



Research on Tourist Perception of Guilin Li River Scenic Area Based on Grounded Theory

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Abstract. The Li River scenic area in Guilin has a natural landscape, which is an important part of the image of Guilin and has unique tourism value. Based on the grounded theory, this paper aims to explore the visitor perception of Li River Scenic Area, and builds a theoretical model of visitor perception factors of the scenic area in three dimensions of "scenic area conditions - play quality - perceived results" by utilizing the online visitor review data, among which scenic area characteristics and visitor evaluation are the biggest factors affecting the visitor's perception. Based on the analysis results, the follow-up management planning suggestions of the scenic area are proposed from the perspectives of tourists' perception and scenic area management.

Keywords: grounded theory, Li River scenic area, tourist perception, influencing factors, development suggestions

1 Introduction

The scenic quality and management level directly affect the perception of tourists on the scenic area. In the research on the relationship between the scenic area and tourists' perception, different scholars have different research focuses. In the last decade, a large number of domestic and overseas scholars have focused the research theme of tourists' perception of scenic areas in the aspects of tourists' place attachment [1], the scenic area satisfaction [2-5], the scenic area value perception [6-8] and so on. In terms of research data sources, in addition to traditional data collection methods such as questionnaires and in-depth interviews [9], photographic photographs [10], poetry and movie works [11], online visitor reviews, and tourists geotagging information [3,12-15] have become new sources of data acquisition. Differences in the perceived results of tourists in different scenic areas, which in turn affects tourists' choice of tour routes [16], and aboriginal-tourist interaction [17], have produced differences.

"Grounded theory" is a qualitative research method proposed by Glaser and Strauss, which advocates the establishment of theories based on empirical data through

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continuous summarization and refinement [18]. Grounded theory is a bottom-up research method, this research method does not put forward theoretical assumptions at the beginning, and generates theories through experience and inductive summarization of the collected data, and then extracts and refines theories and establishes models from the qualitative data through a strictly standardized analytical process, which solves the problem of lack of standardized process guidance in general qualitative research, and at the same time, can circumvent the interference of the subjective factors on the study [19].

The Li River Scenic Area in Guilin is a national 5A scenic area with a total area of about 200 square kilometers, which is one of the largest karst landscape tourism areas in the world. This study takes the Li River scenic Area of Guilin as an example, based on the research method of grounded theory, analyzes the influencing factors of scenic spots on tourist perception through the analysis of online tourist comment data of scenic spots, and explores the planning direction and development suggestions of scenic spots.

2 Study Area, Data and Methodology

2.1 Study Area

Guilin is located in the northeast of Guangxi Zhuang Autonomous Region and is one of the first historical and cultural cities in China. Li River Scenic Area is one of the most important tourism resources in Guilin, which is famous in the world due to its unique karst landscape. Li River Scenic Area is characterized by beautiful natural scenery, high-quality natural geographic conditions, and a rich store of natural resources. Li River Scenic Area exists a great portion of tourism resources to be developed and utilized, with very great potential for tourism development and nature education.

2.2 Data Acquisition

The visitor reviews of Li River Scenic Area in the past five years (from October 2017 to March 2023) on websites of Dazhongdianping and Xiecheng were used as study data sources, and a total of 2264 review data from the website of Dazhongdianping and 2971 review data from the website of Xiecheng were downloaded. Taking the authenticity, timeliness, representativeness, and diversity of the reviews as the basic requirements for information screening, the above 5235 reviews were subjected to data cleansing, and duplicates and reviews unrelated to the content of the study (e.g., tourists' evaluations of the VW Dianping and Ctrip.com software itself or irrelevant information such as the system's automatic replies) were removed, and a total of 934 review data were finally selected for the study.

2.3 Research Methodology

As Zagan theory has important advantages in qualitative research, this study will start from the tourists' perspective and conceptualize and code the tourists' review data in

combination with Zagan theory, in order to form the tourists' perception system of Guilin Scenic Area. The specific steps are as follows: first, randomly select 95% of the tourists' review text data, maintain a sensitive constant comparison of all kinds of perceptual elements in the text, extract all the perceptual factors perceived by tourists in the scenic area, and carry out the conceptualization and abstraction process; then, obtain the scope of new concepts by means of open coding, spindle coding, and selective coding; finally, utilize the remaining 5% of the review text, and the completed coding saturation test, and after determining the theoretical saturation, the theoretical framework is formed, and the scenic area is subsequently analyzed and suggested, the process is shown in Fig. 1.

