STUDY OF TOURIST SATISFACTION AT BUSAN'S TEMPLES: A QUANTITATIVE TEXT MINING APPROACH

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ABSTRACT

This study leverages big data analytics to provide a comprehensive analysis of tourist satisfaction at temples in Busan through the examination of online reviews. Utilizing quantitative textual analysis, including frequency analysis, co-occurrence network analysis, and cluster analysis, the research identifies both positive and negative aspects of the temple tourist experience. While visitors frequently highlight the beauty, ambiance, and convenience of temple visits, challenges such as accessibility issues and admission pricing also emerge. This dual perspective offers a balanced view of the tourist experience. The study is notable for its application of advanced text mining tools to a significant dataset, setting it apart from previous research on temple tourism in Busan. The findings underscore the importance of maintaining the temples' aesthetic appeal and accessibility while addressing tourists' concerns to enhance overall satisfaction. These insights are crucial for temple management and stakeholders in the religious tourism sector, providing a foundation for strategic improvements and a deeper understanding of visitor needs and expectations.

Keywords: Religious tourism, Temple, Busan, Tourist satisfaction, Big data

1. INTRODUCTION

Religious tourism is intimately connected with vacation and cultural tourism (Rinschede, 1992). According to UNWTO (2014), religious heritage sites contribute significantly to international tourism and economic growth and serve as crucial meeting places for tourists and locals, fostering tolerance, respect, and mutual understanding among people of various cultural backgrounds. In Asia, improving ties with Buddhism is a significant motivation for travel (Maneenetr & Ha Tran, 2014). According to Debrincat (2015), multiple religions are practiced in South Korea, and the population continues to honor ancestral customs. Thus, Buddhists constitute the second-largest religious group in South Korea.

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Religious sites have become increasingly important destinations for tourists amid the tourism sector's rapid expansion in South Korea. Nevertheless, to appeal to and satisfy contemporary tourists, these locations must adjust to the current tourism landscape (Liang et al., 2016; Rifan, 2016). Busan, a city renowned for its historic temples, vibrant culture, and stunning beaches, is a prime example of a city with untapped potential for religious tourism.

Busan, a South Korean coastal city, is renowned for its beautiful beaches, delicious seafood, and vibrant culture. Its numerous temples also showcase the country's rich history and spiritual traditions. Temple tourism in Busan offers a unique and rewarding way to experience the city's culture, local festivals, events, and photographic opportunities (Gou & Shibata, 2017). These experiences, enriched by the cultural and spiritual backdrop of the temples, potentially position Busan as an attractive destination for religious tourism.

In the era of digital communication, the way tourists discover and decide on these unique travel experiences has significantly shifted. Online reviews may provide additional information regarding products and services (Mohammad et al., 2023). It is common for tourists unfamiliar with a service provider or destination, such as Busan, to rely on online reviews when making travel-related decisions (Gretzel & Yoo, 2008). With increasing numbers of travelers using the internet to research destinations, accommodations, and activities before booking their trips, online reviews have become an increasingly vital aspect of the tourism industry. Platforms such as TripAdvisor, Yelp, Google, and Booking.com can significantly influence a traveler's decision-making process and impact the reputation and success of the tourism business.

In this increasingly digital age, while online reviews may significantly boost the visibility and appeal of tourism sites, they also expose the challenges faced by managers of religious sites. The growing popularity of religious tourism presents a complex scenario. These sites continue to serve their essential religious function as places of worship and ceremony, but concurrently they must also cater to tourists' diverse and, occasionally, conflicting needs. Visitors may seek historical and cultural information, architectural insights, or enjoyable recreational opportunities (Hughes & Ballantyne, 2013). Effectively managing such sites necessitates identifying crucial aspects in designing tourism experiences at religious sites and finding ways to satisfy a diverse and often demanding range of visitors.

This research examines the dual challenge that temples in Busan encounter: the preservation of their sacred functions and the fulfilment of a wide range of tourist expectations. The study employs big data analytics to investigate tourist satisfaction by analyzing online reviews. Despite the growing emphasis on religious tourism, there is a significant gap in research that specifically examines temple tourism in this context using advanced data analysis techniques. The primary motivation for this research is to address the current gap in the literature by concentrating on the under-explored area of Busan temple tourism. The objective is to pinpoint the primary variables that influence tourist satisfaction and to offer practical insights for temple administration. In doing so, it endeavors to improve the overall visitor experience and contribute to the sustainable development of religious tourism in the region.

2.   LITERATURE REVIEW

2.1 Temple Tourism

The trend of "temple tourism" is rising among the younger generation. Temples are becoming increasingly popular among young people for mental and physical relaxation alongside beach vacations and amusement parks (Global Times, 2023). One of the services most people are interested in temple tourism is the temple stay program. The temple stay program is a relatively new but increasingly popular tourist attraction in Korea. It allows visitors to spend a few days in residence at various major Buddhist monasteries nationwide (Kaplan, 2010). Ross et al. (2020) experienced the temple stay program in a Korean monastery called Hwaeomsa temple. They argue that based on the interest of temple stay participants, travelers may be surprised by the spiritual dimension of temple stays due to their peaceful experience.

Meanwhile, Chun et al. (2017) examined the predictors of temple stay satisfaction comparison between Korean citizens and international tourists. They found that attribute-level satisfaction varies between Korean travelers and international travelers. According to them, strong predictors of temple stay satisfaction for Korean tourists are self-development, being in nature, and relaxation, and for internationals, being with nature and relaxation are strong predictors of temple stay satisfaction, whereas self-growth (based on mean values) is a relatively weak predictor of temple stay satisfaction for internationals.

Hsiang et al. (2021) investigated what motivates people to visit the temple. They claim that one's familiarity with local temples, happiness with those temples, and propensity to return all rise in tandem with one's participation in temple activities. Participation in temple events was found to be affected by individuals' involvement, sense of location, level of satisfaction, and openness to returning.

