

Evaluating Heritage Tourism Management at Istana Maimun: Educational Value and Memorable Tourism Experience

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Abstract

Rapid post-pandemic visitor growth has intensified the management challenges faced by urban heritage destinations, particularly in balancing conservation, educational functions, and visitor experience. This study evaluates heritage tourism management at Istana Maimun, Medan, by examining its management quality, educational value, and memorable tourism experience. A qualitative descriptive-evaluative design was employed using direct observation, documentation, and semi-structured interviews with 13 purposively selected informants comprising destination managers, a tour guide, and local and out-of-city visitors. Data were analysed using the interactive model of Miles, Huberman, and Saldaña through data condensation, data display, and conclusion drawing and verification. The findings indicate that Istana Maimun operates through a multi-actor management arrangement with relatively functional governance, human resources, and institutional coordination, although physical carrying capacity remains a major constraint during peak visitation. Educational value is delivered primarily through architectural authenticity and adaptive oral interpretation, whereas QR codes, augmented reality, and virtual-tour features remain underutilised because of limited visitor orientation, accessibility issues, and outdated content. Analysis across the seven dimensions of memorable tourism experience shows stronger performance in hedonism, local culture, knowledge, and meaningfulness, while involvement remains comparatively weak because visitor activities are predominantly observational. The study proposes an integrated evaluative perspective suggesting that management conditions shape both educational delivery and memorable visitor experiences. The findings highlight the importance of combining carrying-capacity management, adaptive heritage interpretation, and participatory visitor programming in the management of rapidly growing urban heritage destinations.

Keywords: *Heritage Tourism Management; Heritage Interpretation; Educational Value; Memorable Tourism Experience; Urban Heritage Destination.*

To Cite This Paper:

Reni Hamzah, Dewi Shinta Wulandari Lubis. (2026). Evaluating Heritage Tourism Management at Istana Maimun: Educational Value and Memorable Tourism Experience. *Journal of Tourism Sustainability*, 6(2), 10.35313/jtospolban.v6i2.221.

INTRODUCTION

Heritage tourism has increasingly shifted from passive sightseeing toward experience-based encounters in which visitors expect not only access to historical places, but also meaningful engagement with the cultural narratives embedded within them. This shift has changed the role of heritage-destination management. Management is no longer limited to maintaining physical assets and regulating visitor access; it must also facilitate interpretation, learning, experiential

quality, and long-term cultural sustainability. Previous studies have consequently highlighted the importance of destination governance, interpretation systems, visitor-oriented facilities, and community or institutional participation in sustaining heritage attractions (Damayanti & Puspitasari, 2024; Sinaga et al., 2024; Azizah et al., 2024; Cornelius & Sari, 2024). However, researchers often examine these dimensions separately, leaving limited understanding of how management conditions simultaneously shape educational value and memorable visitor experiences in rapidly changing heritage destinations.

This issue is particularly relevant to Istana Maimun, one of the most prominent historical attractions in Medan, North Sumatra. Built in 1888, the palace represents a distinctive architectural synthesis of Malay, Arabic, European, and Indian influences and remains an important representation of Deli Sultanate heritage (Usrah & Habib, 2023; Rajagukguk et al., 2026). Its role as both a cultural monument and a tourism attraction places significant demands on management, particularly as visitation increases. Primary data obtained in this study indicate that visitor numbers increased from 185,810 in 2024 to 975,044 in 2025. This sharp increase raises an important management question: whether the destination's physical capacity, interpretation mechanisms, human resources, and visitor-management practices have kept pace. The case therefore provides a useful context for examining the tensions between growing tourism demand, heritage conservation, educational functions, and visitor-experience quality.

Existing studies on Istana Maimun have provided important but fragmented insights. Manurung and Rismawati (2024) examined destination image and visitation decisions, while Lubis et al. (2025) emphasized the palace as a representation of Malay cultural identity. Other studies have focused on economic potential and the introduction of digital interpretation technologies, including QR-code-based media (Rahmadi & Sirnip, 2024; Mardiah et al., 2025). These studies demonstrate that Istana Maimun has been examined from marketing, cultural, economic, and technological perspectives. Nevertheless, they provide limited evaluation of how the destination is managed as an integrated heritage-tourism system. In particular, analysis remains insufficient on how governance, physical infrastructure, interpretive media, human resources, and institutional coordination collectively shape the destination's capacity to deliver both educational and experiential functions.

A further theoretical issue concerns the relationship between heritage management and visitor experience. Heritage-management approaches tend to emphasize governance, conservation, institutional arrangements, and operational capacity, whereas educational-tourism studies emphasize knowledge transmission and interpretation. In parallel, research on memorable tourism experiences focuses on visitors' cognitive, emotional, and behavioural responses. These perspectives are conceptually related but are rarely integrated into a single evaluative structure. This separation is particularly problematic in heritage destinations, where managerial decisions may directly condition the quality of interpretation, visitor learning, and experiential engagement. For example, inadequate carrying capacity can reduce opportunities for effective guiding, while poorly integrated digital media can limit visitor access to historical information. Conversely, effective interpretation may strengthen knowledge, meaningfulness, and cultural connection even where other experiential dimensions remain weak.

The gap is therefore not simply the absence of another case study of Istana Maimun, but the lack of an integrated explanation of how management quality, educational value, and memorable tourism experience interact within an urban heritage destination. The present study addresses this gap by bringing together three analytical perspectives. First, the study evaluates heritage destination management across five dimensions: policy and governance, physical infrastructure, interpretive media, human resources, and institutional coordination. Second, it assesses educational value through the availability and relevance of historical content, guide competence, interpretive-media effectiveness, and visitor engagement. Third, it examines visitor experience through seven dimensions of memorable tourism experience: hedonism, novelty,

local culture, refreshment, meaningfulness, involvement, and knowledge. Together, these perspectives provide a more integrated basis for evaluating Istana Maimun's functioning as both a heritage attraction and an educational tourism space.

Accordingly, this study aims to evaluate heritage tourism management at Istana Maimun and examine how existing management conditions relate to the delivery of educational value and the formation of memorable tourism experiences. Three research questions guide the study: (RQ1) How is heritage tourism at Istana Maimun currently managed when evaluated across recognized destination-management dimensions? (RQ2) What forms of educational value are delivered to visitors, and through which interpretive mechanisms? (RQ3) How do visitors experience Istana Maimun across the seven dimensions of memorable tourism experience? Rather than assuming causal relationships, the study adopts an evaluative perspective to identify patterns of alignment and tension among management practices, educational delivery, and visitor experience.

The study contributes in three ways. Empirically, it evaluates Istana Maimun during a period of rapid post-pandemic visitor growth. Conceptually, it connects heritage destination management, educational value, and memorable tourism experience within a single evaluative framework. Practically, it identifies areas in which carrying-capacity management, heritage interpretation, digital media, and participatory visitor activities can be strengthened. In doing so, the study positions heritage tourism management not merely as an operational function, but as an enabling condition for educational and memorable visitor experiences in urban heritage destinations.

LITERATURE REVIEW

Heritage Tourism Destination Management

Heritage tourism management involves more than administering historical attractions. It requires coordinated management of cultural assets, visitor flows, interpretation systems, institutional relationships, and tourism services while maintaining the destination's historical integrity. Within this perspective, destination management becomes an institutional mechanism through which conservation objectives are negotiated alongside visitor access, economic utilization, and experiential quality (Dewi, 2023; Cornelius & Sari, 2024). Two broad perspectives dominate discussions of heritage destination governance. Community-based approaches emphasize local participation and the involvement of tourism communities in preserving cultural resources and distributing tourism benefits (Dewi, 2023). Institutional approaches, by contrast, highlight formal governance structures, operational regulations, service standards, and organizational coordination as prerequisites for effective destination management (Cornelius & Sari, 2024). These approaches should not necessarily be treated as competing alternatives. Heritage destinations frequently involve multiple actors with different authorities, interests, and forms of cultural legitimacy. In such contexts, management quality depends on the capacity to integrate formal institutional structures with meaningful stakeholder participation. Recent tourism governance research further suggests that effective destination governance depends not merely on stakeholder participation but on the capacity to coordinate multiple institutional arrangements, interests, and sustainability objectives through meta-governance mechanisms (Becken et al., 2024; Lindström, 2024).

The Istana Maimun case illustrates this institutional complexity. Management involves the Sultan Ma'moen Al Rasyid Foundation, the Deli Sultanate family, government institutions, tourism actors, and visitor-facing personnel. Consequently, assessing management performance requires attention not only to organizational structure but also to the operational relationships among these actors. Based on Cornelius and Sari (2024), five dimensions are particularly relevant: policy and governance, physical infrastructure, interpretive media, human resources, and institutional coordination. These dimensions constitute the principal management evaluation framework adopted in this study.

