

Analysis of the Application of Visitor Management to Visitor Satisfaction at Museum Geologi

Dwi Septiyani¹, Dinarsiah Chendraningrum^{2*}

^{1,2}Tour and Travel Business
Program, Politeknik Negeri
Bandung

Abstract

This study examines how the implementation of visitor management influences visitor satisfaction at the Museum Geologi in Bandung, Indonesia. Although visitor management has been widely discussed in the tourism literature, empirical evidence from educational museums in developing countries remains limited. A quantitative descriptive design was employed using a structured questionnaire distributed to 125 visitors. Visitor management was measured through four dimensions—access management, placement of facilities and interpretation, regulation of support facilities, and time and space distribution—while visitor satisfaction was assessed using expectation conformity, revisit intention, and willingness to recommend. Data were analyzed using simple linear regression. The findings reveal that both visitor management and visitor satisfaction are rated highly. Visitor management has a significant and positive influence on visitor satisfaction ($R^2 = 0.666$; $t = 15.418$; $p < 0.001$). These results emphasize that well-planned visitor management enhances visitor experience and satisfaction, particularly through efficient access systems and clear spatial guidance. The study contributes to the growing discourse on sustainable and inclusive visitor management practices in public educational attractions. Managerially, the findings suggest that museums should adopt integrated digital systems and inclusive accessibility design to improve visitor satisfaction and ensure long-term sustainability.

Keywords: visitor management, visitor satisfaction, museum experience, sustainable tourism, Indonesia

INTRODUCTION

Museums play an increasingly strategic role in sustainable urban tourism, acting not only as custodians of heritage but also as dynamic spaces for public education, cultural engagement, and recreation (Çolak & Karakan, 2023; Phan et al., 2025). In this context, visitor satisfaction has emerged as a key performance indicator, reflecting the alignment between visitor expectations and actual experiences, including factors such as exhibit quality, spatial flow, accessibility, and interpretive clarity (Nyaupane, 2025; Ponsignon et al., 2024; Suryana et al., 2023).

Visitor management—defined as the systematic regulation of visitor behavior, access, and facilities—is essential for optimizing both visitor experience and resource preservation (Burkov & Gorgadze, 2023). Poorly managed environments, marked by congestion, ambiguous wayfinding, or disorganized interpretation, can lead to confusion, dissatisfaction, and lower revisit intentions (Komarac et al., 2024). Conversely, effective management strategies that integrate accessibility, crowd control, and spatial design have been shown to significantly enhance satisfaction, learning outcomes, and loyalty, particularly among diverse audience segments such as Generation Y (Kumraksa & Monpanthong, 2024; Tang et al., 2024).

Technological innovations further extend the potential of visitor management. Tools such as AI-driven layout planning, augmented reality (AR), virtual reality (VR), and personalized interpretation systems contribute to smoother visitor journeys and more immersive experiences (Khalil et al., 2023; J. Wang et al., 2023). At the same time, digital feedback from social media and online reviews provides

Correspondence address:

Dinarsiah Chendraningrum

Email : dinarsiah.chendraningrum@polban.ac.id

Address : Tour and Travel Business Program, Politeknik Negeri Bandung

actionable insights for managers to refine services and tailor offerings (Widiyasa & Tuti, 2023).

As one of Indonesia's most visited educational institutions, Museum Geologi in Bandung illustrates the dual challenge of maintaining educational quality while managing increasing visitor pressures. Recent fluctuations in visitor numbers suggest the need to assess management practices that influence satisfaction critically. While the museum boasts rich geological content, visitor experiences may be undermined by crowding, unclear navigation, or underutilized technologies (Nyaupane, 2025; Tang et al., 2024). This study aims to evaluate visitor management practices at Museum Geologi and analyze their impact on visitor satisfaction. By identifying which management components—such as accessibility, interpretive clarity, or spatial design—most strongly influence satisfaction, this research contributes to the growing discourse on sustainable visitor engagement in urban museums. The findings are expected to offer practical recommendations for improving service delivery while aligning with the broader goals of educational tourism and cultural sustainability.