From a tourism perspective, the temple tourism concept authentically connects the individual to the divine incarnation. More frequently, temple tourists seek authenticity for the inner development of their mind, body, and soul by mingling with the temple culture, which is serene and sublime, possessing the divine aura of God and its incarnation, history, heritage, and culture (Mohanty & Sadual, 2020). Most temple visitors wish to learn about the site. However, some seek education and comprehension, whereas others prefer to be merely informed. The site or location that acquires temples provides visitors with historical information and a significant, memorable experience (Moscardo, 1996).

2.2 Tourist Satisfaction

As a dependable metric for evaluating overall performance, destination management organizations are placing a greater emphasis on tourist satisfaction (Song et al., 2010). According to Zhou et al. (2022), the success of the tourism service sector depends heavily on the level of satisfaction experienced by visitors. Increasing tourist satisfaction is believed to increase profits and decrease marketing expenditures, which have become important goals for most tourism service businesses and organizations today (Canny, 2013). Tourists hesitate to pay an admission fee at attractions like theme parks or festival sites when the experiences they gain are not worth the money paid (Song

et al., 2014). The emotional value of an experience results from the interaction between the mind and the location the traveler visits.

Several studies have been conducted to assess tourist satisfaction in various sectors of the temple tourism and travel industry. Meng et al. (2008) measured Chinese tourists' satisfaction in Hong Kong using the Tourist Satisfaction Index. They found that mainland Chinese tourists in Hong Kong are most satisfied with the hotel industry, followed by the retail industry, and least satisfied with the local tour operators. Meanwhile, Canny (2013) investigated the relationship between the five dimensions of service quality and tourist satisfaction and the relationship between satisfaction and future behavioral intentions. Using multiple regression analysis, this study analyzed the SERVQUAL model. The fieldwork was conducted at the temple of Borobudur. He found that the relationship between service quality and tourist satisfaction is weak, whereas satisfaction substantially affects future behavioral intentions.

Yadav et al. (2010) explored the connection between sociocultural factors and visitor satisfaction at the Lotus temple in India. According to them, both domestic and international visitor segments appreciate the Lotus Temple's scenic grandeur, and in conversations with visitors, they expressed a desire to return. On the other hand, Tendean (2017) analyzed tourist satisfaction in the temple of Surowono in the Kediri Regency. The author used an Importance Performance Analysis (IPA) perception rating based on a questionnaire distributed at the temple of Surowono. The author determined that the temple must enhance its cultural attraction, road condition, availability of transport nodes, and parking lot to increase tourist satisfaction.

Yu et al. (2023) confirmed the role of tourist satisfaction as a mediator in the relationship between tourist perceived value and life satisfaction in Buddhist temple tours. They highlighted the influences of tourist perceived value in Buddhist tourism. In addition, this study examines how tourists perceive the quality, price, emotional value, social value, educational value, physical attributes, and nonphysical attributes of Buddhist tourism. Similarly, Rohman (2021) investigated the factors that affected tourist satisfaction in Prambanan temple, Indonesia. The author used questionnaires as the data collection and the SPSS program to analyze the data. He also discovered that a destination's perceived value, quality, and image positively affect tourist satisfaction.

After visiting a tourist attraction, each traveler generates an opinion regarding the quality of their trip. Travelers compare their expectations to their actual experiences. It is common knowledge that visitor satisfaction is essential to the success of a tourist attraction. Studies have identified several elements that contribute to the happiness of vacationers. However, these factors are still subject to debate.

2.3 Quantitative Textual Analysis

This study utilized KH Coder to analyze the text of Google reviews. The author chose to utilize the KH Coder because this tool is quite user-friendly and designed for general-purpose analysis. In addition, the result of data visualization is also easy to comprehend. KH Coder is an open-source computer-assisted quantitative data analysis application, especially quantitative content analysis, and text mining. The KH coder allowed us to conduct a content analysis of the extracted nouns, verbs, adverbs, and adjectives and to identify the essential topical associations (Jurkus & Taminkas, 2022). KH Coder was initially designed for Japanese text and now supports many additional

languages, including English, Italian, French, Spanish, and other Asian languages such as Korean and simplified Chinese (Heo et al., 2019). It also aids in developing a centralized system for factual analysis, an automated arrangement manual, the ability to scale data across multiple dimensions, and the capacity to conduct comparative analyses (Luo et al., 2019). Mainly it can assist with multidimensional scaling, comparative calculations, and the investigation of the hub structure of co-event system hubs (Kushima et al., 2019). Several studies have used the KH Coder as a data analysis application.

Budiharseno et al. (2023) examined the new attributes that affect customer satisfaction from four luxury-star hotels in the Semarang area through Google Travel. This study analyzes the network centrality using the KH Coder. Using a database and KH Coder, they extracted frequently used words representing significant aspects of customers' experiences. Xu et al. (2019) use quantitative text analysis by KH coder to analyze the guest experiences and satisfaction in Airbnb. This study identifies the main words and subjects representing the tourists' experience by lexical analysis. Next, a multidimensional scaling analysis to cluster the words discussed in the review. This study integrates several research methods, including collecting and processing large amounts of data, text mining, and statistical analysis. Luo et al. (2019) attempt to compare four prominent quantitative text analysis (KH Coder, UIMA, WordStat, & DeepDive). According to them, KH Coder is easier to learn and develop. However, it can only handle a limited number of formats, making it increasingly incapable of meeting various requirements. Meanwhile, Jurkus and Taminkas (2022) investigated the trends and issues in biodiversity conservation and tourism sustainability research. This study utilizes KH Coder 3.0 hierarchical cluster analysis to identify topical co-occurrence networks for thematic words in Google scholar-sourced academic papers from 2015-2020.

KH Coder supports multiple types of searches with frequency tables indicating which types of words were frequently used. Using multivariate analysis, it is also possible to investigate the concepts contained in the data by examining groups of words that appear together or groups of documents containing the exact words. In addition, the characteristics of the document group can be determined by compiling a list of words that appear frequently in the document group (Kushima et al., 2019).

