of Korea. Helong City is rich in hydrological resources and beautiful waters. The city’s forest coverage rate reaches 81.5%, and the natural vegetation of Helong City belongs to the flora of Changbai Mountain, which is a national ecological demonstration area[3]. Helong City was identified by the National Tourism Bureaus as the second batch of “National Tourism Demonstration Zones” in the list of establishment units. Helong City is blessed with a unique geographical location and abundant natural landscapes. It has excellent natural landscapes such as Xianjingtai Scenic Area and Bajiazi Xianfeng National Forest Park. Helong City has a long history. There are national key cultural relics protection areas such as the tomb of Princess Zhenxiao, Longtou Mountain Ancient Tombs, Bohai Zhongjing Archaeological Site Park and other national key cultural relics protection areas. The tourism planning layout of Helong City is shown in Figure 3. In addition, Helong City has strong ethnic customs and beautiful folk landscape, which is known as the "hometown of singing and dancing”. There are 202 individual tourism resources in the overall tourism planning area. It can be seen that Helong City has rich tourism resources and a complete range of human resources and natural resources[4].

Figure 1. Histogram of the number of tourists received and dot-line graph of growth rate in Helong City from 2015 to 2019.

Figure 2. Histogram of the tourism income and dot-line graph of growth rate in Helong City from 2015 to 2019.

Figure 3. Schematic diagram of tourism planning layout of Helong City.
3. Implementation Plan of Helong City’s Tourism Sign System

3.1. The basis of tourism sign design
In March 2018, the General Office of the State Council issued the "Guiding Opinions of the General Office of the State Council on Promoting the Development of All-for-one Tourism." The guidance pointed out that the tourism sign system should be standardized and improved, and the tourism marking system with scientific location, reasonable layout and clear orientation should be established. The key tourist places regulate the use of public information graphic symbols that comply with national standards\(^5\). The key tourist places regulate the use of public information graphic symbols that comply with national standards.

3.2. The overall concept of tourism sign design
The development of tourism in Helong City puts forward higher requirements on the city's tourism sign. In order to ensure the smooth progress of all-for-one tourism, create barrier-free tourism and enhance the tourism image of Helong City, under the leadership of the municipal party committee, the municipal government and cultural tourism bureau, the signage project of Helong City’s all-for-one tourism was proposed. The design standard of Helong City's traffic and tourism sign system is based on the national tourism development framework. Its design concept is satisfied with the design effect and use cycle of 5-10 years ahead of time. It has international forward-looking, international vision and requirements, and fully emphasizes the design is integral, scientific, and cultural\(^6\).

The overall concept of the design of the indicator board and guide view of the tourist roads in Helong City is: in accordance with The overall tourism development master plan of Helong City and The overall urban master plan of Helong City, the main roads adjacent to the surrounding areas of Long City follow the linkage radiation ring of three groups in one belt, cultural relics and ecological farms, and the tourist route map of Helong City are shown in Figure 4 and Figure 5. Take the panoramic guide maps and guide signs for major scenic spots and the introduction of characteristic towns and township tourism plans as "points". Take tourist traffic signs on all levels of expressways, national roads, city roads and township roads as "lines". At the expressway entrance, expressway service area and Jindalai tourist distribution center, take Helong city introduction and panoramic tourism plan as "surface". Realize all-round three-dimensional network type boutique tourist route guidance through standardized road signs.

![Figure 4. Helong City Tourism Planning Route Map.](image1)

Note: The red line represents the red cultural tourism line, the green line represents the rural health tourism line.

![Figure 5. Helong City Tourism Planning Route Map.](image2)

Note: The yellow line represents the ice and snow ecological tourism line, the pink line represents the folk cultural tourism line, and the blue line represents the border-style tourism line.
3.3. Tourism Sign System in Helong City

3.3.1. The content and scale of project implementation
Within the city, construct and install the guide maps of all-for-one tourism and the guide signs of scenic spots at the entrances and exits of various expressways, national highways and provincial highways, and construct and install guide maps and road guidance signs in various scenic spots, rural tourism business units and key rural tourism villages. At the entrance of the expressway and the entrance of the main roads such as national and provincial roads leading to Helong City, the expressway service area, and the Jindalai tourist distribution center, set up a city-wide introduction and an all-for-one tourism plan of the Helong City.