A key tension in heritage management concerns the relationship between conservation and commercial use. Garrod and Fyall (2000) caution that increasing commercial pressures may undermine heritage authenticity when visitor numbers and revenue considerations outweigh conservation objectives. Conversely, Leask (2010) argues that visitor revenue and professional attraction management can provide essential resources for conservation and institutional sustainability. The managerial issue is therefore not whether heritage destinations should accommodate tourism, but how to manage tourism demand without eroding the cultural and physical resources that produce the destination's value.

This tension becomes particularly significant when visitation increases rapidly. Carrying capacity provides an important analytical lens for evaluating such conditions. Physical carrying capacity concerns the ability of the destination's spatial and infrastructural resources to accommodate visitors without deterioration, whereas social carrying capacity relates to the level of visitor density beyond which perceived experience quality begins to decline. Managerial carrying capacity further concerns the institutional ability to organize visitor flows, facilities, staffing, and services effectively (Atakelang, 2025; Kinanthi et al., 2024). These dimensions suggest that visitor growth should not automatically be interpreted as evidence of successful destination management. Growth may simultaneously generate economic opportunities and reveal underlying managerial vulnerabilities. Accordingly, this study evaluates heritage destination management as a multidimensional condition rather than a single organizational attribute. Effective management should demonstrate not only functional governance but also sufficient infrastructure, accessible interpretation, capable human resources, and institutional coordination that can adapt to changing levels of visitor demand.

Educational Value and Heritage Interpretation

Education is a fundamental function of heritage tourism because historical destinations let visitors encounter cultural narratives, material heritage, and collective memory directly. Educational value can therefore be understood as the extent to which a tourism experience facilitates the acquisition of historical knowledge, cultural understanding, and a broader appreciation of a heritage site's significance (Mardiah et al., 2025; Spillane, 1994). However, educational value does not arise automatically from the presence of historical buildings or artefacts. The educational potential of heritage depends substantially on the mechanisms through which historical meanings are interpreted and communicated. Experiential learning perspectives suggest that visitors develop a stronger understanding when they actively engage in encounters that connect information with direct experience (Ulpa & Ramadani, 2025). Heritage interpretation therefore bridges the physical existence of cultural resources and the meanings visitors construct.

Different perspectives emphasize different mechanisms of heritage learning. Rahmat (2021) places substantial emphasis on physical authenticity, suggesting that preserved buildings and artefacts constitute educational resources in themselves. By contrast, Mardiah et al. (2025) and Rahmadi and Sirnip (2024) emphasize digital technologies such as QR codes, augmented reality, and virtual tours as mechanisms that extend interpretation beyond conventional static information. A third perspective stresses culturally immersive activities, arguing that direct engagement with traditions and cultural practices may provide richer educational encounters than passive observation alone (Mutaqin & Harofah, 2023). These perspectives should be viewed as complementary rather than mutually exclusive. Physical authenticity provides the substantive heritage resource, interpretation provides meaning, and participatory or digital mechanisms can deepen visitor engagement. The effectiveness of each mechanism nevertheless depends on how it is integrated into the overall visitor journey. Recent international evidence further indicates that heritage interpretation should be understood not simply as information delivery, but as a mechanism through which different forms of interpretive content generate distinct cognitive and

affective responses. Ruan et al. (2024), for example, demonstrate that knowledge-based and affection-based heritage interpretation operate through different psychological mechanisms in shaping tourists' willingness to support cultural inheritance. This suggests that interpretation effectiveness depends not only on information availability, but also on how heritage narratives are framed and communicated.

This point is particularly important for digital interpretation. Technology availability should not be equated with technology effectiveness. Moscardo's (1996) mindful visitor perspective suggests that interpretive resources become meaningful only when visitors are sufficiently oriented, stimulated, and encouraged to engage with them. More recent evidence supports this distinction. Huang et al. (2022) show that visitor responses to tourism interpretation vary according to both interpretive content and media format, indicating that interpretation effectiveness depends on communication design rather than media provision alone. A QR code, augmented-reality marker, or virtual-tour feature may therefore have little educational effect when visitors are unaware of its existence, cannot access it conveniently, or encounter content that is no longer current. Digitalization should consequently be evaluated in terms of actual visitor engagement rather than technological presence alone.

For analytical purposes, this study evaluates educational value through five related indicators: the availability and accuracy of historical information, the effectiveness of interpretive media, the relevance of content, active visitor engagement, and the extent to which visitors develop historical and cultural understanding. Guide competence is particularly important because tour guides serve as frontline interpreters who can adapt historical narratives to different audiences (Pabeta et al., 2025; Silalahi, 2024). Educational value is thus conceptualized not as a static property of Istana Maimun, but as an outcome of interactions among heritage resources, interpretive mechanisms, management practices, and visitor participation.

Memorable Tourism Experience in Heritage Destinations

Tourist experience encompasses the cognitive, affective, and behavioural responses generated through interaction with destination environments, services, people, and activities (Prakoso et al., 2020). Contemporary tourism research increasingly emphasizes not merely visitor satisfaction but how memorable, personally meaningful, and enduringly impactful experiences become. The Memorable Tourism Experience (MTE) framework provides a useful basis for evaluating these responses. In this study, MTE comprises seven dimensions: hedonism, novelty, local culture, refreshment, meaningfulness, involvement, and knowledge (Anggraeni et al., 2022). These dimensions capture different aspects of the visitor encounter, ranging from enjoyment and experiential novelty to cultural connection, participation, and learning. Recent international research further supports the context-sensitive nature of memorable experiences in cultural heritage tourism. Seyfi, et al. (2025) demonstrate that the configuration of cultural heritage tourism landscapes is closely associated with the formation of memorable tourism experiences, reinforcing the argument that MTE dimensions should be interpreted in relation to the cultural and spatial characteristics of heritage destinations rather than as universally uniform outcomes.

MTE is particularly applicable to heritage destinations because heritage experiences combine emotional, cultural, and cognitive components. The local culture dimension reflects visitors' encounters with the destination's cultural identity, while meaningfulness captures the personal significance that may emerge from engaging with history and collective memory. Knowledge directly represents the educational dimension of the visit, whereas involvement distinguishes participatory encounters from passive observation. Hedonism, novelty, and refreshment further capture the experience's emotional and restorative qualities. Previous applications of MTE suggest that the relative importance of these dimensions may vary according to destination characteristics. Anggraeni et al. (2022) demonstrated the relevance of MTE in an Indonesian tourism context, while Dianty et al. (2021) identified meaningfulness and novelty as important

dimensions associated with visitor behavioural responses. Sariyowan and Ardiansyah (2025) similarly indicate that cultural-emotional engagement and knowledge acquisition can play substantial roles in shaping tourism experiences.

However, applying MTE to historical destinations also raises a conceptual question. Heritage attractions may possess high cultural and educational value while providing limited opportunities for direct participation. Visitors may admire architecture, acquire historical knowledge, and experience cultural meaning without becoming actively involved in cultural activities. A destination may therefore perform strongly on local culture and knowledge yet weakly on involvement or novelty. Examining the full dimensional profile is therefore more informative than treating memorable experience as a single, undifferentiated outcome. This study therefore adopts MTE as an evaluative framework rather than assuming that all dimensions must be equally strong. The purpose is to identify which experiential dimensions Istana Maimun's current management and interpretation practices support most effectively and where significant experiential gaps remain.

Integrating Management Quality, Educational Value, and Memorable Tourism Experience

Despite their conceptual proximity, destination management, educational value, and memorable tourism experience are commonly examined as separate areas of tourism research. Heritage-management studies typically emphasize governance, conservation, infrastructure, and institutional arrangements. Educational tourism research concentrates on interpretation and knowledge acquisition, whereas MTE research focuses predominantly on visitor responses. This disciplinary separation leaves an important analytical gap because the three domains are interconnected within the actual functioning of heritage destinations. Management conditions can shape educational delivery by determining guide availability, the quality of interpretive infrastructure, information accessibility, and the effectiveness of visitor-flow management. Educational interpretation may in turn contribute to experiential dimensions such as knowledge, meaningfulness, local-culture engagement, and novelty. At the same time, management weaknesses—for example, overcrowding, insufficient facilities, or inadequate guide-to-visitor ratios—may constrain both learning opportunities and overall experience quality.

Accordingly, this study proposes an integrated evaluative framework consisting of three interconnected domains: Destination Management Quality → Educational Value → Memorable Tourism Experience. The study assesses destination management quality through five dimensions: policy and governance, physical infrastructure, interpretive media, human resources, and institutional coordination. It examines educational value through historical information, interpretive effectiveness, content relevance, visitor engagement, and knowledge acquisition. The framework analyzes memorable tourism experience through the seven MTE dimensions. The framework's directional structure should not be interpreted as a statistically tested causal model. Rather, it serves as a heuristic evaluative framework for examining how management conditions relate to educational delivery and how both are reflected in visitors' reported experiences. This distinction matters because the qualitative research design supports interpretive examination of relationships and mechanisms rather than causal estimation.