3. METHODOLOGY

Nowadays, tourists frequently voice their opinions or compose reviews of the locations they visit. Online review plays a vital role in tourism (Guo & Pesonen, 2022). When researching tourist attractions, prospective visitors actively seek feedback from previous visitors (Siang et al., 2020). Google reviews, which are among the most frequently utilized platforms for business reviews, provide a comprehensive dataset that accurately represents the sentiments and experiences of actual customers (Noerhartati et al., 2023). Figure 1 displays an illustration of online reviews based on Google.
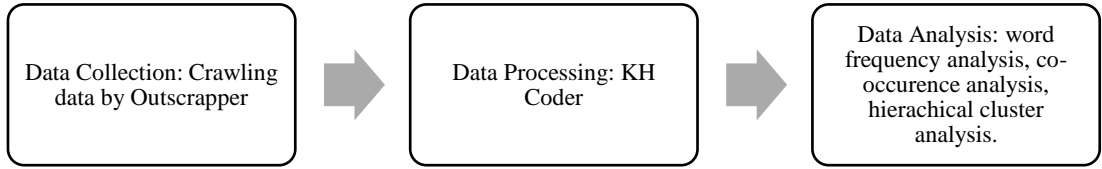
Figure 1: Sample of Google Review
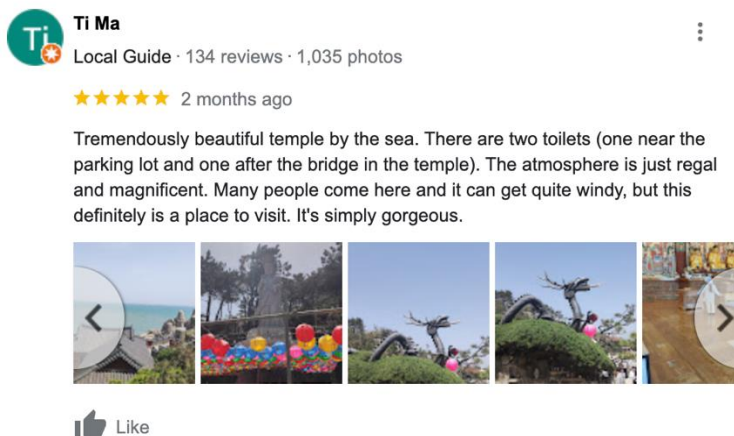
Source: Google review of Yonggungsa Temple

This research data is collected through a Google review of six temples in Busan, including Haedong Yonggungsa temple, Samgwangsa temple, Beomosa temple, Taejungsa temple, Hongryongsa temple, and Tongdosa temple. In this study, the authors only chose temples with more than 1000 reviews. Review content and ratings are included in each review. The data is collected from January 2023 to June 2023. The authors use the year 2023 because there is a continued recovery in international tourism in South Korea, and the South Korean government has loosened tourist entry requirements. For example, taking the COVID-19 pre-departure test or wearing masks is no longer necessary (GlobalData, 2023).

From 32,132 temple reviews, the authors only collected 500 reviews for each temple. In this study, the author ignores the review that does not have text comments or does not contain essential or related information. Tourist satisfaction is evaluated using Google Travel tourist reviews as a basis. The sample size for this study was determined by the objective of assembling a dataset that was sufficiently robust to facilitate meaningful analysis, as well as practical constraints. A total of 3000 reviews were initially considered, with 500 reviews selected for each of the six temples in Busan. A final sample of 2516 reviews was obtained by applying filters to exclude reviews that lacked substantial textual content. The data was scraped using Outscraper, a third program for web crawling and data processing. Frequently, crawling data is used to investigate human behavior and tourist satisfaction by analyzing network reviews (Xu et al., 2019). This method guarantees a diverse and representative collection of data while simultaneously preserving manageable processing volumes. The sample size is by the guidelines for large-scale text analysis in big data contexts (Cochran, 1977; Lokoianova & Rubin, 2014).

KH coder, a program that analyzes quantitative text, was then used to analyze the data. Users of KH Coder can construct a network of words that are likely to co-occur in the same content due to their shared patterns of occurrence (Higuchi, 2015). Figure 2 depicts the phases of the research process.

Figure 2: Research Process

| Data Collection: Crawling data by Outscrapper | → | Data Processing: KH Coder | → | Data Analysis: word frequency analysis, co-occurence analysis, hierachical cluster analysis. |

4.   ANALYSIS & RESULTS

Based on Table 1's results, temples in Busan have received substantial customer feedback, totaling 32,132 reviews. The average rating for these establishments is 4.47 out of 5, indicating high tourist satisfaction. Among other temples, the Yonggungsa temple has the most significant reviews. Hongryongsa temple, meanwhile, has the lowest number of reviews.

Table 1: Temples' Review and Rating

Temple name	Number of reviews	Average Rating
Yonggungsa temple	19,411	4.4
Samgwangsa temple	1,223	4.5
Beomosa temple	3,340	4.6
Taejungsa temple	1,814	4.2
Hongryongsa temple	1,054	4.5
Tongdosa temple	5,290	4.6
Total review	32,132	
Total average rating	4.47	

4.1 Word Frequency Analysis

According to text mining results, by June 2023, six temples in Busan had sorted and collected 2,516 reviews. Based on the word frequency analysis shown in Table 2, a list of the top 100 related terms used by the author to describe the experience of tourists who visited the temple is provided. Using a database and text mining software (KH Coder), the author could extract frequently occurring words representing significant aspects of the tourist experience. The five most common words are "temple," "place," "beautiful," "good," and "hydrangea." The frequent appearance of these terms in online reviews suggests that temples in Busan receive positive feedback through favorable reviews. In this analysis, the word "temple" is used most by the temple reviewers.

Table 2: Frequently Used 50 Words.