3.3.2. Location of traffic and travel guide sign
According to the distribution of scenic spots in Helong City, in the entrances and exits of Antu County, Yanji City, Longjing City and other major highways leading to Helong City, national highways, provincial highways and border ports, a total of 34 locations were selected to set up 45 traffic and tourist signs. 25 traffic and tourist guide signs are set up along 2 national highways; 65 traffic and tourist guide signs are set up on provincial roads, tourist roads, and tourist townships within the city; 15 small general traffic signs are set up on city roads and town roads; 60 road signs were installed at the fork of city roads and roads in the town. See Table 1 for the location of the project traffic and tourism guide signs.

| Numbering | Location of traffic and tourist signs                                                                 | Number of settings |
|-----------|------------------------------------------------------------------------------------------------------|--------------------|
| 1         | In front of Longjing exit of Yanlong Expressway (2 directions), turn into the westbound exit of G334 National Highway after Longjing toll station | 4                  |
| 2         | In front of the Xicheng exit of Yanlong Expressway (2 directions), turn to the westbound and eastbound exit of G334 National Highway after the Xicheng toll station | 5                  |
| 3         | Before the exit of Guandi Village on Yanlong Expressway (2 directions), turn to the westbound and eastbound exit of G334 National Highway after the toll station | 5                  |
| 4         | The entrance of Antu County and Longjing City in G334 National Highway                               | 2                  |
| 5         | Along G334 National Highway in Helong City                                                           | 11                 |
| 6         | The entrance of Antu County and Longjing City in G331 National Highway                               | 2                  |
| 7         | Along G331 National Highway in Helong City                                                           | 14                 |
| 8         | The entrance of the Badong Line of Hailan Village, Helong City from Gongnong Road and Henan Village of Longjing City | 1                  |
| 9         | Entrance at the intersection of Provincial Highway in Helong City and G334 National Highway           | 8                  |
| 10        | Entrance at the intersection of Provincial Highway in Helong City and G331 National Highway           | 15                 |
| 11        | Southwest of Yanbian Xianfeng National Forest Park, the entrance of Helong Provincial Highway from Antu County | 1                  |
| 12        | Guchengli Port and Nanping Port                                                                      | 2                  |
| 13        | Along the provincial roads, tourist roads and tourist township roads in Helong City                   | 65                 |
| 14        | Small general traffic signs on urban roads and town roads                                             | 15                 |
| 15        | Road signs for intersections of urban roads and town roads                                            | 60                 |

3.3.3. The location of the panoramic tour map of all-for-one tourism
According to the distribution of scenic spots in Helong City, 16 panoramic tourist guide maps of all-for-one tourism will be installed at the entrances and exits of highways, national highways, provincial highways, border ports, railway stations, long-distance passenger stations, airports and
tourist distribution centers. See Table 2 for the location of the project’s panoramic guide map of all-for-one tourism.

Table 2. The location of the project’s panoramic guide map of all-for-one tourism.

| Numbering | The location of the project’s panoramic guide map of all-for-one tourism | Number of settings |
|-----------|-------------------------------------------------------------------------|--------------------|
| 1         | Longjing exit of Yanlong Expressway turns into the westbound exit of G334 National Highway | 1                  |
| 2         | After Xicheng Toll Station of Yanlong Expressway                         | 1                  |
| 3         | After Guandi Village Toll Station of Yanlong Expressway                  | 1                  |
| 4         | Helong Service Area of Yanlong Expressway                                 | 1                  |
| 5         | The entrance of Antu County and Longjing City in G334 National Highway   | 2                  |
| 6         | The entrance of Antu County and Longjing City in G331 National Highway   | 2                  |
| 7         | The entrance of the Badong Line of Hailan Village, Helong City from Gongnong Road and Henan Village of Longjing City | 1                  |
| 8         | Southwest of Yanbian Xianfeng National Forest Park, the entrance of Helong Provincial Highway from Antu County | 1                  |
| 9         | Guchengli Port and Nanping Port                                          | 2                  |
| 10        | Square in front of Helong Railway Station and Helong Passenger Terminal   | 2                  |
| 11        | Jindalai General Airport (under planning) and Jindalai Tourism Customer  | 2                  |
|           | Service Center (under planning)                                          |                    |

3.3.4. Other tourism signs of scenic spots and townships

In order to better publicize the image of all-for-one tourism’s demonstration zone in Helong City, 15 publicity boards of all-for-one tourism’s demonstration zone were set up at the entrances and exits of highways, national highways, and provincial highways, and border ports in Helong City. Select 15 major large-scale scenic spots and 8 towns in the city. The panoramic guide maps of scenic spots and townships were set at the entrance of each scenic spot and prominent places in the town center, totaling 23 places. At the entrance of the city’s attractions, there are about 202 tourist attractions nameplates and introduction signs. For directional sign with guidance, direction and function in the scenic spot, a total of 300 signs are set in important large scenic spots, and a total of 200 signs are set in general scenic spots.