LITERATURE REVIEW

Visitor Management in Museums

Visitor management in museums is a strategic, multidisciplinary process that organizes and regulates visitor behavior, access, and circulation to optimize the visitor experience while safeguarding institutional resources. It encompasses deliberate spatial planning, timed entry systems, interpretive infrastructure, and inclusive service design, all integrated to ensure safe, comfortable, and educational visits (Ataoğlu et al., 2023; Kruczek et al., 2023; Philippopoulos et al., 2024). Beyond basic operational efficiency, effective visitor management supports sustainable tourism by balancing the dual objectives of cultural preservation and public engagement. Holistic approaches—combining physical infrastructure with data-driven monitoring—enable the optimization of exhibit flow, staffing allocation, and crowd control, while also allowing institutions to capture and evaluate visitor behaviors and satisfaction metrics cost-effectively (Philippopoulos et al., 2024; Shin et al., 2023). Open-space design and accessible layouts further enhance inclusivity, particularly for audiences with disabilities or mobility limitations, aligning museum practice with evolving policy frameworks that advocate for equal cultural access (Al-Belushi & Al-Hooti, 2023; Kruczek et al., 2023).

Recent literature highlights the growing influence of digital transformation in shaping contemporary visitor management strategies. AI-powered guides, augmented and virtual reality applications, and cloud-based systems not only personalize interpretation but also facilitate real-time feedback, improve spatial navigation, and expand experiential reach (Huo et al., 2024; Ljubič, 2023; Talamo et al., 2021). However, successful digital integration requires alignment with organizational capacity, spatial design, and insights into visitor segmentation. Studies show that socio-demographic profiling—especially among Generation Y—enables museums to design participatory, tech-savvy experiences that appeal to digitally engaged audiences (Kumraksa & Monpanthong, 2024; Wu, 2024). The co-creation of value through visitor interaction, participation, and motivation, moderated by knowledge levels, reinforces the significance of tailoring content and engagement strategies to enhance satisfaction and loyalty (Yang et al., 2023; Zhao, 2025). Moreover, tools such as sentiment analysis and online review mining provide actionable inputs for refining layout, programming, and communication strategies (Lukac et al., 2024; Rahman et al., 2024). Ultimately, a convergent model of visitor management—one that combines inclusive physical spaces with digital and data-informed interventions—emerges as key to delivering high-quality, personalized, and sustainable museum experiences (Ataoğlu et al., 2023; Rahman et al., 2024; Wan & Forey, 2024).

Dimensions of Visitor Management

Visitor management in museums can be conceptualized through four interrelated dimensions: access management, the placement of facilities and interpretation services, regulation of supporting infrastructure, and the distribution of time and space. Together, these dimensions form a comprehensive framework for organizing visitor flow, minimizing congestion, enhancing interpretive engagement, and supporting safety and inclusivity (Bollenbach et al., 2024; Choe et al., 2023; Rose et al., 2024). Access management plays a foundational role by regulating entry and internal movement to ensure orderly visitation. Tools such as occupancy prediction, real-time flow monitoring, and contactless check-in systems have emerged as critical mechanisms to prevent bottlenecks and maintain throughput, especially under public health constraints (Luo et al., 2024; Mashkov & Shoval, 2024). Complementing this, strategically placed signage, interpretation boards, and exhibits facilitate wayfinding and support cognitive engagement. Research shows that clear servicescapes—featuring functional layout, visual coherence, and ambient comfort—significantly improve comprehension, emotional response, and overall satisfaction (Chang, 2025; Chen et al., 2025; Simangunsong & Setyorini, 2023; F. Wang & Jailani, 2025). Interpretive design is particularly influential in heritage and

museum contexts, where spatial storytelling and authentic narratives enhance both perceived value and visitor memory.