Words	Frequency	Words	Frequency
temple	1509	valley	67
place	681	best	97
beautiful	608	visit	97
good	822	water	96
hydrangea	270	cool	94
time	232	flower	93
waterfall	213	bloom	90
people	209	full	88
view	208	way	88
entrance	192	amazing	84
bus	188	famous	84
mountain	177	building	82
parking	158	car	79
quiet	155	food	79
sea	151	fee	77
walk	148	large	77
scenery	135	autumn	76
year	126	buddhist	76
day	122	area	72
great	121	peaceful	71
small	115	season	71
worth	101	tree	70
road	99	city	68
tourist	98	minute	68
old	66	history	65

4.2 Co-occurrence Analysis

The KH Coder 3.0 function of the Co-occurrence analysis enabled us to create a network diagram with different colors, each representing a different research theme expressed as the most frequent words (Jurkus & Taminkas, 2022). In this study, the Jaccard distance is utilized. The Jaccard coefficient is a statistical measure of the likeness within distinct sample sets, such as a list of words (Romesburg, 1984). Based on the Co-occurrence network analysis depicted in Figure 3, it appears that the reviews of temples in Busan contain several recurring themes:

Figure 3: Co-Occurrence Network Results
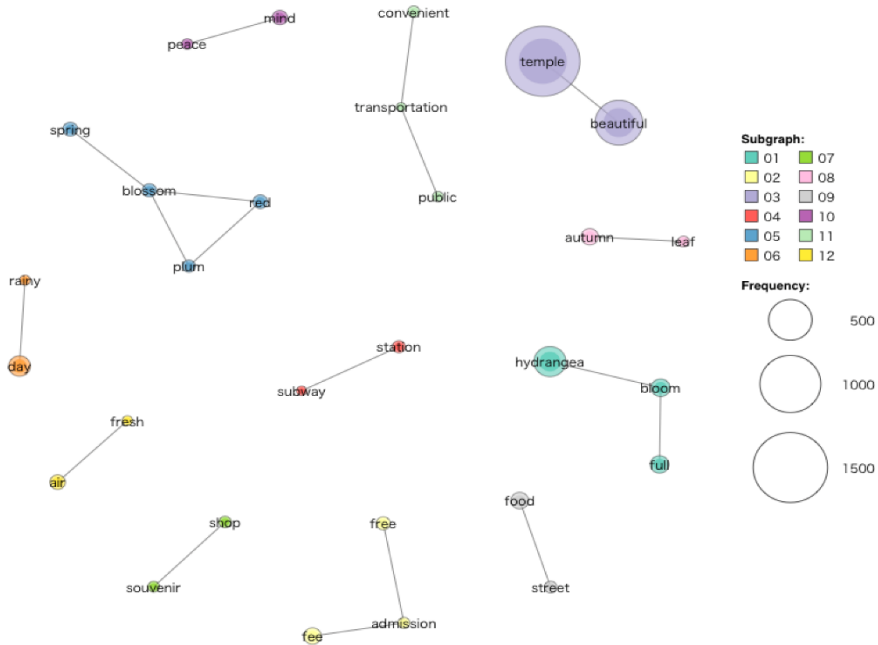
Cluster 1 focuses on the hydrangea flower in the temple. This indicates that most tourists come to see the blooming of hydrangea flowers when visiting the temple. Cluster 2 revolves around the price of temple admission. This cluster emphasized free admission to the temple. This indicates that tourists considered the fee admission when visiting the temple. Cluster 3 highlighted the beauty of the temple. This cluster is the most noticeable among others. This cluster demonstrated that most tourists view the temple as a beautiful location. Cluster 4 investigates the subway station to reach the temple. This indicates that most tourists use the subway to reach the temple. Cluster 5 was concerned with the springtime at the temple. This implies that springtime visitors to the temple will observe the red palm in bloom. In the meantime, Cluster 6 represents a rainy day when tourists visit the temple. Cluster 7 describes the gift shop located near or within the temple. This indicates that most visitors visit the souvenir shop at the temple. Cluster 8 centered on the temple's autumn season. This implies that tourists observe the leaf fall during autumn. Cluster 9 focuses on street food around the temple. This suggests that most tourists who visit the temple also buy street food. Meanwhile, cluster 10 focuses on the temple's atmosphere. This cluster explained that most visitors to the temple experience a sense of tranquility. Cluster 11 investigates temple-area public transportation. This cluster indicates that most tourists arrive at the temple via public transportation. They recognize the utility of public transportation as convenient. Finally, cluster 12 indicates that most visitors to the temple enjoy the atmosphere of fresh air.

In Figure 4, it gives the result of the Co-occurrence network based on rating. The Co-occurrence rating uses ratings as each subject's leading variable or heading. As indicated by the review ratings,

the co-occurrence rating concentrates on the correlation between specific themes and varying levels of satisfaction. Meanwhile, the co-occurrence network analysis identifies and illustrates the common themes and topics that are discussed in tourist reviews, irrespective of their ratings. The emphasis of the co-occurrence ratings is to determine the factors that contribute to high satisfaction and those that result in dissatisfaction. The general co-occurrence network provides a comprehensive thematic landscape of tourist discussions, while the rating-based analysis offers actionable insights into the factors that contribute to overall satisfaction or dissatisfaction, advising temple management on how to improve visitor experiences.

Based on Figure 4, The inner circle, which represents the 4-star and 5-star ratings, demonstrates a strong correlation between several keywords, including "temple," "place," "good," "nice," and "beautiful." This indicates that tourists who give the temple a rating of 4 or 5 stars tend to highlight these positive aspects of their experience when visiting the temple. The place's atmosphere and experience are frequently associated with its high ratings. The strong correlation between these terms and high ratings suggests that these elements significantly influence tourists' satisfaction with Busan's temples.

