



Perception and Optimization Strategies for Museum Study Tour Experiences from the Mass Consumer Perspective

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Abstract. By investigating the perceived quality of museum study tour experiences, this study aims to propose optimization strategies to refine these perceptions. Online reviews (n=2,983) from Ctrip were analyzed via Python and ROST, including high-frequency word statistics and sentiment analysis. This allowed the identification of hotspots, core themes, and emotional tendencies in the mass consumer group's feedback on museum study tours, thereby assessing the perceived quality of their experiences. The perceived quality of museum study tour experiences is generally positive. However, challenges such as inconsistent service levels, irregular ticket booking practices, and inadequate crowd control persist. This study proposes five optimization strategies to address these shortcomings, aiming to improve the study tour experience and promote the healthy development of museum-based educational tourism.

Keywords: educational tourism; museums; study tour experience; mass consumer group; semantic network analysis

1 Introduction

China has a long-standing educational philosophy and cultural spirit encapsulated in the saying, “Read ten thousand books and travel ten thousand miles.” Since Guangdong Province pioneered study tours in 1998, China has progressively institutionalized them, notably through the 2013 National Tourism Leisure Outline and the 2016 Mandatory Study Tour Policy.^[1] The demand for study tourism in China continues to grow robustly, with market enthusiasm rising steadily^[2]. As a new industry integrating tourism and education, study tourism thrives^[3]. From a tourism perspective, it represents an upgraded tourism product and a future-oriented form of tourism development^[4].

Current issues in the study tour market, including disorderly practices and supply-demand imbalances, have become prominent challenges amid rapid growth^[5], while theoretical research remains insufficient^[6]. Accurately understanding tourists' experiential perceptions and emotional tendencies is crucial for ensuring the long-term stable

development of the tourism industry^[7]. Existing research on rural tourism, scenic areas, and homestays. Few studies address the optimization of museum study tour experiences, and empirical research is notably lacking. Therefore, this study takes the Guanghan Sanxingdui Museum—a popular study tour destination—as a case study. By analyzing online reviews from the mass consumer group, it identifies conflicts and issues in museum study tour experiences and proposes targeted strategies, providing theoretical insights for optimizing museum experience perception.

2 Research Design

2.1 Research Methodology

Semantic network analysis is a widely used content analysis method. It identifies high-frequency words as nodes and reflects node relationships through co-occurrence frequencies, constructing a semantic network to visualize the mental map of textual information^[8]. This method helps extract themes, features, and underlying tendencies from online reviews, revealing user preferences, reactions, and attitudes toward tourism destinations.

2.2 Data Collection

Web crawlers are a common tool for data acquisition. By validating hyperlinks and HTML code, crawlers extract data based on predefined fields^[9]. Online travel platforms like Ctrip and Dianping provide abundant user-generated content (UGC) for tourism destination research. As the industry leader, Ctrip dominates the online travel agency (OTA) market with a massive user base. The Guanghan Sanxingdui Museum, a top-tier study tour destination, holds titles such as a National AAAA Tourist Attraction and a National Youth Science Education Base, and was listed among the 2022 Top 100 Trending Museums in China. Using Python, this study collected 2,983 UGC entries from Ctrip, after removing duplicates and invalid reviews.

2.3 Data Preprocessing

Data preprocessing included cleaning, deduplication, Chinese word segmentation, and stop-word removal. Textual data were filtered for particles, modal particles, punctuation errors, typos, and non-standard expressions. Synonyms and internet slang were standardized. Processed text was saved in .txt format, totaling approximately 142,100 characters.

Table 1. Top 30 High-Frequency Feature Words in the Sample Text

Rank	High-Frequency Word	Frequency	Rank	High-Frequency Word	Frequency
1	Explanation	1372	16	Teacher	149
2	Sanxingdui	922	17	Ticket	148
3	Museum	624	18	Mysterious	144
4	Worthwhile	586	19	Experience	141
5	Tour Guide	466	20	Convenient	131
6	Cultural Relics	339	21	Abundant	131
7	Hour	329	22	Exhibits	130
8	Culture	248	23	Overcrowded	124
9	Bronze	248	24	Suggestion	114
10	Civilization	241	25	Guanghan	109
11	Visit	202	26	Ancient Shu	104
12	Knowledge	166	27	Millennium	103
13	Chengdu	165	28	Interpretation	102
14	Service	164	29	Scenic Area	102
15	Location	160	30	New Hall	99

3 Data Analysis

3.1 High-Frequency Word Analysis

As illustrated in Table 1, high-frequency words in consumer reviews of the Sanxingdui Museum encompass evaluations of its features, study tour experiences, and specific suggestions.

The term “guided commentary” appeared most frequently (1,372 times), reflecting visitors’ strong emphasis on guided services. Tourists seek professional guides or audio devices to gain deeper insights into Sanxingdui’s cultural and historical context. Words such as “knowledge”, “artifacts”, and “civilization” also ranked prominently, indicating visitors’ focus on acquiring knowledge about ancient Shu culture and Bronze Age history.

Positive terms like “worthwhile” (586 instances) demonstrate visitor satisfaction and recommendations. This likely correlates with the museum’s artifact collections, exhibition design, and service quality. Additionally, terms like “tour guide”, “narration”, and “audio devices” highlight demand for professional guidance and accessibility tools. Feedback such as “suggestions” and “expectations” underscores visitors’ desire for improvements, revealing opportunities to enhance operational efficiency and appeal.

