INCOSTE
International Conference on Sustainable Tourism and Entrepreneurship

Vol. 01 No.01 August 2026, ISSN: 3163-2912

Strategic Analysis of ImersifA Digital Service Quality on Visitor Satisfaction at the National Museum of Indonesia

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ABSTRACT

This study evaluates the impact of service quality within the ImersifA attraction on visitor satisfaction levels at the National Museum of Indonesia. In the era of digitalization, museums must transform into educational and recreational destinations. However, field observations reveal technical issues and reservation system limitations that affect visitor perceptions. Using a quantitative approach, questionnaires were distributed to 100 respondents. Regression analysis indicates that service quality significantly contributes to satisfaction. The "tangibles" dimension, represented by 360-degree video mapping technology, is the strongest determinant, while the "reliability" aspect requires management's attention to minimize technical complaints.

Keywords: *ImersifA, Service Quality, Visitor Satisfaction, National Museum of Indonesia*

1. INTRODUCTION

The rapid advancement of Information and Communication Technology (ICT) in the era of Industry has fundamentally transformed the global tourism landscape, shifting it toward a more digitized and experience-oriented industry. In this context, museums once viewed as static repositories of historical artifacts are now forced to undergo a paradigm shift to maintain their relevance in the eyes of a modern, tech-savvy audience. According to [1], institutions must continuously innovate to meet evolving consumer expectations. For the National Museum of Indonesia, this innovation is embodied in "ImersifA," a state of the art facility utilizing 360 degree video mapping technology to deliver immersive historical narratives.

However, the implementation of high end technology in public service environments brings a new set of challenges regarding service quality. While digital transformation aims to enhance the visitor experience, there is often a "service gap" between the technological promise and operational reality. Preliminary observations and digital reviews from platforms such as Google Review and Traveloka indicate that while the visual aspect of ImersifA is highly praised, visitors frequently encounter technical glitches, such as unsynchronized audio and a rigid online only ticketing system. These issues suggest a potential misalignment in the delivery of service quality dimensions, particularly reliability and responsiveness.

The urgency of this research lies in the critical role of visitor satisfaction as a determinant of the museum's sustainability. As stated by [2], satisfaction is the ultimate goal of any service interaction; failure to meet expectations can lead to negative word-of-mouth and a decline in revisit intentions. This study seeks to bridge the gap in existing literature regarding the effectiveness of immersive technology in Indonesian museums. By analyzing the five dimensions of service quality, Tangibles, Reliability, Responsiveness, Assurance, and Empathy. This research provides a comprehensive evaluation of how ImersifA influences visitor satisfaction. The findings are expected to offer strategic recommendations for museum management to optimize their digital assets and ensure a high quality educational experience that aligns with international standards of sustainable tourism and entrepreneurship.

2. LITERATURE REVIEW

2.1 ImersifA

ImersifA is a cutting-edge digital technology-based facility developed at the National Museum of

Indonesia as a strategic innovation in presenting historical and cultural collections. This facility utilizes 360-degree projection technology combined with interactive audio-visual elements, allowing visitors to experience an immersive (all-encompassing) journey through historical narratives. The experience features a 15-minute presentation of Indonesian history through an engaging display of digital visuals, soundscapes, and lighting, with an accessible admission fee of Rp35,000 per person.

The implementation of such technology aligns with the evolving role of modern museums. According to Sekar et al. (2023), immersive museums provide interactive experiences that stimulate the visitors' senses, which in turn enhances their interest and comprehension of art, history, and culture. Beyond mere education, the application of immersive facilities like ImersifA plays a vital role in extending the duration of visits and deepening emotional engagement. This is supported by Park et al. (2022), who argue that "immersive displays in exhibitions attract potential attendees, and they engage them to stay at the exhibitions longer." By creating a multisensory environment, ImersifA effectively bridges the gap between traditional historical artifacts and the expectations of contemporary digital-native visitors, ensuring that the museum remains a dynamic and relevant educational destination.

2.2 The Concept of Service Quality (SERVQUAL)

The foundation of modern service quality theory was pioneered by Parasuraman, Zeithaml, and Berry (1988), who defined service quality as the discrepancy between customers' expectations and their perceptions of the service received. In their seminal work, they introduced the SERVQUAL model, which consists of five core dimensions:

1. Tangibles: The appearance of physical facilities, equipment, personnel, and communication materials. In ImersifA, this refers to the quality of the 360-degree projectors, the comfort of the viewing room, and the clarity of the visual content.
2. Reliability: The ability to perform the promised service dependably and accurately. For Museum Nasional of Indonesia, this involves ensuring that the show starts on time and that all technical equipment (audio and video) functions without interruption.
3. Responsiveness: The willingness to help customers and provide prompt service. This is measured by how quickly staff address visitor inquiries or technical complaints during the show.
4. Assurance: The knowledge and courtesy of employees and their ability to inspire trust and confidence. Visitors need to feel that the staff are experts in the museum's history and the facility's operations.
5. Empathy: The provision of caring, individualized attention to customers. This includes the museum's ability to cater to diverse visitor needs, such as different age groups or accessibility requirements.