4. Conclusion

4.1. Complete treatment of the tourism sign system

The construction of tourism sign system is not a decentralized and independent system, but should be synchronized with the planning and design of the scenic area and influence each other. Make overall planning of tourist attractions, determine the setting points of tourism signs, from line to surface, to ensure that tourists can find their destination smoothly. The design style, color, material and pattern of the tourism sign should be unified with the construction of scenic spots. At the same time, visitors can also be guided through a series of scenic spots related surrounding areas such as tickets, scenic spots maps, cultural and creative products, and realize the serialization of the design of tourism sign system. This is conducive to create a tourism environment where sign information is ubiquitous to providing tourists with scenic play information from multiple angles and levels.

4.2. people oriented

The service object of the tourism sign system is people, and all of its services are based on people's feelings. The tourism sign design needs to be based on the behavioral characteristics and physical habits of tourists, not only satisfies the scientificty and completeness of tourism sign, but also to meet the needs and psychological characteristics of tourists, and to bring tourists a relaxing and enjoyable play experience. Tourist groups in tourist attractions are not fixed, but random. The humanization of
the sign is to continuously meet the common needs of most tourists while also considering the play needs of special groups as much as possible. For mothers and babies, children, the elderly, the disabled, etc., Braille and barrier-free signs can be added to the tourism sign system to provide convenience for tourists.

4.3. Respect the local culture and traditions
The design of tourism identification system should respect the local ethnic culture and traditions, and comprehensively consider local economy, culture, society and other factors. The design of the tourism sign system should be in harmony with the scenic landscape in appearance; the materials should be as consistent as possible with the resources and style of the scenic spot. It is necessary to enrich the cultural connotation, reflect the local nature, history and folk culture and make the tourism sign of the scenic spot have cultural belonging and irreplaceability. When designing tourism sign for local tourist attractions in my country, the theme culture should be selected first and the theme cultural symbols should be refined so that it can be promoted to the greatest extent.

References
[1] Guan Hongfen. A Preliminary Study on the Design of Yunfu Tourism Sign System in the Information Age[J]. Art and Design (Theory), 2020, 2(08): 38-40.
[2] Zhang Lin, Lin Kechi, Lai Hanhan. Exploration on planning and design of tourism and traffic sign system under the background of all-for-one tourism[J]. China Housing Facilities, 2020(06): 93-94.
[3] Li Zehuan. The path and countermeasures of rural revitalization in Helong City from the perspective of poverty alleviation [D]. Jilin University, 2020.
[4] Wang Zheng. The problems and countermeasures in the development of rural tourism——Taking Helong City, Jilin Province as an example[J]. Guangdong Sericulture, 2020, 54(06): 148-149.
[5] Zhou Liyun, Yi Na, Deng Zhengfang. Small town tourism sign planning that takes into account the rationality of space and human perception——Taking Mojiang County, Yunnan Province as an example[A]. China Urban Planning Society, Hangzhou Municipal People’s Government. Sharing and Quality——Proceedings of the 2018 China Urban Planning Annual Conference (19 Small Town Planning) [C]. China Urban Planning Society, Hangzhou Municipal People's Government, 2018:12.
[6] Yang Juping. Research on the Problems and Countermeasures of Tourism Administrative Law Enforcement in Shaoxing City[D]. Nanjing Agricultural University, 2015.
[7] Li Min. Quantitative Research on Driving Factors of Tourism Real Estate Value Promotion[D]. Jiangxi Normal University, 2015.
[8] Chen Han. The Enlightenment of Korean Tourism Signs to Chinese Tourism Signs——Taking Gyeongju City, South Korea as an Example[J]. Tourism Overview (Second Half Month),2019(22):233-235+238.