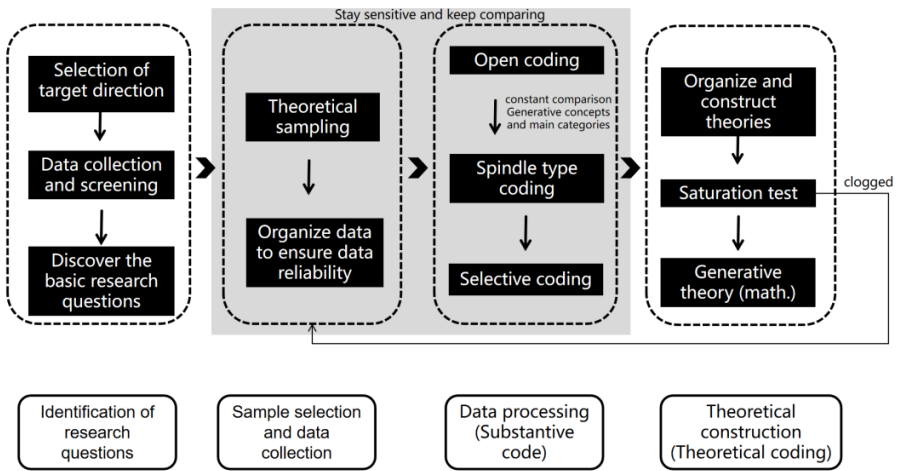


Fig. 1. Framework diagram of the rooted theory research process

3 Results and Analysis

3.1 Open Coding

Taking the crawled Li River Scenic Area tourists' comments as the basis of open coding, we refined the words from each user's comments, summarized different words, sentences and situations according to the concepts, coded and extracted the concepts from the Li River Scenic Area comment texts, and constructed the initial concepts and the categories that can be further summarized. When open coding, the inherent subjective will and existing theories in the field were strictly limited to be brought into the coding process, and the text content was coded to extract a certain number of concepts and carry out the initial generalization. Eventually, 42 basic concepts were generated and 18 perceptual categories were generalized from them (Fig. 2). In the statistics of the preliminary categories, the highest number of visitor perceptions was found for featured attractions, and the lowest number of visitor perceptions was found for neutral evaluations.

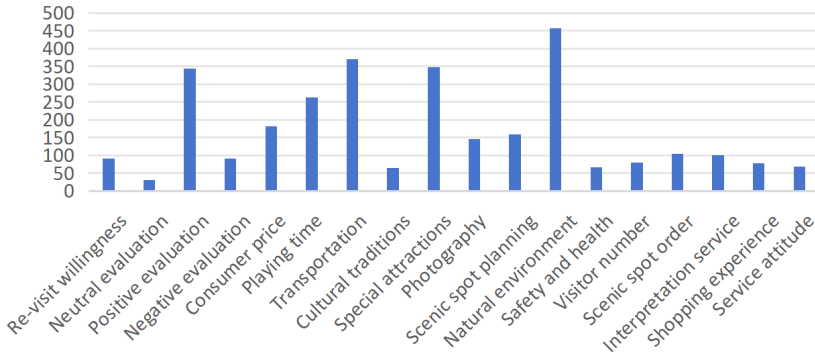


Fig. 2. Open coding process based on visitor perception

3.2 Spindle Type Coding

On the basis of the 20 preliminary categories extracted from the open coding of visitors' comments, further spindle coding was carried out to summarize the deeper, more representative and abstract main categories. The main purpose of this step is to further explore the intrinsic connections among the 18 preliminary categories and deeply analyze the attributes and logical relationships among the categories. Six main categories were extracted through spindle coding: tourists' evaluation, travel choice, scenic characteristics, activity atmosphere, management level and service quality (Table 1).

Table 1. Number and percentage of spindle type codes

| Serial Number | Main Category | Number of Main Reference Points | Percentage of Number of Main Reference Points (%) | Preliminary Category Share (%) |
|---------------|-----------------------------|---------------------------------|---|---|
| 1 | Traveler's Commentary | 557 | 23.1 | Willingness to Revisit (16.3), Neutral Rating (5.6), Positive Rating (61.8), Negative Rating (16.3) |
| 2 | Travel Options | 182 | 7.5 | Mode of Travel (45.5), Consumer Price (22.3), Travel Time (32.2) |
| 3 | Scenic Area Characteristics | 1029 | 42.7 | Cultural Connotation (6.3), Characteristic Attractions (33.8), Scenic Planning (15.5), Natural Environment (44.4) |
| 4 | Event Atmosphere | 226 | 9.4 | Number of Tourists (35.4), Photographs Taken (64.6) |
| 5 | Management Level | 171 | 7.1 | Scenic Order (61.4), Safety and Health (38.6) |
| 6 | Quality of Service | 247 | 10.2 | Explanatory Service (40.9), Shopping Experience (31.6), Service Attitude (27.5) |

The indicators of willingness to revisit, neutral evaluation, positive evaluation and negative evaluation have the characteristics of scenic area evaluation, which represent the tourists' identification with the scenic area, and therefore are summarized as tourists' evaluation. In the evaluation of tourists, positive evaluation accounts for a great part of the evaluation, indicating that tourists have a better overall impression of the scenic area, and therefore get a higher willingness to revisit. The tourists generally have a favorable attitude towards the characteristics of the scenic area, but due to the varying quality of the staff, the comments on the natural scenery and service attitude are polarized.