Through this integration, the study moves beyond evaluating whether individual management components are present. It examines whether those components function collectively in ways that support the educational and experiential roles expected of an urban heritage destination.

METHODS

Research Design

This study employed a qualitative descriptive-evaluative design to examine heritage tourism management at Istana Maimun, with particular attention to management quality, educational value, and memorable tourism experience. A qualitative approach was considered appropriate because the study focused on contextual processes, managerial practices, interpretive mechanisms, and visitor perceptions that cannot be adequately understood through numerical indicators alone. The evaluative orientation assessed existing practices against theoretically derived dimensions rather than merely describing the destination.

The study did not aim to statistically test causal relationships among destination management quality, educational value, and memorable tourism experience. Instead, these domains served as an integrated analytical framework to examine patterns, relationships, strengths, and weaknesses in the heritage destination's operation. This methodological positioning aligns with the research's interpretive character and avoids attributing causal effects beyond what qualitative evidence can support.

Research Site and Study Period

The research was conducted at Istana Maimun, located in Medan, North Sumatra. The site was selected because it is a prominent urban heritage destination that combines historical, cultural, educational, and tourism functions. It also offers a relevant case for evaluating destination management under rapidly increasing visitation. The researchers conducted fieldwork from March to July 2026. The research period included preliminary topic identification, literature review, field observation, interviews, document collection, qualitative analysis, and manuscript preparation.

Informant Selection and Sampling

The researchers selected informants using purposive sampling based on their direct knowledge of, involvement in, or experience with tourism management and visitation at Istana Maimun. Thirteen informants participated in the study: one Chairperson of the Sultan Ma'moen Al Rasyid Foundation, one Operational Manager of Istana Maimun, one tour guide, six local tourists, and four out-of-city tourists, covering managerial, operational, interpretive, and visitor perspectives. Management representatives provided information regarding governance, infrastructure, institutional arrangements, visitor management, and operational practices. The tour guide provided evidence on heritage interpretation and educational delivery, while tourists provided experiential accounts of learning, cultural engagement, satisfaction, and memorable tourism experiences.

Government and community-organization representatives were not included as primary informants because preliminary field scoping indicated that operational decision-making was concentrated primarily within the Foundation and the Deli Sultanate family. Meanwhile, the municipal tourism authority played a more regulatory and promotional role. We acknowledge this limitation because the absence of these stakeholders restricts the breadth of governance perspectives represented in the data. Informant recruitment continued until thematic saturation. By the eleventh interview, no substantially new themes or contradictory patterns were emerging across the principal analytical domains. We conducted two additional interviews to confirm this saturation.

Evaluation Framework

To strengthen analytical consistency, we established an evaluation framework before full data analysis. The framework translated the three principal analytical domains into specific dimensions and indicators. We evaluated destination management quality through five dimensions: policy

and governance, physical infrastructure, interpretive media, human resources, and institutional coordination. Policy and governance covered operational regulation, oversight mechanisms, and pricing arrangements. Physical infrastructure included carrying capacity, facility adequacy, and accessibility. Interpretive media covered tour guiding, information boards, QR codes, augmented reality, virtual-tour features, and content currency. Human resources focused on guide competence, narrative adaptation, and staffing adequacy. Institutional coordination examined collaboration and coordination among destination actors.

Educational value was evaluated through the availability and accuracy of historical information, content relevance, guide competence, interpretive-media effectiveness, visitor engagement, and reported knowledge acquisition. Memorable tourism experience was analyzed across seven dimensions: hedonism, novelty, local culture, refreshment, meaningfulness, involvement, and knowledge. The framework functioned as an analytical guide rather than a quantitative measurement instrument. Evaluative terms such as strong, adequate, mixed, moderate, and low were assigned through interpretive comparison between empirical evidence and the framework's conceptual indicators. These assessments therefore represent qualitative judgements derived from triangulated evidence rather than numerical scores.

Data Collection

Data were collected through three complementary techniques: direct observation, semi-structured interviews, and documentation. The team conducted direct observation during six site visits between April and June 2026. We used a structured observation guide to examine the physical condition of facilities, visitor-density patterns, circulation and congestion, use of interpretive media, visitor interaction with guides, visitor behaviour, and the visibility and accessibility of QR-code and augmented-reality features.

We conducted semi-structured interviews individually with all 13 informants. Interviews lasted between approximately 45 minutes and 1 hour 21 minutes. The interview protocol was organized around three principal domains: destination management and governance, educational value and interpretation, and visitor experiences related to the seven MTE dimensions. The semi-structured format allowed comparable topics to be discussed across informants while permitting additional probing when relevant themes emerged. Documentation complemented interview and observational evidence. Documentary materials included visitor statistics, management records available to the researchers, relevant destination information, and field photographs. Using multiple forms of evidence was intended to reduce dependence on any single source and strengthen interpretive credibility.

Data Analysis

Data analysis followed the interactive model of Miles, Huberman, and Saldaña (2014), consisting of data condensation, data display, and conclusion drawing and verification. Analysis proceeded concurrently with data collection so that emerging themes could inform subsequent interviews and observations. In the first stage, the team reviewed and coded interview transcripts, observation notes, and documentary evidence. Initial coding identified statements and observations relevant to destination management, educational value, interpretation practices, and visitor experience. Focused coding then consolidated related codes into categories aligned with the evaluation framework.

In the second stage, we organized coded evidence into analytical matrices. We developed separate matrices for management dimensions, educational-value indicators, and the seven MTE dimensions. This procedure enabled comparison across informant groups and helped identify convergence, divergence, and recurring patterns. Both authors participated in coding. The authors discussed coding discrepancies until they reached agreement. Rather than calculating formal inter-coder reliability coefficients, the authors strengthened consistency through

independent coding, comparing interpretations, and negotiating agreement. This approach suited the study's interpretive qualitative orientation. In the final analytical stage, the team repeatedly checked provisional interpretations against interview transcripts, field observations, documentary evidence, and the conceptual criteria established in the evaluation framework. The team paid particular attention to negative or contradictory evidence to avoid presenting an artificially uniform interpretation.

Analytical Logic for Evaluation

To improve transparency in qualitative evaluation, we assigned assessment categories based on the convergence of evidence across sources. A dimension was interpreted as relatively strong or adequate when consistent positive evidence appeared across relevant informants and observational data with no major structural deficiency identified. A mixed assessment was used when evidence showed both functional and problematic characteristics. Moderate or below-potential assessments reflected partial fulfilment accompanied by identifiable limitations, while low assessments were reserved for dimensions in which empirical evidence consistently indicated limited realization. These categories were therefore not treated as fixed quantitative thresholds. They facilitated systematic qualitative comparison across analytical dimensions and made explicit the reasoning behind the evaluative judgements presented in the results.

Trustworthiness

Trustworthiness was addressed through credibility, dependability, confirmability, and transferability. Credibility was strengthened through source triangulation by comparing accounts from management representatives, the tour guide, local tourists, and out-of-city tourists. Method triangulation was also employed by comparing interview evidence with direct observation and documentary materials. Dependability was supported through an audit trail documenting coding decisions, category development, and changes in interpretation during analysis. Confirmability was strengthened by requiring both researchers to record their initial analytical assumptions and to discuss areas where interpretation differed. Transferability is deliberately limited. This study focuses on a single urban heritage destination and does not claim statistical generalisability. However, the analytical framework and identified mechanisms may provide conceptual relevance for comparable heritage destinations facing similar challenges involving visitor growth, interpretation, infrastructure, and experiential quality.

Ethical Considerations

All informants were informed of the study's purpose before participating. Participation was voluntary, and informants were informed of their right to withdraw at any stage. Interview data were used solely for academic purposes. When a participant was identified by name or official position, the researcher obtained explicit consent to attribute them. The study followed the ethical guidelines of Sekolah Tinggi Ilmu Manajemen Sukma Medan.

RESULTS AND DISCUSSION

Visitor Growth as a Management Pressure

Istana Maimun combines the functions of a historical monument, a representation of Deli Malay cultural identity, and an urban tourism attraction. Its architectural character—combining Malay, Islamic, European, and other design influences—provides much of the cultural and interpretive substance visitors encounter. However, this setting's significance is accompanied by a rapidly changing tourism context. Rather than treating increasing visitation as a simple indicator of destination success, this study treats visitor growth as a significant pressure on the site's managerial, educational, and experiential capacities. Available visitation records reveal

considerable fluctuation between the pre-pandemic and post-pandemic periods. Table 1 summarises the available evidence.

Table 1. Visitor Trends at Istana Maimun, 2019–2025

Period	Recorded Visitation	Context
2019, pre-pandemic	200–400 visitors/day; 1,900–2,500 during Eid al-Fitr	Regular and seasonal visitation
2020–2021	Approximately 200 visitors/day	Pandemic-related decline
2022	292,579 visitors/year	Early recovery
2023	Approximately 600 visitors/day during Eid al-Fitr	Seasonal recovery
2024	185,810 visitors/year	Annual management record
2025	975,044 visitors/year	Sharp increase from 2024

Source: Research data and documentary sources reported in the study; Kusnady (2022); Handayani (2023); management interview, 2026.