**Figure 4:** Co-occurrence rating results
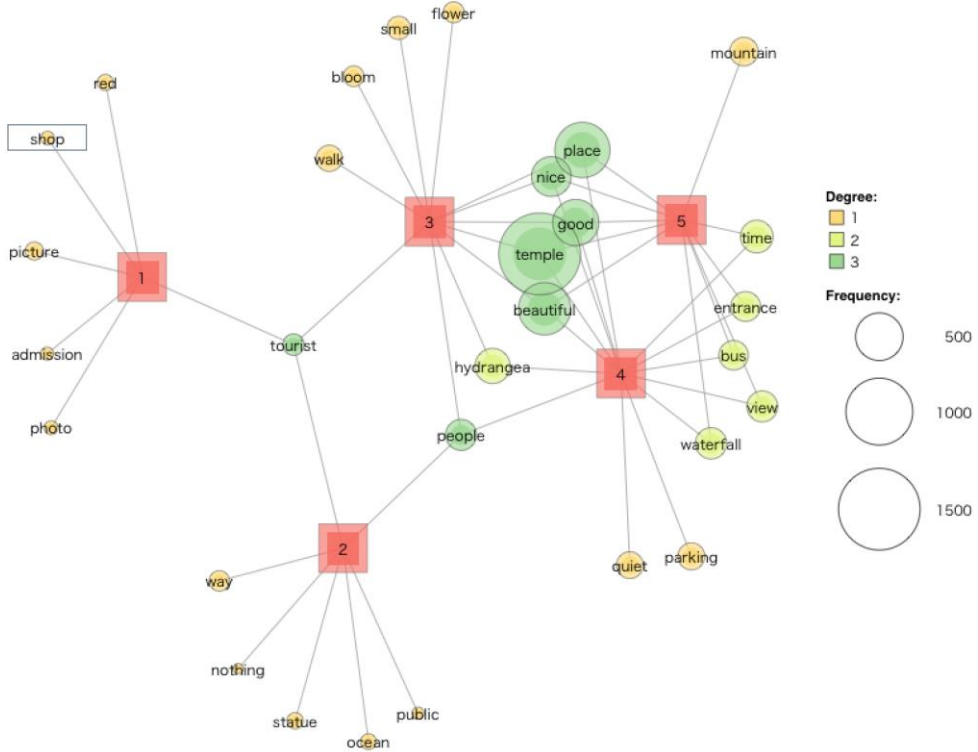
4.3 Hierarchical Cluster Analysis

A hierarchical cluster analysis was conducted with the minimum number of occurrences limited to 2 or more. The Ward method and Jaccard distance scale describe the hierarchical cluster analysis chart. This analysis divided the online testimonials into eight distinct cluster groups, each denoted by a unique color. For example, the first red cluster in Figure 5 describes the parking facility and entrance fee. "entrance" is the most important word in this group, followed by "parking" and "fee".

The second cluster, which is colored Tosca green, represents autumn. "hydrangea" is the most prevalent word in this group, followed by "time" and "year" This indicates that the hydrangea flower drew most visitors to the temple. The third cluster, colored yellow, includes the words "road," "tree," "statue," "building," and "ancient" to describe the ancient temple structure. The fourth cluster contains more words than any other cluster. This cluster describes the mode of transport, the sensation, and the experience. In this cluster are the terms "train", "walk", and "bus". This indicates how individuals reach the temple. The fifth cluster, colored dark green, represents the temple's waterfall. The sixth cluster in purple represents the view. This cluster is dominated by the word "temple," followed by "beautiful," "place," and "good." The green-colored seventh cluster contains the fewest words, with "full" and "bloom" describing the bloom view. The eighth cluster, which is colored pink, represents the spring flower.

Figure 5: Hierarchical Cluster Analysis Results
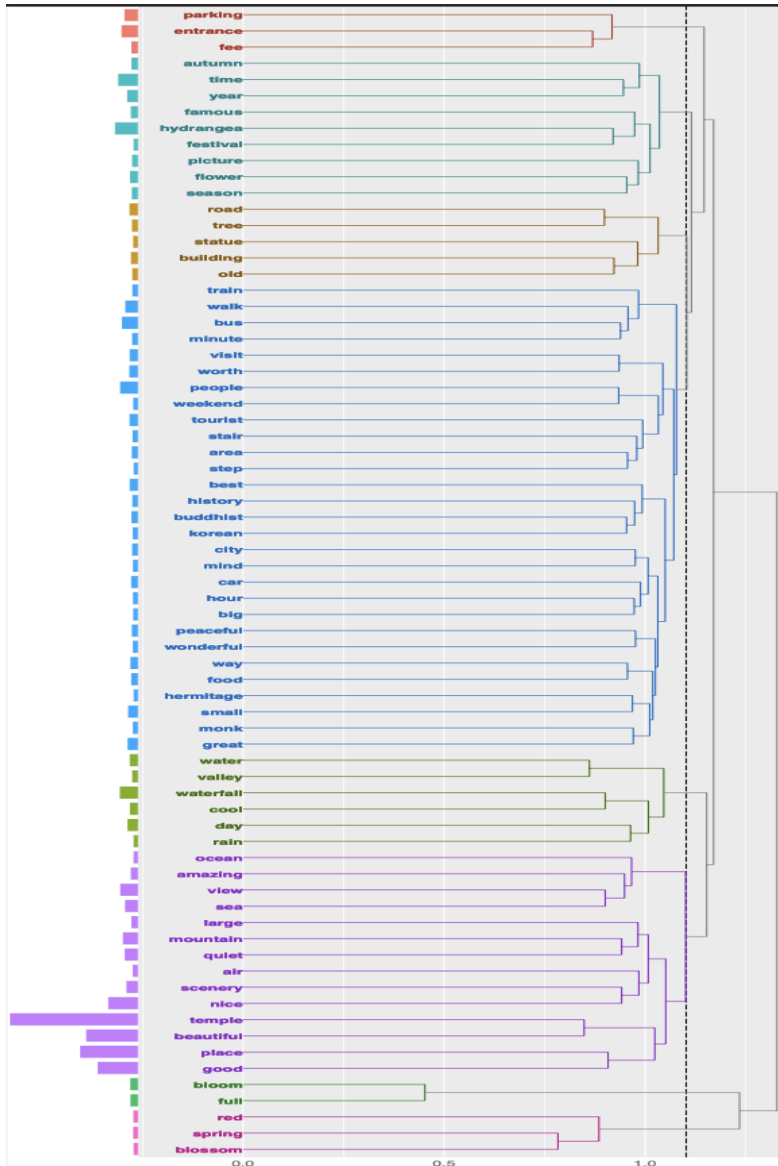
5. FINDINGS AND DISCUSSION