Perceptions of travel mode, consumer price and travel time can be summarized as travel choices of tourists. Travel mode is the one that receives the most attention, followed by travel time, and finally consumption price. When tourists choose to visit the Li River scenic area, perceptions mostly focus on whether the transportation meets expectations, and the comfort and convenience of both internal and external transportation and supporting facilities in the scenic area are the focus of tourists' attention.

The categories of perception of cultural connotation, characteristic attractions, scenic planning, and natural environment can be attributed to the characteristics of scenic areas. Natural environment is the most important factor affecting the perception of tourists, accounting for 44.4%, Guilin's unique climate and landscape features have created karst landscapes rarely found in the world, and the unique natural scenery of Guilin Lijiang River is a major highlight attracting tourists, and due to the language teaching materials and publicity of the general public, the popularity of Guilin Lijiang Scenic Area is very high in China. Characteristic attractions are also a major perceptual factor in the Li River scenic area, accounting for 33.8% of the total, as the scenic area is the setting for the RMB printing painting, and most tourists come to the scenic area for this reason. Most of the perceptions of scenic planning focus on the time-consuming transportation due to the large distances between scenic areas, while the high degree of commercialization and homogenization between scenic areas reduces the good feelings towards the scenic areas. In addition, the beautiful natural style of the Li River has attracted many ancient and modern literati and artists to create their works here, and these popular poems and other cultural works have become an important factor affecting tourists' perception of the scenic area's culture.

Photographic souvenirs and the number of tourists can be attributed to the activity atmosphere of the scenic areas. Tourists' perception of photo souvenir is mainly in the service attitude and fee level of photographers, and many people like to take a Li River cruise or bamboo raft to take photos at the Renminbi viewpoint. Due to the varying service levels of the photography staff, visitor evaluations were polarized. The number of tourists is also an important perceptual factor affecting the atmosphere of the event, and tourists are especially impressed by crowded scenic areas.

The management level includes order and safety and hygiene of the scenic area, and the perception of the management level only accounts for 7.1% of all perceptions. In a scenic area where natural beauty is widely praised, tourists' perceptions of scenic area management are mostly negative, containing problems such as indiscriminate charging, queue-jumping, difficulty in distinguishing real goods from fake ones, and uneven

service levels. Tourists' perceptions of safety and hygiene are relatively small, focusing mainly on perceptions of hygiene levels in restaurants and restrooms.

In terms of service quality, interpretation service, shopping experience, and service attitude are all categorized under this category. The large proportion of narration service indicates that for service quality, narration service plays a larger role in tourists' perception. During the journey, the commentary service is often accompanied by sales promotion, which directly brings the tourists' perception of the shopping experience. Most of the tourists have a positive attitude towards the commentary broadcast, while a small number of them think that the commentary is too noisy. In terms of shopping experience, local specialty goods have a greater impact on tourists' perception. In terms of service attitude, some tourists believe that the staff's service attitude and level need to be improved.

3.3 Selective Coding

The third key stage in rooted theory is selective coding, also known as core coding. By systematically analyzing the intrinsic connections in the six main categories, we summarized and generated three types of core categories, namely: selection process, play experience, and perceptual evaluation. As show in table 2.

Table 2. Number and percentage of selective codes

| Serial Number | Core Scope | Number of Core Category Reference Points | Percentage of Number of Reference Points for Core Categories (%) | Main Category Share (%) |
|---------------|-------------------|--|--|---|
| 1 | Scenic Conditions | 1211 | 50.2 | Travel Choices (15.0), Scenic Features (85.0) |
| 2 | Quality of Travel | 644 | 26.7 | Activity Atmosphere (35.1), Management level (26.6), Service Quality (38.4) |
| 3 | Perceived Results | 557 | 23.1 | Visitor Rating (100.0) |

Travel choices and scenic characteristics can be attributed to the scenic conditions perception, in which the perception of your scenic characteristics account for most of the tourists through the different transportation conditions, scenic characteristics and other conditions of the comprehensive analysis of the scenic area to choose the scenic area to play. Play quality perception, activity atmosphere, management level and service quality have an impact on this, for example, the perception of unreasonable charges, such as attractions to take pictures of indiscriminate charges, mandatory charges, there are also some dissatisfied with the health status of the speech. The evaluation of tourists on the scenic area belongs to the results of tourists' perception, accounting for 23.1%. Factors such as scenic area conditions, scenic area management and service can directly affect the evaluation of tourists' playing experience, and also

affect whether tourists are willing to revisit or share the scenic area with their friends and relatives.