The most striking pattern is the increase from 185,810 recorded visitors in 2024 to 975,044 in 2025. This represents more than a fivefold increase in the reported annual number. However, interpret this change cautiously. This cross-sectional study cannot determine whether it reflects a sustained structural increase in demand, an exceptional year, differences in recording practices, or a combination of post-pandemic recovery and promotional effects. Consequently, the figures are treated here primarily as contextual evidence of intensified visitor pressure rather than as evidence of a stable long-term growth trajectory.

Informant accounts associated the increase with several developments, including greater exposure of the destination through digital and social media, promotional activity, and growing public awareness of newly introduced digital interpretation initiatives. These explanations are plausible within the field evidence, but the present research design cannot independently establish them as causal drivers. More importantly for this study, both interviews and observations indicate that increased visitation has exposed mismatches between visitor demand and the site's operational capacity.

This distinction is important. Destination growth is frequently interpreted through demand-side indicators such as increasing arrivals, visibility, or visitor expenditure. At heritage attractions, however, growth also produces supply-side pressures involving circulation, conservation, interpretation, staffing, and facility use. The Istana Maimun case illustrates this tension clearly: stronger demand has not been accompanied by equivalent expansion of all components of visitor-management capacity.

Heritage Tourism Management: An Unevenly Adaptive System

Istana Maimun's governance is characterized by a multi-actor arrangement rather than a single organizational structure. The Sultan Ma'moen Al Rasyid Foundation performs the principal management role, while the Deli Sultanate family retains an important position as asset owner and custodian of cultural values. The Medan City Tourism Office contributes mainly through regulatory and promotional functions, while tourism-related actors participate in operational activities. At first sight, this arrangement reflects the collaborative characteristics commonly associated with heritage destination governance. More detailed evaluation, however, reveals substantial variation across the five management dimensions used in this study. Table 2 presents the cross-dimensional synthesis.

Table 2. Evaluation of Heritage Tourism Management at Istana Maimun

Management Dimension	Main Empirical Evidence	Qualitative Assessment	Analytical Interpretation
Policy and governance	Zoning arrangements, timed visitor access, differentiated pricing, daily	Adequate	Operational mechanisms exist, although stronger formalization

Management Dimension	Main Empirical Evidence	Qualitative Assessment	Analytical Interpretation
	operational briefings, and periodic coordination		and regulatory codification would improve consistency
Physical infrastructure	Peak congestion, pressure on restrooms and parking, and mismatch between visitor volume and available facilities	Suboptimal	The clearest management constraint; infrastructure has not expanded proportionately with visitor pressure
Interpretive media	Information boards are actively used; brochures receive limited attention; QR, AR, and VR facilities exist but show limited utilization	Mixed	Technology availability has not translated automatically into interpretive effectiveness
Human resources	Guides demonstrate historical knowledge and adapt narratives to visitor characteristics; staffing becomes insufficient during peaks	Adequate but vulnerable	Competence is relatively strong, but service capacity is sensitive to fluctuations in visitor volume
Institutional coordination	Routine internal coordination and periodic interaction with other stakeholders	Adequate with limitations	Coordination mechanisms operate, but broader stakeholder participation remains underdeveloped

Source: Research data, 2026

The findings indicate that the management system cannot be categorized simply as either effective or ineffective. Instead, it displays what may be described as uneven adaptive capacity: some organizational mechanisms have adjusted reasonably well to tourism operations, whereas infrastructure, visitor-flow capacity, and interpretive systems have not adapted at the same rate.

Policy and Governance

At the operational level, the destination has developed several mechanisms to regulate day-to-day activities. These include spatial zoning, visitor-access arrangements, pricing practices, daily briefings, and periodic coordination among managers. Such mechanisms indicate that management is not entirely informal or reactive. They provide a basic organizational structure for managing routine tourism activity. Nevertheless, the evidence also suggests a distinction between operational functionality and institutional maturity. Existing procedures appear capable of supporting normal operations, but rapid visitor growth increases the need for more formalized protocols concerning visitor thresholds, crowd management, interpretive responsibilities, and inter-organizational coordination.

This finding provides a more nuanced reading of formal and community-oriented heritage management perspectives. Cornelius and Sari (2024) emphasize institutional structure and operational regulation, whereas Dewi (2023) highlights participatory forms of destination management. At Istana Maimun, the evidence suggests that neither perspective alone fully explains destination governance. Formal management arrangements matter, but their effectiveness depends on coordination with actors with cultural authority, regulatory responsibilities, and operational roles. This implies that heritage governance should be evaluated not merely by the number of participating actors, but by the degree to which responsibilities and decision-making mechanisms are integrated. Multi-actor participation, by itself, does not necessarily constitute collaborative governance.

Physical Infrastructure and Carrying-Capacity Pressure

Physical infrastructure emerged as the most significant weakness within the management system. Interviews and observations consistently identified congestion, limited parking, pressure on restroom facilities, insufficient rest areas, and staffing constraints during periods of high

visitation. The original field evidence further indicates that peak visitation may reach substantially higher levels than ordinary periods. These problems should not be interpreted merely as isolated deficiencies in visitor amenities. They indicate a broader capacity mismatch between demand growth and destination-management resources. As visitor density increases, spatial limitations affect not only physical comfort but also guides' ability to communicate effectively, visitors' opportunities to engage with interpretation, and the quality of movement through the heritage environment.

This finding reinforces the relevance of carrying capacity as a management concept. Physical capacity concerns the site's and its infrastructure's ability to accommodate visitation, while social capacity concerns the point at which density begins to impair visitor experience. Managerial capacity concerns the organization's ability to regulate these pressures through staffing, circulation, scheduling, and visitor-flow strategies (Atakelang, 2025; Kinanthi et al., 2024). Evidence from Istana Maimun suggests these dimensions are interdependent rather than separate management problems. Importantly, this study does not calculate a numerical carrying-capacity threshold. The available data are insufficient to establish a maximum permissible number of visitors. The finding should therefore be interpreted as evidence of carrying-capacity pressure, rather than proof that a scientifically established capacity threshold has been exceeded. This distinction is necessary to maintain consistency between the qualitative evidence and the claims made from it.

The analytical significance of this finding lies in its consequences beyond infrastructure. Congestion also affects the destination's educational and experiential functions. When guides must communicate with larger groups, visitors have limited time or space to engage with artefacts, and movement through interpretive areas becomes constrained; a management limitation becomes an educational and experiential limitation. This relationship becomes particularly important in the subsequent analysis of educational value and memorable tourism experience.

Interpretive Media: Availability Without Effective Integration

Istana Maimun provides several forms of interpretation, including tour guiding, information boards, brochures, QR codes, augmented-reality features, and virtual-tour technology. The coexistence of conventional and digital media could theoretically support different visitor preferences. Empirical evidence, however, shows considerable variation in their effectiveness. Information boards remain among the most visible and frequently accessed conventional interpretation tools, whereas brochures receive relatively limited visitor attention. Digital interpretation presents a different problem. QR codes, AR, and virtual-tour functions have been introduced, but their availability has not resulted in widespread visitor engagement.

This distinction between technology provision and technology utilization is theoretically important. Heritage digitalization is sometimes approached as though the presence of technology itself represents interpretive innovation. The present findings suggest instead that effectiveness depends on how technology is embedded within the visitor journey. Digital media that are poorly signposted, inconveniently positioned, insufficiently introduced by guides, or inadequately maintained may remain peripheral even when technically functional. The result is therefore better described as an interpretation-integration gap than simply a technology-adoption problem. The weakness lies not necessarily in the absence of digital infrastructure but in the failure to connect that infrastructure consistently with visitor orientation and interpretive practice. This interpretation aligns with Moscardo's (1996) mindful visitor perspective, which holds that interpretation is most effective when visitors are actively oriented and stimulated to engage with available information.

Human Resources: Competence Versus Capacity

Human resources present a contrasting pattern. Tour-guide competence was generally evaluated positively. Guides demonstrated knowledge of the history of the Deli Sultanate, palace architecture, and Malay cultural values and were reported to adjust the depth and style of narration according to visitor characteristics. This adaptive interpretation is an important strength because effective heritage communication requires more than factual accuracy. It requires translating historical content into narratives different audiences can understand and connect with, consistent with the role Pabeta et al. (2025) and Silalahi (2024) attribute to guides.

However, the evidence reveals an important distinction between human-resource quality and human-resource capacity. Individual guide competence may remain high, but the overall interpretive system becomes less effective when visitor numbers exceed what available guides can reasonably serve. Thus, the weakness is not principally one of guide capability, but of scalability. This finding again demonstrates why management dimensions should not be analyzed independently. Increased visitor volume creates staffing pressure; staffing pressure reduces interpretive reach; reduced interpretive reach can weaken educational value and visitor knowledge acquisition. Human-resource vulnerability therefore represents one mechanism through which demand pressure can influence the broader heritage experience.