Equally critical is the regulation of supporting facilities, including the infrastructure that enables seamless, predictable experiences—from digital ticketing and parking to responsive staff and reliable amenities. These systems not only streamline entry and circulation but also directly influence perceptions of convenience, accessibility, and service quality (Alarbi et al., 2023; Hazudin et al., 2023; Kiala et al., 2025). Moreover, the distribution of visitors across time slots and physical zones—supported by movement analytics and predictive modeling—mitigates congestion and improves comfort, reducing stress and enhancing affective outcomes (Bollenbach et al., 2024; Choe et al., 2023; Mashkov & Shoval, 2024). Synthesis across these dimensions suggests that effective visitor management is not a singular intervention but an integrative strategy that links spatial, temporal, technological, and human-centered design. By aligning real-time data, interpretive media, and infrastructure with visitor characteristics and expectations, museums can achieve sustainable, high-quality, and inclusive experiences. This approach supports broader goals in regenerative tourism, balancing visitor satisfaction with heritage preservation and smart capacity planning (Halim et al., 2025; Rudan et al., 2024).

Visitor Satisfaction

Visitor satisfaction in museums is a multidimensional construct that emerges from the alignment between pre-visit expectations and actual experiences. It reflects both cognitive and affective evaluations and is recognized as a key predictor of revisit intentions, recommendation behavior, and long-term loyalty (Addis et al., 2023; Sinaga et al., 2024; Widiyasa & Tuti, 2023). In the museum context, satisfaction is driven not only by exhibition quality but also by service delivery, environmental design, and technological engagement. Studies consistently link satisfaction to functional and experiential factors such as ease of navigation, clarity of information, comfort, cleanliness, staff responsiveness, and pricing (Çolak & Karakan, 2023; Huo et al., 2024; Rahmita et al., 2024). SERVQUAL-based models are widely applied in museums to evaluate these elements, with tangible and intangible service components—ranging from layout to staff behavior—playing critical roles in shaping the visitor experience (Dianawati et al., 2024; Simangunsong & Setyorini, 2023). Furthermore, environmental aesthetics and spatial organization—including signage, interior design, and landscaping—significantly enhance perceived value and visitor enjoyment (Akgul & Eren, 2024; Chen et al., 2025), making the physical environment a key lever in satisfaction management.

Alongside physical and service dimensions, digital innovation has become a central determinant of visitor satisfaction. Immersive experiences such as virtual tours, XR-enhanced storytelling, and AI-powered personalization have been shown to elevate emotional engagement, particularly among digitally native cohorts (Rodrigues et al., 2023; Zhang & Kim, 2025). Satisfaction in digitally mediated environments is increasingly modeled through constructs such as perceived value, immersion, and interactivity, indicating that emotional and technological dimensions are becoming inseparable from traditional service quality indicators (Qu et al., 2024; Shi, 2025). Analytical frameworks such as ACSI and SEM have further demonstrated that satisfaction mediates the relationships among promotional efforts, user-generated content, and behavioral intentions (X. Wang et al., 2024). Additionally, netnography and sentiment analysis of online reviews offer rich, real-time insights into visitor perceptions, expanding the measurement toolkit beyond conventional surveys (Burkov & Gorgadze, 2023; Yang et al., 2023). Finally, co-creation and participatory experiences—where visitor motivation and interaction contribute to the perceived value—have been identified as critical to enhancing satisfaction and fostering advocacy, suggesting that museums should embrace both technological and human-centered strategies to sustain positive visitor outcomes (He et al., 2024; Yang et al., 2023).

METHODS

This study employed a quantitative descriptive approach to examine the influence of visitor management on visitor satisfaction. The design was selected to enable objective measurement of variables and statistical testing of the proposed relationship. The analysis relied on a cross-sectional survey, allowing data collection from visitors during a specific period of museum operations. The population comprised all visitors to the Museum Geologi in Bandung during the 2024 operational year. Using a statistical estimation formula, a minimum of 101 respondents was required; however, 125 valid responses were collected to enhance reliability and representativeness. Respondents were selected through a non-probability sampling technique based on visitor availability at the time of data collection. Participation was voluntary, and all respondents were informed of the study's purpose and confidentiality measures before completing the questionnaire.