As a result, it has been discovered that temples in Busan have overwhelmingly positive ratings and reviews from visitors. The average rating of 4.47 out of 5 indicates that most tourists who visit the temples have positive experiences. The word frequency analysis revealed that the tourist that has

visited the temples in Busan have positive experiences considering the most frequently occurring words are "temple"," place"," beautiful"," good", and "nice".

The Co-occurrence analysis revealed several key terms, including overall temple experience, admission price, environment, and nearby transportation. The co-occurrence analysis based on ratings revealed a strong correlation between high ratings (4 and 5 stars) and positive attributes such as view, location, temple transportation, and overall pleasant experience. This suggests that these factors are crucial for determining the future of Busan's temples and ensuring tourists' satisfaction. In contrast, the analysis revealed that visitors with lower ratings (1 to 4 stars) are likelier to mention stores, attractions, and fees. The temple management can improve the lower ratings by considering the admission fee, the prices of shops nearby, and adding more attractions. By doing these things, tourists hope to improve their reviews and ratings. The hierarchical cluster analysis uncovered eight separate clusters. Each of the clusters represents a unique aspect of the temple experience. In addition, some subclusters emphasize specific relationships and themes. Attractions, scenery, and weather also play an essential role in temples in Busan tourist satisfaction. The environmental factors of Busan's temples, attractions, and scenery create unforgettable experiences that tourists have witnessed (Suanmali, 2014).

The results of this study are consistent with prior research that has identified the primary factors that contribute to tourist satisfaction in temple tourism. For example, visitor experiences are significantly influenced by the beauty and tranquility of temples, as well as logistical factors like transportation accessibility and admission prices, similar to the findings of Chun et al. (2017). Furthermore, the methodology and advantages emphasized by Xu et al. (2019) and Budiharseno et al. (2023) have been replicated in the successful extraction of insights from extensive datasets through the use of the KH Coder for text mining. Additionally, this research emphasizes the significance of factors such as convenience and ambiance, which have been similarly identified in other research on temple tourism satisfaction (Rohman, 2021).

At last, the temple's management team needs to concentrate on improving the overall temple experience. Admission, environment, scenery, and transportation contribute to tourists' satisfaction. The staff of the temple must maintain a clean and welcoming environment. In addition, Preserving the originality of the temple constructed centuries ago is necessary. In addition, it is necessary to establish and execute routine maintenance and conservation programs. Ensuring sufficient staff recruitment and training guarantees proper safety and other vital services. These aspects can encourage tourists to return for future visits (Pandya & Sanghani, 2023).

6. THEORETICAL IMPLICATIONS

This study's theoretical implications highlight the potential of utilizing big data in tourism studies, especially for understanding tourist satisfaction in niche areas such as Busan's temples. This study fills a gap in the literature by applying quantitative textual analysis to online reviews, providing a new perspective on temple tourism, and introducing a comprehensive method to interpret vast quantities of unstructured data. This research contributes to the broader discourse on the relationship between digital user-generated content and traditional tourism management practices by highlighting the importance of online feedback in shaping the image of religious destinations.

In addition, the study enriches the theoretical framework surrounding tourist behavior and expectations in religious tourism contexts by identifying specific factors that influence satisfaction.

7.   MANAGERIAL IMPLICATIONS

The advent of social media and online platforms has facilitated a shift in how tourists communicate their thoughts, emotions, and experiences, mainly through online reviews. Review ratings were utilized as an alternative standard for consumer satisfaction, as the evaluations derived from these ratings were employed to find the overall level of contentment with the product or service (Handani & Kim, 2023). These reviews, characterized by greater independence and openness, have emerged as a prominent means for tourists to express their opinions regarding various destinations and services. Businesses and the tourism industry can benefit from the information available by adapting their strategy to attain a competitive advantage. Ensuring optimal tourist satisfaction is crucial for maintaining competitiveness in highly competitive markets and achieving success in the online domain (Handani et al., 2022).

The level of tourist satisfaction is significant within the tourism business. Tourist complaints will be influenced by unhappiness as a direct outcome. The lodging of complaints by tourists has the potential to enhance the performance of management. Nevertheless, if the complaints are managed appropriately, it will help the tourists' level of annoyance and discontentment, thereby causing harm to the reputation of the place. Considering the advantages and disadvantages associated with tourist grievances, managers must devise efficient channels via which tourists can express their displeasure and afterward implement suitable strategies to address and solve these complaints (Wang et al., 2009).

8.   CONCLUSION

This study evaluated the quality of a significant volume of online information using quantitative textual analysis. Identifying related relationships between words through massive amounts of big data is also part of the purpose. Even though a significant quantity of research has been conducted on temple tourism and tourist satisfaction, there has been no precedent for studies utilizing big data to investigate the tourist satisfaction of temples in Busan.

This study provides beneficial insights into the temples in Busan and the tourist experience by analyzing online evaluations. Frequency analysis, cluster analysis, and Co-occurrence network analysis reveal various factors that affect tourist satisfaction. To completely comprehend the factors influencing tourist satisfaction, future studies might need a larger sample size and implement additional methodologies. In addition, a comprehensive examination of the preferences and expectations of tourists can help pinpoint specific areas for enhancement.