Institutional Coordination

The destination maintains internal coordination through regular management communication and periodic interaction with the Deli Sultanate family and government institutions. These arrangements appear sufficient for many routine operational needs. However, the evidence available to this study provides less support for intensive participation by government and community organizations in core operational decision-making. Interpret the assessment cautiously because the study did not include government and community representatives among the 13 primary informants. The study therefore cannot determine comprehensively how these actors perceive their own roles or the effectiveness of existing coordination arrangements.

Within this limitation, the evidence suggests that institutional coordination is functional but relatively manager-centred. This is important because collaborative governance should involve more than consultation or occasional cooperation. It requires mechanisms for different actors to contribute to planning, implementation, monitoring, and problem-solving. For heritage destinations, such coordination becomes particularly important when management issues cross organizational boundaries. Parking, urban access, heritage conservation, promotion, visitor safety, and cultural interpretation may involve different authorities. Istana Maimun's long-term resilience therefore depends not simply on maintaining existing relationships, but on converting them into clearer, more systematic mechanisms for shared heritage management.

Management Pattern Emerging from the Findings

Taken together, the five dimensions reveal a distinctive pattern. Istana Maimun has a functioning institutional and interpretive foundation, but that system has not developed uniformly in response to changing visitor pressure. Governance arrangements and guide competence are relative strengths; infrastructure is the clearest weakness; and digital interpretation occupies an intermediate position, with technological resources present but incompletely integrated. The resulting management condition can be summarised as follows: Rapid visitor growth → increased spatial and operational pressure → infrastructure and staffing constraints → reduced interpretive capacity during peak periods → potential consequences for educational and experiential quality.

This sequence should be understood as an analytical interpretation of patterns identified in the qualitative evidence, rather than as a statistically tested causal pathway. The findings

therefore refine the conventional assumption that successful heritage management can be inferred from visitor growth or the availability of management structures. In the Istana Maimun case, the more critical issue is whether institutional, physical, human, and interpretive capacities evolve together. When adaptation is uneven, visitor growth may signal destination attractiveness while exposing weaknesses in the system that sustains it.

Educational Value and Heritage Interpretation: Strong Content, Uneven Delivery

The educational function of Istana Maimun is supported by three principal interpretation channels: oral historical guiding, conventional interpretive media, and digital technology-based interpretation. These channels differ substantially in their accessibility, depth, and capacity to engage visitors. The findings therefore suggest that educational value at the site is not determined simply by the availability of historical information, but by how effectively that information is translated into an interpretable and accessible visitor experience. Table 3 summarises the evaluation of educational value across the principal indicators used in this study.

Table 3. Educational Value and Heritage Interpretation Assessment

Indicator	Empirical Evidence	Assessment	Analytical Interpretation
Historical information availability and accuracy	Palace construction, Deli Sultanate history, architectural fusion, and Malay cultural values communicated primarily through guides	Strong	Substantive historical content is available and forms a solid educational foundation
Guide competence and narrative adaptation	Narratives adapted to visitor age, educational background, and place of origin	Adequate–Strong	Human interpretation is the principal mechanism translating heritage resources into visitor understanding
Conventional interpretive media	Information boards widely used; brochures receive limited attention; some peripheral spaces contain limited interpretive depth	Mixed–Adequate	Static interpretation supports learning but is unevenly distributed across the visitor route
Digital interpretation	QR codes, AR, and 360° virtual-tour features are available but show limited visitor use	Mixed–Weak	Technological provision has not translated into effective interpretation
Content relevance and currency	Oral narratives remain highly contextualised; some digital content has not been updated since 2024	Mixed	Cultural relevance remains strong, but digital-content maintenance weakens temporal relevance
Active visitor engagement	Dominant behaviour consists of viewing and photographing; only a minority engage with digital media	Below potential	Educational encounters remain predominantly receptive rather than participatory

Source: Research data, 2026

Oral Interpretation as the Educational Core

Oral historical guiding emerged as the most consistently utilised mechanism for educational delivery. Guide narratives include the construction history of Istana Maimun, the historical development of the Deli Sultanate, the palace's cross-cultural architectural characteristics, and the cultural values associated with Deli Malay identity. Importantly, guides do not appear to deliver an entirely standardised narrative. Guides adjust the depth and vocabulary of interpretation based on visitors' age, educational background, and familiarity with the cultural context. Children receive simpler explanations, academically oriented visitors may receive more detailed historical content, while out-of-city visitors are given greater contextualisation of Deli Malay culture. This adaptive practice suggests that the educational value of guiding lies not

simply in the amount of historical information communicated, but in the guide's ability to mediate between heritage content and visitor characteristics. Such mediation matters in historical tourism because the physical presence of buildings and artefacts does not guarantee visitor understanding. Interpretation becomes the mechanism through which architecture shifts from an object of visual consumption to a culturally meaningful resource.

This finding aligns with Pabeta et al. (2025) and Silalahi (2024), who position guide competence as a critical element of heritage interpretation. However, the present study extends this argument by showing that adaptive narration is particularly important at destinations serving heterogeneous audiences. The educational function of a guide is therefore not adequately captured by factual competence alone. Interpretive competence also requires audience recognition and narrative flexibility. This distinction matters because Istana Maimun receives both local visitors with varying levels of prior cultural familiarity and visitors from outside the region who may encounter Deli Sultanate history for the first time. The same historical narrative may therefore generate different educational value depending on how it is framed.

Conventional Interpretation: Accessible but Spatially Uneven

Conventional interpretive media provide a second channel of educational delivery. Information boards were among the most frequently used non-personal interpretation tools, while brochures received considerably less visitor attention. The original evidence also indicates that some peripheral exhibition spaces contain relatively limited informational depth. This pattern suggests that interpretive effectiveness is partly shaped by how well information is integrated into the visitor route. Information visible at the point of encounter requires less effort than information in brochures or other materials that visitors must actively seek out and read separately.

The uneven distribution of interpretive depth also produces what may be termed an interpretive concentration effect. Educational content is relatively strong around prominent architectural elements and major historical focal points but becomes thinner in less prominent areas. As a result, the palace's educational potential is not fully distributed across the entire visitor journey. This observation matters because heritage interpretation should ideally turn the destination into a coherent narrative environment rather than a collection of isolated informative points. Peripheral rooms, transitional spaces, and less visually spectacular artefacts may contribute substantially to visitor learning when appropriately contextualised. The issue is therefore not simply whether interpretation is present, but whether it creates a sufficiently continuous narrative across the heritage space.

Digital Interpretation: Technology Presence Does Not Equal Interpretive Effectiveness

The most analytically significant educational finding concerns digital interpretation. Istana Maimun has introduced a 360° virtual tour, augmented reality, and QR-code-based interpretation through collaboration involving Universiti Utara Malaysia, Universitas Islam Sumatera Utara, and the University of Creative Arts. These technologies demonstrate an institutional willingness to expand interpretation beyond conventional guiding and static displays. However, their actual educational contribution remains considerably below their technological potential.

The field evidence identifies four specific barriers.

First, some QR codes are positioned in areas where visitor density makes scanning inconvenient. Their physical availability therefore does not necessarily translate into practical accessibility. Second, AR features are insufficiently incorporated into visitor orientation. Visitors are not systematically informed about these features at the beginning of the visit, and guides do not consistently integrate them into standard narration. Third, on-site directional signage explicitly encouraging visitors to interact with digital features is limited. Fourth, content updates

were discontinued in late 2024. By the April–June 2026 fieldwork period, some material had consequently remained unchanged for approximately 18 months. Together, these conditions indicate that the principal challenge is not a lack of technology, but the orchestration of digital interpretation.

This distinction provides an important conceptual insight. Digital heritage initiatives are frequently evaluated through technological provision: whether QR codes, AR, virtual tours, or related tools are available. Findings from Istana Maimun suggest this is an insufficient indicator. Digital interpretation only becomes educationally functional when four conditions converge: **Visibility → Accessibility → Visitor Orientation → Content Currency.**

Failure at any stage can interrupt the pathway from technology availability to meaningful visitor engagement. The findings therefore challenge a technologically deterministic assumption that introducing digital tools will automatically enhance educational accessibility. Mardiah et al. (2025) and Rahmadi and Sirnip (2024) highlight the potential of digital interpretation, but the present evidence indicates that technological potential depends strongly on operational integration.

Moscardo's (1996) mindful visitor framework provides a particularly useful explanation. Visitors are more likely to engage with interpretation when they are actively oriented toward available learning opportunities. At Istana Maimun, digital media appear to require stronger visitor priming: visitors need to know that the tools exist, understand why they are worth using, and encounter them at appropriate moments within the visit. The issue is consequently better characterised as an interpretive integration failure than as low visitor interest in technology.