2.3 Visitor Satisfaction in the Digital Era

Visitor satisfaction is a multifaceted construct that represents the emotional response to a service experience. Tjiptono (2011) emphasizes that satisfaction is achieved when the perceived performance of a service matches or exceeds the initial expectations. In the context of "New Museology," satisfaction is no longer just about the acquisition of knowledge; it is about the "total experience" the blend of education, entertainment, and emotional engagement. The use of immersive technology like ImersifA is specifically designed to trigger "flow" and deep engagement, which are key drivers of high satisfaction scores in cultural tourism.

2.4 Immersive Technology and Museum Innovation

Immersive technology refers to digital tools that create a sense of being physically present in a non-physical world. In museums, this often involves Augmented Reality (AR), Virtual Reality (VR), or Video Mapping. Research suggests that these technologies can significantly enhance the narrative power of history. However, as Kotler (2016) points out, technology is merely a medium; the quality of the service surrounding the technology is what determines the final value for the consumer.

3. METHOD

3.1 Research Design and Approach

This study adopts a quantitative research method with an associative descriptive approach. The primary objective is to evaluate the causal relationship between the independent variable, Service Quality (X), and the dependent variable, Visitor Satisfaction (Y), at the ImersifA facility of the National Museum of Indonesia. The quantitative approach was chosen to provide an objective measurement of visitor perceptions through statistical data, allowing for a structured generalization of the findings.

3.2 Population and Sampling Technique

The population of this study encompasses all visitors who experienced the ImersifA digital facility during the 2025 observation period. Since the exact number of the population is fluctuate and undefined (infinite population), the researcher employed a non-probability sampling method, specifically accidental sampling. This technique involves selecting respondents who were present at the location and had just finished the ImersifA session. To ensure the reliability of the statistical analysis, a sample size of 100 respondents was determined, adhering to the minimum requirements for linear regression analysis in management research.

3.3 Data Collection Methods

To achieve comprehensive results, the researcher utilized two types of data sources:

- Primary Data: Collected through the distribution of a structured questionnaire. Each question was designed based on the operationalization of variables using a 5-point Likert Scale (1 = Strongly Disagree to 5 = Strongly Agree). This allowed respondents to express their level of agreement regarding the technological and service aspects of ImersifA.

- Secondary Data: Sourced from internal museum reports, previous academic literature, and digital visitor testimonials from platforms such as Google Review, Traveloka, and Tiket.com. These secondary sources provided the initial context for the research problem, specifically regarding technical issues in the facility.

3.4 Operationalization of Variables

The research framework is built upon two core variables:

A. Service Quality (X): This variable is analyzed through the five SERVQUAL dimensions adapted for digital museum experiences:

- Tangibles: The visual quality of the 360-degree projection, room comfort, and staff appearance.
- Reliability: The consistency of show schedules and the stability of multimedia hardware (audio-visual).
- Responsiveness: The speed of staff in handling ticket inquiries and technical difficulties.
- Assurance: Staff knowledge about the historical content and their ability to provide a safe environment.
- Empathy: Personal attention to visitor needs and the accessibility of the facility.

B. Visitor Satisfaction (Y): This variable is measured through indicators such as the alignment of the experience with initial expectations, the willingness of visitors to recommend ImersifA to others (Word of Mouth), and the intention to revisit the museum in the future.

3.5 Data Analysis Procedures

The data analysis was performed using SPSS (Statistical Product and Service Solutions) software. The process involved several rigorous stages:

- Instrument Validity and Reliability Tests: Conducted to ensure that every item in the questionnaire was accurate and consistent in measuring the intended variables.
- Classical Assumption Tests: Including normality and linearity tests to ensure the data was suitable for regression modeling.
- Simple Linear Regression Analysis: Employed to quantify the impact of Service Quality on Visitor Satisfaction.
- Hypothesis Testing (T-test): To determine if the influence of Service Quality is statistically significant.
- Coefficient of Determination (R^2): To evaluate what percentage of the variance in Visitor Satisfaction can be explained by the Service Quality provided by ImersifA.

4. RESULTS AND DISCUSSION

Statistical tests confirm a strong influence between the two variables.

- Dimension Analysis: The Tangibles dimension received the highest score (4.45) due to the visual grandeur of the video mapping. This aligns with Parasuraman's theory that sophisticated physical evidence creates a positive first impression.
- Technical Challenges: The Reliability dimension had the lowest score due to complaints about interrupted audio narratives. This indicates that high technology must be coupled with consistent maintenance.
- Overall Satisfaction: Most visitors reported being satisfied (average score 4.15), though they noted that the 30-minute show duration felt too short compared to the long queue times.

5. CONCLUSIONS

This study concludes that Service Quality has a positive and significant effect on Visitor Satisfaction at ImersifA. Management is advised to improve the stability of multimedia devices and consider implementing an on-the-spot ticketing system to assist visitors who find the online system difficult to navigate.

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