3.4 Tourist Perception Model Construction

The internal logic of the coded content will be analyzed to build a model of tourists' perceived influencing factors (Figure 3). The framework starts from the perspective of tourists' play perception and comprehensively organizes the relationship between the perceived experience of the play process. Scenic conditions and play quality are both important factors affecting tourists' perceived outcomes. In the perception of scenic conditions, scenic features will strengthen the tourists' choice of the scenic area, and the tourists enter the scenic area through the choice and start to experience the scenic features and feel the atmosphere of the scenic area. In the process of playing in the scenic area, tourists will have a deep perception of management services such as the degree of crowding and order, and the atmosphere of activities such as the flow of people will also be suggested. At the same time, tourists' choice of scenic areas and the characteristics of scenic areas will be influenced by the level of management of scenic areas.

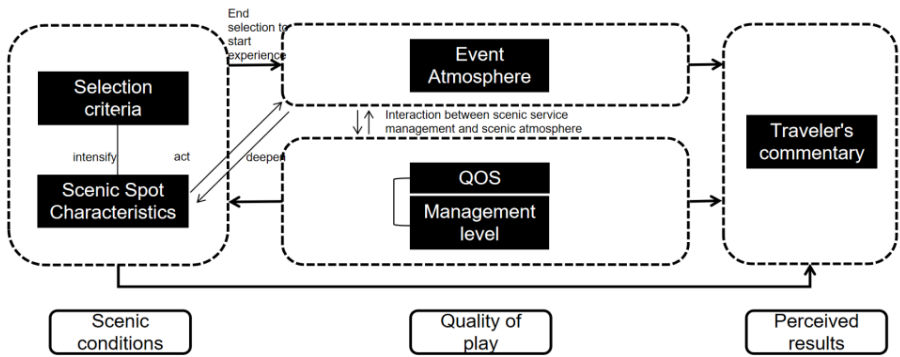


Fig. 3. Interaction diagram of factors influencing tourists' perceptions

Finally, the remaining 5% of the tourists' review texts were calibrated for the study, and they all conformed to the category categorization and framework system logic described above.

4 Summary and Recommendations

In this study, summarizing the perceived intensity of various types of tourists' perceptual elements, there are a total of three levels. The first level is the element that plays a decisive role in perception, such as the natural environment with the most category reference points; the second level is the common problems of tourists' concern about scenic tours, such as the consumption level, photography and souvenirs, etc.; and the

last level is the element that is not intensive enough in the degree of perceptions, such as the quality of hygiene, safety and security and other perceptual elements, and the category that tourists feel the shortcomings will still give favorable comments after considering other advantages of the scenic area. Currently, there are limitations in the study due to the reliance on a single data source and research methodology, and the breadth and precision of the conclusions should be enhanced in the future by a wider range of data sets and quantitative methods.

Various perceptual factors within the scenic area, its operation process and configuration are not independent, but interdependent, based on the characteristics of different perceptual elements derived from the development of a unique scenic area operation ecosystem. Some factors have higher perceived intensity, which attenuates the influence of other perceived factors, such as the natural scenery factor of Li River, which to a considerable extent masks the deficiencies of the scenic area such as order and service attitude. From the statistics, it can be seen that the unique natural environment of the Li River scenic area is the core of attracting tourists, and the other characters in the model are serving the activity atmosphere, while the management and service level of the scenic area needs to be improved urgently. Managers of Li River scenic spots need to optimize the internal operation ecosystem to ensure that various perceptual factors can work in synergy to enhance visitor satisfaction. With the development of society and the advancement of technology, tourists have higher expectations of the tourism experience, especially the new generation of tourists and the elderly who enjoy life. Therefore, the scenic spot needs to create a better brand image and optimize all services to attract new tourists and motivate repeat customers to return, thus supporting the sustainable development of the Li River Scenic Spot. By implementing a comprehensive quality improvement program and enhancing cultural experience programs, the Li River Scenic Area can effectively enhance visitor experience and satisfaction, and further strengthen the destination loyalty of visitors.

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