Data were collected using a structured questionnaire comprising two main sections: visitor management and visitor satisfaction. The visitor management construct was measured through four dimensions: access management, placement of facilities and interpretation, regulation of support facilities, and time and space distribution. The visitor satisfaction construct comprised three dimensions: expectation conformity, revisit intention, and willingness to recommend. All items were rated on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Before full deployment, the instrument underwent a pilot test to ensure clarity, validity, and reliability.

Data were analyzed using descriptive statistics and simple linear regression. Descriptive analysis was conducted to determine the overall level of visitor management implementation and visitor satisfaction. The regression analysis tested the effect of visitor management (independent variable) on visitor satisfaction (dependent variable). Statistical assumptions of normality, linearity, and homoscedasticity were verified before hypothesis testing. The strength and significance of the relationship were assessed through the coefficient of determination (R^2) and t-test results at a 5% significance level. All analyses were performed using SPSS version 26. Ethical integrity was maintained throughout the study. Participation was entirely voluntary, and respondents could withdraw at any time without consequence. No personal identifying information was collected, and all responses were treated confidentially and used solely for academic purposes.

RESULTS AND DISCUSSION

Respondent Profile

The study collected 125 valid responses via an online questionnaire, capturing a demographically diverse yet youth-dominated visitor base. A substantial majority of respondents were female (72.8%), and the age distribution was overwhelmingly skewed toward Generation Z (88%), with smaller representations from Millennials (11%) and Generation X (1%). In terms of occupation, students constituted the dominant group (72%), followed by employees, freelancers, and professionals, indicating that the Museum Geologi Bandung primarily attracts a younger, academically oriented audience. This profile aligns closely with the museum's educational positioning and underscores its appeal as a knowledge-based destination for learning and leisure. The prevalence of students and Gen Z visitors also suggests a digitally literate demographic that is responsive to online engagement, interpretive technologies, and social media-based outreach.

Geographically, more than half of the respondents (56%) resided within Bandung City, while an additional 34.4% came from other regions in West Java, and 9.6% from outside the province. This spatial distribution reinforces the museum's role as a prominent regional attraction with a strong local draw, supported by ease of access for residents of Bandung and the surrounding areas. The modest percentage of out-of-province visitors indicates potential for broader outreach, particularly through targeted marketing and digital engagement strategies. Taken together, the demographic and geographic profiles suggest that visitor satisfaction and management strategies should be attuned to the expectations of young, student-based audiences—especially in terms of digital interactivity, interpretive clarity, and affordability—while also laying the groundwork for expanding appeal to a more diverse, intergenerational audience in the future..

Descriptive Analysis of Visitor Management

Visitor management in Museum Geologi Bandung was measured across four key dimensions: access management, placement of interpretation services, regulation of supporting facilities, and distribution of time and space. The aggregate descriptive results indicate a high level of effectiveness, with a total score of 8,265 out of a maximum 10,000, translating to an overall performance index of 82.65%. This suggests that, in general, visitors perceived the museum's visitor management practices as highly satisfactory. The average score per dimension was 516.56, signaling that most areas of visitor management are functioning well. However, a more nuanced view reveals variation across the specific dimensions, highlighting both strengths and areas for improvement.

As shown in Table 1, the highest-performing dimension was the placement of interpretation services, with a mean score of 531. This reflects strong visitor approval of the museum's signage, exhibit labeling, and interpretive displays, which appear to enhance cognitive engagement and ease of exploration. The regulation of supporting facilities had a mean score of 523.75, indicating satisfaction with features such as QR-based digital ticketing, mobile check-ins, and on-site infrastructure, including rest areas and amenities. These findings align with previous studies that emphasize the importance of seamless technological integration in enhancing visitor convenience and perceived service quality (Hazudin et al., 2023; Sinaga et al., 2024). Meanwhile, the distribution of time and space dimensions scored 519.25, suggesting that visitor flow and congestion were generally manageable, though not optimal.