Content Currency as an Educational Management Issue

The discontinuation of digital-content updates introduces another dimension that is often overlooked in heritage digitalisation: technological infrastructure requires ongoing editorial management. The educational value of digital interpretation depends not only on hardware functionality but also on the accuracy, relevance, and currency of its content. A functioning QR code containing outdated information remains technically operational but may no longer constitute effective interpretation. The observed discontinuation of updates since 2024 therefore represents a management issue rather than merely a technological one. This finding suggests that heritage digitalisation should be conceptualised as a continuous content-management process, not as a one-time technology project. Digital interpretation requires responsibility for content ownership, updating schedules, quality control, technical maintenance, and integration with changing visitor needs. In practical terms, the sustainability of digital heritage interpretation may therefore depend less on the initial sophistication of the technology than on whether the destination possesses institutional capacity to maintain it.

Dependence on Human Interpretation: Strength and Vulnerability

The effectiveness of oral interpretation creates a paradox. On the one hand, skilled guiding constitutes one of Istana Maimun's strongest educational assets. On the other hand, heavy dependence on guides creates a structural vulnerability when visitor numbers increase. The original field evidence indicates that guide-to-visitor ratios become less favourable during peak periods, potentially limiting the number of visitors who can receive sufficiently detailed interpretation. This creates what can be described as an **interpretive scalability problem**. A human-centred interpretation system can deliver highly adaptive and culturally rich narratives, but its capacity is inherently constrained by the number of available guides and the size of visitor groups. Digital and self-guided interpretation could theoretically complement this limitation; however, those systems currently underperform. Istana Maimun therefore exhibits a notable asymmetry: **strong human interpretation + weakly integrated digital interpretation = educational quality that is deep but limited in scalability.** This asymmetry is central to

understanding the destination's educational system. The managerial challenge is not to replace guides with technology. Rather, it is to construct a complementary interpretation ecosystem in which different media perform different functions. Guides can provide culturally nuanced and audience-responsive narratives; information panels can ensure baseline access to key knowledge; digital media can deepen self-directed exploration and provide interpretive capacity when guide access is limited. Such complementarity would reduce the current dependence on a single dominant interpretation channel.

From Knowledge Transmission to Visitor Engagement

Although historical information and guide competence are comparatively strong, visitor engagement remains below its potential. Observations indicate that dominant visitor activities still involve viewing architectural elements and artefacts, listening to explanations, and taking photographs. Engagement with QR codes and AR occurs only among a minority of visitors. This finding highlights a distinction between knowledge transmission and educational participation. Visitors may acquire information without actively constructing or applying that knowledge. Much of the current educational experience therefore follows a transmission-oriented model: heritage resource → guide/media → visitor, rather than a participatory model in which visitors interact, interpret, question, create, or perform cultural meanings.

The educational system should not consequently be characterised as ineffective. Visitors are exposed to meaningful historical and cultural information, and guide-mediated learning appears to function relatively well. Rather, the system is educationally substantive but experientially passive. This distinction connects directly with the MTE analysis. In particular, it provides a plausible interpretive explanation for why the knowledge dimension can perform relatively strongly while involvement remains weak.

An Emerging Interpretation Ecosystem

The educational findings collectively suggest that the three interpretation channels should not be evaluated independently. Oral guiding provides depth and adaptive contextualisation. Conventional media provide stable, accessible information. Digital interpretation offers potential scalability and interactivity but currently suffers from weaknesses in orientation, accessibility, and maintenance.

The relationship can be summarised as:

Authentic Heritage Resources

↓

Interpretation System

- Human interpretation: **high depth / limited scalability**
- Conventional media: **high accessibility / moderate interaction**
- Digital media: **high potential / currently low integration**

↓

Visitor Knowledge and Cultural Understanding

↓

Predominantly Passive Engagement

This configuration suggests that the key challenge at Istana Maimun is not an absence of educational resources but a lack of interpretive orchestration across available channels. The central finding is that educational value depends less on the number of interpretive technologies available than on management's capacity to connect heritage content, interpretive media, visitor orientation, and participation into a coherent learning experience. In this respect, Istana Maimun illustrates an important distinction for heritage-tourism management: heritage authenticity

creates educational potential, but interpretation determines how much of that potential becomes accessible to visitors.

Memorable Tourism Experience: A Dimensionally Uneven Heritage Experience

Visitors' memorable tourism experience at Istana Maimun is uneven across the seven MTE dimensions. Instead, the findings reveal a distinctive experiential profile in which architectural aesthetics, cultural identity, and historical learning are comparatively strong, while active participation remains limited. This uneven pattern matters because it shows that a heritage destination can generate memorable experiences without necessarily providing high levels of experiential involvement. Table 4 summarises the seven MTE dimensions identified in the study.

Table 4. Memorable Tourism Experience Profile at Istana Maimun

MTE Dimension	Main Empirical Evidence	Fulfilment Level	Analytical Interpretation
Hedonism	Visitors report visual enjoyment of the palace's distinctive architecture; overall satisfaction is commonly rated around 7–8/10	High	Aesthetic appreciation is a major experiential strength
Novelty	Out-of-city visitors experience greater newness; local visitors report more limited novelty due to prior familiarity	Mixed	Novelty is strongly segment-dependent
Local Culture	Guide narratives, royal artefacts, and palace symbolism connect visitors with Deli Malay heritage	High	Cultural identity is a core source of memorability
Refreshment	Outer areas provide a relatively relaxing atmosphere, while interior congestion reduces comfort during busy periods	Moderate	Management and density conditions constrain restorative experience
Meaningfulness	Local visitors experience cultural reinforcement; out-of-city visitors experience discovery and learning	Moderate–High	Meaningfulness emerges through different mechanisms across visitor segments
Involvement	Dominant activities are viewing, listening, and photographing; participatory cultural activities are limited	Low	Visitors remain primarily spectators rather than active participants
Knowledge	Visitors report learning about Deli Sultanate history, fusion architecture, and Malay cultural values	Moderate–High	Knowledge is strengthened particularly through oral interpretation

Source: Research data, 2026.

Hedonism: Aesthetic Pleasure as an Immediate Experiential Strength

Hedonism emerged as one of the most strongly fulfilled MTE dimensions. Visitors consistently responded positively to Istana Maimun's visual character, particularly its architectural composition, interior ornamentation, royal artefacts, and distinctive blend of cultural influences. Satisfaction ratings commonly fell within the 7–8 out of 10 range, indicating that visitors generally considered the experience enjoyable. The importance of hedonism in this context differs from the entertainment-oriented interpretation often associated with leisure attractions. At Istana Maimun, enjoyment comes primarily from consuming aesthetic heritage. Visitors derive pleasure from observing an architectural environment perceived as distinctive, photogenic, and historically significant.

This finding suggests that visual authenticity remains a powerful experiential resource. The destination does not necessarily require intensive entertainment programming to generate immediate positive affect. Its architectural character already provides a strong sensory and

emotional entry point into the visitor experience. However, aesthetic enjoyment alone does not guarantee deeper engagement. Visitors may appreciate and remember the palace visually while remaining relatively passive in their interaction with its cultural meanings. Hedonism should therefore be understood as a strong experiential foundation rather than a sufficient condition for a multidimensional memorable experience.

Novelty: A Segment-Dependent Experience

Novelty displayed the clearest variation between visitor groups. Out-of-city visitors were more likely to describe the palace, Deli Sultanate history, and Malay cultural context as new or surprising. Local visitors, by contrast, often had greater prior familiarity with the destination or its historical narratives, resulting in comparatively lower perceived newness. This pattern demonstrates that novelty is not simply an objective property of the destination. It emerges from the interaction between destination attributes and visitors' prior knowledge.

For out-of-city tourists, the visit may represent first exposure to the material heritage and historical narratives of the Deli Sultanate. For local visitors, novelty may depend more heavily on discovering overlooked architectural details, hearing unfamiliar narratives, or encountering new forms of interpretation. This implies that interpretation strategies should not assume a homogeneous audience. A single standard narrative may generate substantially different experiential value for visitors with different levels of familiarity. For repeat or local visitors, novelty may need to come from deeper storytelling, rotating interpretation themes, temporary exhibitions, or participatory programmes rather than the physical heritage resource alone. For first-time visitors, the destination itself may already provide sufficient novelty. This segment-dependent pattern supports the broader argument that MTE dimensions should be interpreted contextually rather than treated as fixed characteristics of an attraction.

Local Culture: The Core of Heritage Memorability

Local culture constitutes another strongly fulfilled dimension. Visitors encounter Deli Malay identity through architectural symbolism, guide narratives, royal artefacts, the Sultan's throne, and historical stories associated with the Deli Sultanate. The strength of this dimension reflects the site's intrinsic cultural authenticity. Istana Maimun is not a reconstructed thematic environment but a heritage place whose material setting remains directly associated with the cultural and political history being interpreted. However, the findings also show that cultural connection does not arise from material authenticity alone. Guides play an important role in translating buildings and artefacts into cultural meaning. A royal throne may function primarily as a visual attraction unless visitors understand its symbolic and historical significance. Local culture at Istana Maimun therefore emerges through the interaction between authentic material heritage and interpretive narration. This distinction matters for heritage tourism. Cultural authenticity may provide the basis of an experience, but interpretation determines whether visitors understand that authenticity as culturally meaningful rather than simply visually distinctive. The strong performance of local culture is therefore directly connected to the educational findings discussed previously. Effective human interpretation strengthens the destination's cultural memorability.