In the end, by implementing these recommendations, it is anticipated that the temples in Busan will be able to maintain the satisfaction of their visitors, increase their ratings, and ultimately attract more tourists. As the demand for religious tourism rises, the temple's staff must keep tourists satisfied and provide them with unforgettable experiences.

REFERENCES

Budiharseno, R. S., Joon Kim, M., Anggelita, M., Putra, S., & Husein, F. (2023). *Recovery Hotel Industry Luxury Hotels in Semarang: Big Data Analysis*. 143–149. https://doi.org/10.2991/978-2-38476-024-4_17

Canny, I. U. (2013). An empirical investigation of service quality, tourist satisfaction and future behavioral intentions among domestic local tourists at Borobudur Temple. *International Journal of Trade, Economics and Finance*, *4*(2), 86–91. https://doi.org/10.7763/ijtef.2013.v4.265

Chun, B., Roh, E. Y., Spralls, S. A., & Kim, Y. (2017). Predictors of Templestay Satisfaction: A Comparison Between Korean and International Participants. *Leisure Sciences*, *40*(5), 423–441. https://doi.org/10.1080/01490400.2017.1296390

Cochran, W.G. (1977). *Sampling Techniques* (3rd ed.). New York: John Wiley & Sons.

Debrincat, D. (2015). *Ancestral beliefs in South Korea*. Evaneos.com; Evaneos. https://www.evaneos.com/south-korea/holidays/essential-information/8062-religion/

Global Times (2023). *"Temple tourism" becomes more popular among post-90s - Global Times*. www.globaltimes.cn. https://www.globaltimes.cn/page/202303/1286435.shtml

GlobalData (2023). *South Korea Source Tourism Insight Report Including International Departures, Domestic Trips, Key Destinations, Trends, Tourist Profiles, Analysis of Consumer Survey Responses, Spend Analysis, Risks and Future Opportunities, 2023 Update*. Market Research Reports & Consulting | GlobalData UK Ltd. https://www.globaldata.com/store/report/south-korea-tourism-source-market-analysis/

Gou, S., & Shibata, S. (2017). Using visitor-employed photography to study the visitor experience on a pilgrimage route – A case study of the Nakahechi Route on the Kumano Kodo pilgrimage network in Japan. *Journal of Outdoor Recreation and Tourism*, *18*, 22–33. https://doi.org/10.1016/j.jort.2017.01.006

Gretzel, U., & Yoo, K. H. (2008). Use and Impact of Online Travel Reviews. *Information and Communication Technologies in Tourism 2008*, pp. 35–46. https://doi.org/10.1007/978-3-211-77280-5_4

Guo, X., & Pesonen, J. A. (2022). The role of online travel reviews in evolving tourists' perceived destination image. *Scandinavian Journal of Hospitality and Tourism*, *22*(4–5), 372–392. https://doi.org/10.1080/15022250.2022.2112414

Handani, N. D., & Kim, H.-S. (2023). Unlocking customer satisfaction of halal restaurant in South Korea through online review analysis. *Environment and Social Psychology*, *7*(2). https://doi.org/10.18063/esp.v7.i2.1501

Handani, N. D., Williady, A., & Kim, H. S. (2022). An analysis of customer textual reviews and satisfaction at luxury hotels in Singapore's Marina Bay Area (SG-Clean-Certified Hotels). *Sustainability (Switzerland)*, *14*(15). https://doi.org/10.3390/su14159382

Heo, C. Y., Kim, B., & Drapé-Frisch, L. (2019). Understanding guests' dissatisfaction: Application of data visualization tools. *Bridging Tourism Theory and Practice*, *11*, 125–142. https://doi.org/10.1108/S2042-144320190000011011

Higuchi, K. (2015). *KH Coder Reference Manual*. http://khcoder.net/en/manual_en_v2.pdf

Hsiang, T. C., Lien, C. C., Quan, D., & Xin, C. (2021). Factors Affecting Temple Tourism Activities– A Case Study of Taiwan Lukang Tianhou Temple. *E3S Web of Conferences*, *251*, 03027. https://doi.org/10.1051/e3sconf/202125103027

Hughes, K., Bond, N., & Ballantyne, R. (2013). Designing and managing interpretive experiences at religious sites: Visitors' perceptions of Canterbury Cathedral. *Tourism Management*, *36*, 210–220. https://doi.org/10.1016/j.tourman.2012.11.022

Jurkus, E., Povilanskas, R., & Taminskas, J. (2022). Current Trends and Issues in Research on Biodiversity Conservation and Tourism Sustainability. *Sustainability (Switzerland)*, *14*(6). https://doi.org/10.3390/su14063342

Kaplan, U. (2010). Images of Monasticism: The Temple Stay Program and the Re-branding of Korean Buddhist Temples. *Korean Studies*, *34*(1), 127–146. https://doi.org/10.1353/ks.2010.a413035

Kushima, M., Yamazaki, T., & Araki, K. (2019). Text data mining of the nursing care life log from electronic medical record. *Lecture Notes in Engineering and Computer Science*, *2239*, 257–261.

Liang, M., Wang, M., & Xu, S. (2016). The Study of Temple Tourism Brand Marketing—Taking Guangxiao Temple as an Example. *Chinese Studies*, *05*(03), 88–92. https://doi.org/10.4236/chnstd.2016.53010

Lukoianova, T., & Rubin, V. L. (2014). Veracity roadmap: Is big data objective, truthful and credible? *Advances in Classification Research Online*, *24*, 4–15. https://doi.org/10.7152/acro.v24i1.14671

Luo, J., Wang, R., Sun, D., Wang, Y., & Li, G. (2019). Comparison among four prominent text processing tools. *Proceedings - 2018 15th International Symposium on Pervasive Systems, Algorithms and Networks, I-SPAN 2018*, 325–330. https://doi.org/10.1109/I-SPAN.2018.00072

Maneenetr, T., & Ha Tran, T. (2014). SWOT Analysis of Religious Tourism in Nong Khai Province, Thailand Proposed Guidelines to Incorporate Temple Stay Program. *Mediterranean Journal of Social Sciences*, *5*(23). https://doi.org/10.5901/mjss.2014.v5n23p696