Table 1. Descriptive Statistics of Visitor Management Dimensions

Dimension	Mean Score	Performance Index (%)	Rank
Placement of Interpretation	531.00	85.00%	1
Regulation of Supporting Facilities	523.75	83.80%	2
Distribution of Time and Space	519.25	82.68%	3
Access Management	491.75	78.68%	4
Overall Total	516.56	82.65%	—

Source: Research data. 2025

The lowest-performing dimension was access management, with a mean score of 491.75 —the only dimension to fall below the average index. This indicates recurring issues related to physical entry, wayfinding, and internal circulation. Visitors reported difficulties, including unclear directional signage, bottlenecks at entrances, and limited spatial flow control—particularly during peak hours. These findings suggest that while digital systems and interpretive elements are well-executed, the museum's spatial and physical design aspects require targeted enhancements, particularly in managing large visitor volumes and ensuring a smooth navigational flow. Strengthening physical infrastructure, integrating wayfinding technologies, and redesigning entry-exit logistics are therefore recommended to close the gap in this underperforming area..

Descriptive Analysis of Visitor Satisfaction

Visitor satisfaction was assessed using multiple indicators reflecting both service quality and experiential value, including ease of navigation, clarity of information, comfort, cleanliness, staff responsiveness, and digital interaction. The overall results reveal very high satisfaction, with a total score of 8,470 out of 10,000, equivalent to an index of 84.7%. This confirms that the Museum Geologi Bandung has generally succeeded in delivering an experience that aligns with, or even exceeds, visitor expectations. Among the indicators, the highest score was recorded for information clarity (mean = 535), indicating that visitors found the content easy to understand and effectively presented. This aligns with previous findings that interpretive quality is a critical driver of satisfaction, especially in educational tourism settings (Çolak & Karakan, 2023; X. Wang et al., 2024).

Closely following were comfort and cleanliness (mean = 528) and staff responsiveness (mean = 524), highlighting the importance of environmental and interpersonal service aspects. These findings are consistent with service quality models such as SERVQUAL, which indicate that tangible factors and empathy contribute significantly to positive evaluations (Sinaga et al., 2024). Meanwhile, navigation ease (mean = 510) and digital interaction (mean = 506) scored slightly lower, though still within the "high satisfaction" category. These lower scores suggest opportunities to enhance spatial orientation and expand the interactive digital features offered to visitors, particularly given the museum's predominantly young, tech-savvy audience. These results point to strong overall performance, with room for targeted improvements to further elevate the experience.

Table 2. Descriptive Statistics of Visitor Satisfaction Indicators

Satisfaction Indicator	Mean Score	Satisfaction Index (%)	Rank
Information Clarity	535.00	85.60%	1
Comfort & Cleanliness	528.00	84.48%	2
Staff Responsiveness	524.00	83.84%	3
Navigation Ease	510.00	81.60%	4
Digital Interaction	506.00	80.96%	5
Overall Total	516.56	84.70%	—

Source: Research data. 2025

Regression and Hypothesis Testing

To examine the effect of visitor management on visitor satisfaction, a simple linear regression analysis was conducted using visitor management scores as the independent variable (X) and visitor satisfaction scores as the dependent variable (Y). The resulting regression equation was:

$$Y = 2.612 + 0.344X$$

This model indicates that for every one-unit increase in visitor management effectiveness, visitor satisfaction is expected to increase by 0.344 units. The positive, statistically significant regression coefficient confirms a direct linear relationship between the two variables, supporting the assumption that improvements in management practices can substantially enhance the overall visitor experience. The t-statistic value of 15.418 greatly exceeds the critical value (1.980) at the 5% significance level, and the p-value of 0.000 falls well below the α threshold. Consequently, the null hypothesis is rejected, and the alternative hypothesis is accepted, establishing that visitor management has a statistically significant effect on visitor satisfaction.