3.2 Semantic Network Analysis

As shown in Figure 1, the semantic network analysis of high-frequency words reveals that reviews revolve around three core clusters.

(1)"Mr. Lei's guided commentary was detailed, professional, and engaging, effortlessly immersing us in the ancient civilization."

(2)"Among China's vast and awe-inspiring cultural relics, the Sanxingdui artifacts stand out as the most historically, scientifically, and artistically valuable, as well as the most visually captivating."

(3)"The tour guide's explanations were exceptionally professional and thorough. We gained a comprehensive understanding of Sanxingdui! Truly grateful to encounter such an outstanding guide. It was worth every penny!"

These remarks indicate that popular study tour destinations like the Guanghan Sanxingdui Museum have garnered widespread acclaim on online platforms. As an educational activity integrating field trips and academic knowledge, museum study tours help students broaden their horizons and deepen their understanding of subjects. This immersive approach enables students and parents to contextualize classroom knowledge, fostering greater interest in learning and holistic development.

Negative sentiments constituted 24.07% of the reviews, with 1.41% classified as highly negative. Key concerns included:

(1)"No third-party platforms are authorized to sell tickets. Despite booking a week in advance via Ctrip, we were abruptly informed of ticket unavailability. Such practices are unacceptable!"

(2)"Overcrowding is severe—avoid weekends and holidays. Even on weekdays, visitor numbers remain high."

(3)"The bronze mask is currently on loan and unavailable for viewing."

These negative perceptions primarily stem from practical issues such as ticket booking difficulties and poor crowd management. Limited ticket availability or inefficient booking systems may inconvenience visitors. Restrictions like "difficulty purchasing tickets" and "unauthorized third-party sales" further narrow purchasing channels, exacerbating frustration. Overcrowding negatively impacts the learning environment, as excessive visitor numbers hinder students' ability to focus on exhibits. During peak times, congestion may also raise safety concerns, heightening visitors' anxiety.

4 Conclusions and Limitations

In the internet age, online reviews offer a more authentic and extensive reflection of public perception than traditional surveys^[10-11]. Analyzing museum study - travel reviews, this study proposes the following optimization strategies:

First, optimize interpretation services by training knowledgeable guides, refining exhibition layouts, and integrating smart guidance systems with virtual reality (VR) technology to enhance interactivity, educational value, and the museum's unique cultural appeal.

Second, improve ticket - booking systems and manage visitor numbers. Make online booking more user - friendly, collaborate with third - party platforms, and implement crowd - control measures like visitor caps and optimized entry procedures.

Third, boost study - travel product quality and efficiency. Design quality courses, plan clear itineraries, and ensure comprehensive support systems.

Fourth, cultivate study - travel talent to boost market vitality. Train professionals for product development and guide services, and certify study - travel mentors.

Fifth, establish feedback and evaluation mechanisms to ensure healthy development. Address visitor feedback promptly and set up evaluation and supervision systems for study - travel products. This study has limitations. Data from a single platform may not represent all study - travel tourists. The museum studied is just one example. Future research will expand the sample size for deeper insights.

Acknowledgement

This paper is supported by 2024 Sichuan Philosophy and Social Sciences 14th Five-Year Plan Academic Research Grant (SC24T008); China Panxi Health Industry Research Center 2024 annual project (PXY-YB-202406); 2024 project of "Meteorological Disaster Prediction and Early Warning and Emergency Management Research Center" (ZHYJ24-YB13).

References

1. Chen, C. L. (2020). Research on Challenges and Development Issues in the Study Tour Market. *Economic Issues*, (06), 88–93.
2. China Tourism Academy. (2018). *China Study Travel Development Report 2017*. Tourism Education Press, Beijing.
3. Sun, J. X. (2022). "Travel Education": A New Perspective on Study Tourism. *Tourism Tribune*, 37(11), 5–7.
4. Liu, L., & Zeng, S. L. (2018). Progress and Reflections on Study Travel for Primary and Secondary Schools. *Education Exploration*, (01), 8–12.
5. Zhang, Y. (2023, July 20). Several Phenomena in the Sustained "Boom" of the Study Tour Market Deserve Attention. *China Tourism News*, p. 005.
6. Chen, F. (2010). Industrial Development and Theoretical Gaps: Research on the Value Forms of Educational Tourism. *Theory Monthly*, (08), 177–179.
7. Zhou, S. B., & Chen, C. Y. (2024). Research on Ecological Tourism Experience Perception: A Case Study of Meili Snow Mountain. *Forestry Economics*, 46(07), 42–58.
8. Doerfel, M., & Barnett, G. (1999). A Semantic Network Analysis of the International Communication Association. *Human Communication Research*, 25(4), 590.
9. Liu, Z. H., Zhou, J. F., & Dou, Q. (2022). Research on Intelligent Mining Technology Based on Web Crawlers. *Electronic Technology & Software Engineering*, (08), 13–16.
10. Zhuang, X. L., Cheng, S. J., & Chang, X. P. (2020). Perception of Tourism Image of Mount Emei Scenic Area Based on Text Mining. *Scientific and Technological Management of Land and Resources*, 37(01), 106–117.
11. Wang, Y., Ku, T. T., Xu, S. P., et al. (2020). Emotional Components of Awe: A Text Mining Analysis Based on Social Networks. *Psychological Techniques and Applications*, 8(4), 235–242.

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