Meng, F., Tepanon, Y., & Uysal, M. (2008). Measuring tourist satisfaction by attribute and motivation: The case of a nature-based resort. *Journal of Vacation Marketing*, *14*(1), 41–56. https://doi.org/10.1177/1356766707084218

Mohammad , S. N., Handani, N. D., & Kim, H.-S. (2023). Exploring user generated content for beach resorts in Cox's Bazar, Bangladesh: A pre- and post-pandemic analysis. *Environment Social Psychology, 8(2)*. https://doi.org/10.54517/esp.v8i2.1771

Mohanty, P. P., & Sadual, S. K. (2020). An integrative framework for temple tourism destination of odisha: The marketing and management perspectives, case study on golden triangle of Odisha, India. *International Journal of Scientific and Technology Research*, *9*(1), 3547–3554.

Moscardo, G. (1996). Mindful visitors: Heritage and Tourism. *Annals of Tourism Research*, *23*(2), 376–397. https://doi.org/10.1016/0160-7383(95)00068-2

Noerhartati, E., Handani, N. D., & Dhaneswara, N. (2023). Exploring The Influence of Online Reviews on Sales. *Journal of Women's Entrepreneurship and Education*. https://doi.org/10.28934/jwee23.34.pp48-74

Pandya, N. V., & Sanghani, P. (2023). *Exploring the Importance of Temple Management Research in Gujarat. March*. https://www.researchgate.net/publication/369201585

Park, J.-Y., Bufquin, D., & Back, R. M. (2019). When do they become satiated? An examination of the relationships among winery tourists' satisfaction, repeat visits and revisit intentions. *Journal of Destination Marketing & Management*, *11*, 231–239. https://doi.org/10.1016/j.jdmm.2018.04.004

Rifan, A. (2016). *Tourism Components and Tourists Characteristic Of Prambanan Temple as The World Culture Heritage Site In Yogyakarta*. International Journal of Tourism and Hospitality Study.

Rinschede, G. (1992). Forms of religious tourism. *Annals of Tourism Research*, *19*(1), 51–67. https://doi.org/10.1016/0160-7383(92)90106-y

Rohman, I. Z. (2021). What Creates Tourist Satisfaction in Prambanan Temple? *Kinerja*, *25*(2), 151–163. https://doi.org/10.24002/kinerja.v25i2.4362

Romesburg, H. C. (1984). *Cluster analysis for researchers*. Belmont, CA: Lifetime Learning Publications.

Ross, S. L., Hur, J. (Christine), & Hoffman, J. (2020). Temple Stay as Transformative Travel: An Experience of the Buddhist Temple Stay Program in Korea. *Journal of Tourism Insights*, *9*(1). https://doi.org/10.9707/2328-0824.1090

Siang, J. H., Yang, W. G., & Liu, L. W. (2020). Impact of WOM and online WOM on tourist destinations in Indonesia. *Utopia y Praxis Latinoamericana*, *25*(Extra10), 305–318. https://doi.org/10.5281/zenodo.4155629

Song, H. J., Lee, C.-K., Park, J. A., Hwang, Y. H., & Reisinger, Y. (2014). The influence of tourist experience on perceived value and satisfaction with temple stays: The experience economy theory. *Journal of Travel & Tourism Marketing*, *32*(4), 401–415. https://doi.org/10.1080/10548408.2014.898606

Song, H., Li, G., van der Veen, R., & Chen, J. L. (2010). Assessing mainland Chinese tourists' satisfaction with Hong Kong using tourist satisfaction index. *International Journal of Tourism Research*, *13*(1), 82–96. https://doi.org/10.1002/jtr.801

Suanmali, S. (2014). Factors Affecting Tourist Satisfaction: An Empirical Study in the Northern Part of Thailand. *SHS Web of Conferences*, *12*, 01027. https://doi.org/10.1051/shsconf/20141201027

Tendean, C. (2017). Analysis of Tourist Satisfaction to Tourist Attraction Quality in Kediri Regency, East Java. *Journal of Indonesian Tourism and Development Studies*, *5*(2), 91–100. https://doi.org/10.21776/ub.jitode.2017.005.02.04

UNWTO. (2014). *Tourism can protect and promote religious heritage | UNWTO*. Www.unwto.org. https://www.unwto.org/archive/europe/press-release/2014-12-10/tourism-can-protect-and-promote-religious-heritage

Wang, X., Zhang, J., Gu, C., & Zhen, F. (2009). examining antecedents and consequences of tourist satisfaction: A structural modeling approach. *Tsinghua Science and Technology*, *14*(3), 397–406. https://doi.org/10.1016/S1007-0214(09)70057-4

Xu, F., La, L., Zhen, F., Lobsang, T., & Huang, C. (2019). A data-driven approach to guest experiences and satisfaction in sharing. *Journal of Travel and Tourism Marketing*, *36*(4), 484–496. https://doi.org/10.1080/10548408.2019.1570420

Yadav, S., Bandyopadhyay, R., Rasul, G., & Rawal, A. (2010). Exploring the relationship between socio-cultural factors and tourist satisfaction. *Worldwide Hospitality and Tourism Themes, 2*(5), 554–558. doi:10.1108/17554211011090157

Yu, Y., Lang, M., Zhao, Y., Liu, W., & Hu, B. (2023). Tourist perceived value, tourist satisfaction, and life satisfaction: Evidence from Chinese Buddhist Temple Tours. *Journal of Hospitality and Tourism Research*, *47*(1), 133–152. https://doi.org/10.1177/10963480211015338

Zhou, X., Wang, Y., & Ma, P. (2022). Survey on the tourist satisfaction of rural homestay based on the theory of importance–performance analysis. *Frontiers in Psychology*, *13*. https://doi.org/10.3389/fpsyg.2022.940345