The model's strength is further confirmed by the coefficient of determination ($R^2 = 0.666$), indicating that visitor management practices explain 66.6% of the variance in visitor satisfaction. This shows a strong model fit and reinforces the relevance of operational and experiential management in shaping visitor outcomes. The remaining 33.4% of unexplained variance may be attributed to other influential factors such as the intrinsic quality of exhibits, personal motivation, staff interaction, prior expectations, and external situational variables (e.g., weather, crowding, or visit purpose). While the model's simplicity provides clarity, it also underscores the need for a more comprehensive multivariate analysis in future studies to capture the full complexity of satisfaction drivers. Nonetheless, the results validate the managerial importance of optimizing access, interpretation, spatial flow, and infrastructure, as these components directly translate into more favorable visitor evaluations and experiences.

Discussion

The findings of this study provide robust empirical support for the hypothesis that visitor management significantly influences visitor satisfaction in the context of educational tourism. The regression analysis revealed a statistically significant positive relationship between visitor management and satisfaction, with a regression coefficient of 0.344 and an R^2 of 0.666, indicating that over two-thirds of visitor satisfaction is explained by the quality of visitor management. These results corroborate earlier assertions in the literature that effective visitor management is a central determinant of perceived experience quality in museums, influencing both cognitive and emotional dimensions of satisfaction (Çolak & Karakan, 2023; Sinaga et al., 2024; Widiyasa & Tuti, 2023). Among the four dimensions assessed—access management, placement of interpretation services, regulation of supporting facilities, and distribution of time and space—the highest visitor ratings were attributed to the placement of interpretation services and the integration of digital ticketing systems, highlighting the critical role of clear signage, exhibit legibility, and seamless digital infrastructure in enhancing comprehension and convenience. These findings align with prior research emphasizing that spatial intelligibility and information clarity substantially improve visitor engagement and satisfaction, particularly in educational or heritage-based contexts (Chen et al., 2025; Rose et al., 2024). Additionally, the positive reception of QR-based systems reinforces evidence that technology-mediated entry processes and smart infrastructure enhance not only efficiency but also perceptions of modernity and responsiveness (Hazudin et al., 2023; Luo et al., 2024).

Conversely, access management scored lowest, highlighting issues with navigational clarity, crowd dispersion, and entry-exit bottlenecks. This suggests that physical space design remains a key challenge, particularly in high-traffic urban museums. This echoes the concerns raised by (Bollenbach et al., 2024; Mashkov & Shoval, 2024), who noted that spatial congestion and poor wayfinding reduce affective satisfaction and increase cognitive load, especially during peak hours. While the museum excels in interpretive content delivery and digital facilitation, spatial management strategies such as zone-based routing, real-time flow monitoring, and adaptive wayfinding systems may be necessary to close this gap and deliver a consistently positive experience across all operational dimensions.

In light of the **visitor demographic—dominated by digitally literate Generation Z students—the results further underscore the need for museum environments to adopt hybrid engagement strategies that combine physical accessibility with immersive and interactive technologies. As noted in previous studies, satisfaction is increasingly tied to personalized, participatory, and emotionally engaging experiences, often mediated by AR/VR technologies, AI-driven guides, and data-informed personalization systems (Rodrigues et al., 2023; Shi, 2025; Zhang & Kim, 2025). Therefore, the museum's current digital strengths provide a foundation for further enhancing experiential quality, but must be balanced with physical space improvements and responsive staff interaction to meet the expectations of a young, experience-oriented audience fully. Finally, the model's explanatory power ($R^2 = 0.666$) indicates that visitor management is a key, but not exclusive, predictor of satisfaction. The remaining variance suggests that other factors—such as exhibiting novelty, cultural relevance, emotional resonance, and social interaction—also contribute meaningfully to the visitor experience (He et al., 2024; Yang et al., 2023). Future strategies should therefore adopt a more integrated view of visitor satisfaction, blending service excellence, design innovation, participatory learning, and cultural storytelling to deliver not just operationally smooth visits, but also memorable and meaningful engagements that support visitor loyalty, advocacy, and repeat visitation.