Refreshment: The Experiential Cost of Congestion

Refreshment was fulfilled only moderately. Visitors experienced the palace's exterior environment and some areas of the complex as relatively enjoyable and relaxing, while congestion inside the building reduced physical comfort and the quality of movement during crowded periods. This finding is particularly important because refreshment shows how management conditions directly shape **visitor experience**. Unlike local culture or knowledge, which depend primarily on heritage content and interpretation, refreshment is highly sensitive

to visitor density, circulation, rest areas, spatial comfort, and facility adequacy. Consequently, a destination may have exceptionally strong heritage resources yet still produce a weaker restorative experience if operational conditions become uncomfortable.

The result provides empirical support for the integrated evaluative perspective adopted in this study. Management quality and tourist experience are not independent domains. Congestion generated by high visitor pressure can translate directly into reduced experiential quality.

This does not establish statistical causality, but the convergence of interview and observational evidence provides a plausible qualitative mechanism: **visitor density** → **reduced spatial comfort** → **weaker refreshment experience**. The finding therefore reinforces the need to treat carrying-capacity management as an experiential issue, not merely an operational or conservation concern.

Meaningfulness: Cultural Reinforcement and Cultural Discovery

Meaningfulness was assessed as moderate to high but manifested differently between visitor segments. Local visitors frequently interpreted the visit in relation to regional identity, cultural familiarity, and historical connection. Out-of-city visitors more often described meaningfulness in terms of discovery and learning about a previously unfamiliar cultural heritage. This distinction reveals two pathways to meaningful heritage experience: **Cultural Reinforcement**—for visitors who already have some connection to the heritage context. **Cultural Discovery** — for visitors encountering that heritage from outside the cultural or geographical context. Both pathways can produce memorable experiences, but the underlying mechanisms differ.

For local visitors, meaningfulness can arise from recognising familiar cultural symbols and connecting personal or regional identity with historical narratives. For visitors from outside Medan, meaningfulness is more likely to emerge from increased understanding and appreciation of a culture previously known only superficially or not at all. This finding further strengthens the argument for audience-sensitive interpretation. Meaning is not located exclusively within the heritage object; it is co-produced through the relationship between the site, its narrative, and the visitor's prior cultural frame.

Involvement: The Most Significant Experiential Deficit

Involvement emerged as the weakest of the seven MTE dimensions. Visitor behaviour remains dominated by viewing, listening, and photographing, while opportunities for active participation in cultural activities are limited. This is perhaps the clearest experiential limitation the study identified. Istana Maimun currently provides a relatively strong **see-and-learn experience**, but a comparatively weak **do-and-experience dimension**. Visitors encounter heritage primarily as observers rather than participants. The absence of structured participatory programmes—such as culturally grounded workshops, interpretive demonstrations, or carefully designed interactive experiences—limits how far visitors can move from cultural observation to cultural engagement.

This finding aligns with Damayanti and Puspitasari (2024), who argue that heritage tourism can involve different levels of engagement, including seeing, learning, tasting, and experiencing. At Istana Maimun, the first two are substantially more developed than the latter forms of engagement. The low involvement score matters because it helps explain why the destination can be both educationally valuable and experientially passive. This weakness does not mean every heritage site should become an entertainment venue. Excessive experientialisation may trivialise cultural meaning or compromise authenticity. Rather, the managerial challenge is to develop **authentic participation**, where interactive experiences deepen rather than dilute cultural interpretation. Potential activities should therefore emerge from legitimate Deli Malay cultural narratives rather than from generic tourism entertainment.

Knowledge: Interpretation as a Driver of Cognitive Memorability

Knowledge was assessed as moderate to high. Visitors reported learning about the history of the Deli Sultanate, the palace's construction and architecture, and Deli Malay cultural values. The relatively strong knowledge outcomes reinforce the importance of heritage interpretation. Historical learning does not arise merely because visitors enter a historic building. It depends on the availability, accessibility, and clarity of information. In the present case, oral guiding appears to be the most important mechanism supporting knowledge acquisition. This again demonstrates the strength of human interpretation identified in the educational-value analysis. The relationship between knowledge and memorable experience is particularly important in heritage tourism because learning itself can become part of what makes an experience memorable. Visitors may remember not only what they saw but also what they understood.

However, the same structural vulnerability identified earlier remains relevant: when guide availability becomes insufficient during high visitation periods and digital interpretation remains underutilised, the ability to deliver consistent knowledge experiences across all visitors may be reduced. Thus, strong knowledge outcomes coexist with a potential scalability problem.

The MTE Hierarchy at Istana Maimun

Taken together, the seven dimensions reveal a clear hierarchy:

Strongest dimensions: Hedonism – Local Culture

Moderate-to-strong dimensions: Knowledge – Meaningfulness

Context-dependent dimension: Novelty

Moderate dimension: Refreshment

Weakest dimension: Involvement

This profile suggests that Istana Maimun currently performs most strongly as an **aesthetic-cultural-learning heritage destination** rather than as an intensely participatory experience. The experiential strength of the destination lies in three interrelated resources:

Architectural authenticity → aesthetic enjoyment

Cultural authenticity + interpretation → local cultural connection

Historical interpretation → knowledge acquisition

By contrast, the principal experiential weaknesses emerge where visitor experience depends more heavily on active management intervention:

Congestion and facility pressure → weaker refreshment

Limited participatory programming → weak involvement

Prior visitor familiarity → uneven novelty

The MTE profile therefore further supports the integrated framework developed in this study. Experiential outcomes do not arise exclusively from destination attributes. They reflect interactions among heritage resources, interpretation systems, visitor characteristics, and management conditions.

From Passive Memorability to Participatory Heritage Experience

One key finding is that a tourism experience can be highly memorable in some dimensions while remaining passive in others. At Istana Maimun, visitors may enjoy the architecture, connect with local culture, learn about history, and assign personal meaning to the visit without becoming actively involved in cultural practices. This indicates that memorability and participation should not be treated as synonymous. The findings therefore challenge an implicit assumption that stronger experience necessarily requires more activities. The issue is not the quantity of activities, but the quality and cultural relevance of visitor engagement.

The opportunity for Istana Maimun lies in moving selectively from **spectatorship** → **interpreted engagement** → **authentic participation**. Such a transition does not require replacing the existing heritage experience. The strong aesthetic, cultural, and educational core should remain central. Participatory elements should instead be layered onto this core in ways that reinforce the historical and cultural meanings already present. In this sense, the development challenge is not to make Istana Maimun more entertaining, but to make its heritage more accessible through experience.

Discussion

This study examined heritage tourism management at Istana Maimun by bringing together three domains often treated separately in tourism research: destination management, educational value, and memorable tourism experience. The findings reveal an important paradox. Istana Maimun has substantial cultural and architectural resources that can generate meaningful and memorable visits, yet its management system has not developed equally across all areas needed to translate those resources into consistently high-quality visitor experiences. Governance arrangements and human interpretation function relatively well, whereas infrastructure capacity, digital interpretation, and participatory opportunities remain less developed. These findings matter not because they show a causal sequence among management, education, and experience, but because they show how these domains intersect in the day-to-day operation of an urban heritage destination.

Heritage Value Alone Does Not Ensure Management Readiness

The first key finding concerns the destination's uneven adaptive capacity. The existing multi-actor arrangement provides a functioning basis for tourism operations, supported by routine coordination, operational arrangements, and culturally knowledgeable guides. However, rapid increases in visitation have strained physical facilities, visitor circulation, and guide capacity. This finding qualifies approaches that evaluate heritage-tourism success primarily through visitation growth or destination attractiveness. This result aligns with Cornelius and Sari (2024), who emphasise that heritage destination management requires institutional capacity beyond preserving cultural resources. It also supports Kinanthi et al. (2024) and Atakelang (2025), who highlight the importance of carrying-capacity considerations in managing heritage attractions. These findings extend these arguments by showing that capacity constraints can have consequences beyond infrastructure itself. Congestion may affect spatial comfort, guide accessibility, interpretive engagement, and ultimately the quality of the visitor encounter.