Theoretical Implications

This study offers meaningful theoretical contributions to the evolving discourse on visitor experience management within cultural and educational tourism. It empirically substantiates the proposition that visitor

management is not merely an operational function, but a critical construct within the broader theory of perceived service quality and experiential satisfaction. The strong positive correlation between visitor management performance and visitor satisfaction reinforces prior theoretical assertions that managerial systems and environmental design directly shape visitors' affective and behavioral responses. By integrating constructs from SERVQUAL (Parasuraman et al., 1988) and experience economy theories, the findings validate the idea that managerial decisions—spanning spatial layout to digital infrastructure—mediate perceived value, emotional engagement, and revisit intention. This extends theoretical models that previously emphasized content and exhibit design by bringing operational design and service flow into the center of experience evaluation frameworks.

Moreover, the study contributes to the contextual expansion of visitor management theory by situating its analysis within an educational museum in a developing country setting. Existing literature has primarily focused on institutions in mature tourism markets, where resource availability and visitor expectations differ significantly. By applying the visitor management framework in the Indonesian context—characterized by high volumes of student visitors, constrained infrastructure, and evolving digital integration—the study broadens the theoretical applicability of visitor experience models to underrepresented geographies. It highlights that even in resource-limited environments, strategic control of access, interpretation, and visitor flow can generate high satisfaction and loyalty. As such, the findings invite further theoretical inquiry into how cultural, technological, and demographic factors mediate the relationship between visitor management and satisfaction, especially in the Global South, where museums serve both pedagogical and socio-cultural functions.

Practical Implications

From a managerial perspective, several actions can be derived from these findings: 1) Enhance Access Management: Redesign visitor circulation routes, increase signage visibility, and optimize entry and exit systems to ensure smoother flow and inclusivity; 2) Integrate Hybrid Management Systems: Combine digital ticketing and information systems with human assistance to accommodate visitors with varying levels of digital literacy; 3) Prioritize Inclusive Design: Ensure facilities are accessible for all visitor groups, including children, seniors, and people with disabilities, to promote equitable experiences; 4) Develop Continuous Monitoring: Implement visitor feedback mechanisms and digital analytics to track satisfaction trends and identify operational bottlenecks in real time; and 5) Strengthen Interpretive Experience: Maintain explicit, engaging, and multilingual interpretive materials to enhance learning outcomes and international visitor appeal. By adopting these strategies, museums can elevate both visitor satisfaction and operational efficiency while contributing to broader goals of sustainable and inclusive tourism.

CONCLUSION

This study analyzed the implementation of visitor management and its influence on visitor satisfaction at the Museum Geologi in Bandung. Using quantitative methods and simple linear regression, the study revealed that visitor management significantly affects visitor satisfaction, with an explanatory power of 66.6%. Both variables were rated highly by respondents, demonstrating the museum's effectiveness in managing visitor experience through digital systems, spatial organization, and facility arrangement. The strongest dimension of visitor management was the placement of interpretation facilities and services, indicating that visitors value clarity, accessibility, and the quality of information provided. Conversely, the weakest dimension, access management, highlights the need to improve directional flow and ease of movement. On the satisfaction side, visitors expressed strong willingness to revisit and recommend the museum, confirming positive emotional and behavioral outcomes. The results affirm that effective visitor management enhances satisfaction by improving convenience, engagement, and overall experience. Well-managed access, efficient digital systems, and clear spatial design not only foster satisfaction but also strengthen visitor loyalty and sustainable museum performance.

Limitations and Future Research

This study was limited to a single museum and relied on cross-sectional data, which may restrict the generalizability of findings. Future research could apply comparative or longitudinal designs across different types of museums or heritage sites to capture temporal variations in visitor behavior. Integrating qualitative approaches, such as interviews or observation, would also enrich understanding of how specific management strategies shape visitors' emotions and learning experiences.

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