This is particularly relevant to Istana Maimun because its heritage significance both attracts visitors and constrains how much physical space can be modified. Management must therefore negotiate a structural tension between access and preservation, a longstanding issue in heritage tourism. Garrod and Fyall (2000) caution that increasing tourism use can threaten heritage integrity, whereas Leask (2010) argues that professionally managed visitor activity can generate resources necessary for conservation. The present study supports neither an anti-growth nor an unrestricted-growth position. Instead, it suggests that the critical issue is whether managerial capacity develops in proportion to visitor pressure. Importantly, the present evidence should not be interpreted as demonstrating that a formally calculated carrying-capacity threshold has been exceeded. This study did not measure such a threshold. Rather, the convergence of observations and informant accounts indicates carrying-capacity pressure, manifested in congestion and limited support facilities. This distinction matters because it frames carrying capacity as an area requiring formal managerial assessment rather than a numerical conclusion drawn from the current qualitative design.

Heritage Interpretation Is Central to Educational Value

A second major finding is that educational value arises primarily from the interaction between authentic heritage resources and human interpretation. The palace's architectural characteristics, royal artefacts, and historical associations provide substantial educational content, but guides play a crucial role in translating these resources into understandable cultural narratives. This supports Pabeta et al. (2025) and Silalahi (2024) that tour guides function as frontline heritage interpreters. The findings add an important qualification: guide effectiveness at Istana Maimun depends not only on historical knowledge but also on the ability to adapt narratives according to visitor characteristics. Local visitors and visitors from outside Medan do not necessarily require identical explanations because they enter the heritage environment with different levels of cultural familiarity. The distinction between informational availability and interpretive effectiveness also aligns with Ruan et al. (2024), whose findings show that different forms of heritage interpretation generate different cognitive and affective pathways to cultural engagement.

Educational value should therefore not be treated as an inherent property of heritage objects. The physical authenticity of Istana Maimun creates **educational potential**, whereas interpretation determines how successfully visitors can access it. This finding provides a middle position between perspectives that privilege physical authenticity as the main educational resource (Rahmat, 2021) and those that emphasise technological interpretation (Mardiah et al., 2025; Rahmadi & Sirnip, 2024). The evidence suggests that authenticity, human interpretation, and technology perform complementary rather than substitutive functions. This distinction also clarifies educational value's position within the study's conceptual framework. Rather than functioning as a statistically tested mediator between management quality and tourist experience, educational value is better understood in this qualitative context as an **interpretive interface** through which heritage resources acquire cognitive and cultural meaning for visitors. This formulation remains consistent with the evidence while avoiding a causal claim that the research design was not intended to test.

Digitalisation Requires Integration, Not Merely Technology

The contrast between effective oral interpretation and underutilised digital interpretation is one of the study's most important findings. QR codes, augmented-reality features, and virtual-tour facilities are available, but visitor engagement with them remains limited. Field evidence suggests this is linked to inconvenient placement, limited visitor orientation, insufficient signage, weak integration with guide narratives, and discontinued content updates. This finding qualifies the relatively optimistic expectation that digitalisation automatically improves heritage interpretation. Mardiah et al. (2025) and Rahmadi and Sirnip (2024) highlight digital media's potential to increase educational accessibility, but the present study indicates that technological availability alone is insufficient. Digital interpretation becomes meaningful only when visitors can discover, access, understand, and trust the content's relevance.

Moscardo's (1996) mindful visitor perspective offers a useful explanation. Interpretive engagement depends partly on whether visitors are actively oriented toward learning opportunities. At Istana Maimun, the technological interface is present, but the surrounding visitor-orientation system is comparatively weak. This helps explain why limited digital use should not automatically be interpreted as visitor resistance to technology. More broadly, the findings suggest evaluating digital heritage interpretation as an organisational process rather than a technological installation. Effective digital interpretation requires appropriate placement, visitor orientation, integration with other interpretive channels, and continuing content management. This insight is particularly relevant for heritage destinations where digital initiatives are frequently introduced through temporary projects or external collaborations but require long-term institutional responsibility after implementation. The practical and theoretical implication is that

the relevant question is no longer simply whether a heritage attraction possesses digital technology, but whether that technology is integrated into the visitor journey. This finding also aligns with Huang et al. (2022), who show that visitor responses depend on the configuration of interpretive content and format rather than the mere presence of interpretive media.

Memorable Experience Is Multidimensional Rather Than Uniform

The MTE findings further demonstrate that memorable heritage experience should not be interpreted as a single overall condition. Istana Maimun performs relatively strongly in hedonism and local culture, moderately strongly in knowledge and meaningfulness, moderately in refreshment, variably in novelty, and weakly in involvement. This pattern supports the multidimensional nature of memorable tourism experience proposed by Anggraeni et al. (2022) and suggests that the salience of individual dimensions depends on destination characteristics. Hedonism reflects the immediate aesthetic appeal of Istana Maimun's architecture, while local culture reflects the site's direct connection to Deli Malay heritage. Historical interpretation supports knowledge and meaningfulness. In this sense, the experiential profile differs from destinations where novelty, entertainment, or intensive participation constitute the primary foundations of memorability.

The findings therefore extend previous applications of MTE by suggesting that heritage destinations may possess distinctive dimensional profiles rather than uniformly strong or weak memorable experiences. This observation is consistent with Dianty et al. (2021), who demonstrated the relevance of novelty and meaningfulness in destination experience, but the present case shows that dimensional salience varies according to the character of the attraction and the visitor.

Novelty provides particularly clear evidence of this contextual dependence. Out-of-city visitors reported greater newness, while local visitors tended to possess more prior familiarity with the site and its cultural context. Novelty therefore arises not solely from destination attributes but from the relationship between those attributes and visitors' previous knowledge. This finding indicates that designers should consider visitor familiarity when designing interpretation for heritage sites. Introductory narratives may remain appropriate for first-time visitors, while local or repeat visitors may require deeper or changing forms of interpretation to generate new experiential value.

The Coexistence of Strong Memorability and Weak Involvement

Perhaps the most theoretically interesting MTE result is the coexistence of relatively strong cultural, aesthetic, and educational experiences with weak involvement. Visitors can enjoy the palace, connect with Deli Malay heritage, acquire historical knowledge, and assign meaning to the visit while remaining predominantly observers. This finding offers an important qualification to experiential-tourism perspectives that link stronger visitor experience to increasingly active participation. At Istana Maimun, participation is not a prerequisite for all forms of memorability. Authentic heritage resources and effective interpretation can themselves generate powerful cognitive and affective responses.

Nevertheless, the low level of involvement represents an identifiable experiential gap. The dominant visitor behaviours—viewing, listening, and photographing—indicate that the heritage encounter remains primarily receptive. This is consistent with Damayanti and Puspitasari (2024), who distinguish among seeing, learning, tasting, and experiencing within heritage tourism. Istana Maimun currently performs more strongly in the first two dimensions. This does not mean the palace should be transformed into an entertainment-oriented attraction. Such an approach could undermine the authenticity that currently constitutes one of its greatest strengths. Instead, opportunities exist for heritage-consistent participation that deepens interpretation. Culturally grounded demonstrations, storytelling encounters, or carefully designed educational activities

may strengthen involvement while preserving the site's historical character. The findings thus suggest that the appropriate transition for heritage destinations is not from passive tourism to entertainment, but from observation toward meaningful participation.

Connecting Management Conditions with Visitor Experience

Taken together, the findings show why management and visitor experience cannot be evaluated independently. The strongest MTE dimensions are associated largely with the destination's intrinsic heritage resources and existing interpretation capabilities. Architectural authenticity supports aesthetic enjoyment; cultural heritage supports local-culture experiences; and guide interpretation supports knowledge and meaningfulness. By contrast, several weaker dimensions are associated with areas requiring more intensive management intervention. Congestion and facility pressure constrain refreshment, limited participatory programming restricts involvement, and weak digital integration reduces opportunities for self-directed educational engagement. The evidence therefore suggests that heritage experiences emerge through the interaction of three elements: **heritage resources, interpretive capacity, and management conditions.**

This integrated interpretation advances the literature in two ways. First, it demonstrates that management quality matters not merely for operational efficiency but also because it shapes the conditions under which visitors encounter and interpret heritage. Second, it shows that educational value connects management and experience through interpretation rather than functioning simply as another destination attribute. These relationships should be regarded as interpretive mechanisms suggested by qualitative evidence, not as statistically established causal pathways. Their value lies in explaining how strengths and weaknesses observed in one domain correspond with patterns identified in another.

Theoretical Implications

The study offers three principal theoretical implications. First, it supports an integrated view of heritage destination management in which operational management, interpretation, and visitor experience are analytically connected. Existing approaches frequently examine governance, educational interpretation, or MTE separately. The present findings show that evaluating their interfaces can better explain heritage-destination performance. Second, the findings refine understanding of educational value in heritage tourism. Educational value is not produced by authenticity or information availability alone; it emerges when heritage resources are successfully interpreted for visitors. This positions interpretation as the mechanism that connects the destination's cultural substance with visitors' knowledge and meaning.

Third, the study contributes to MTE research by demonstrating that memorable experiences at heritage destinations can be dimensionally uneven. Strong local culture, hedonism, knowledge, and meaningfulness can coexist with weak involvement. The relative importance of MTE dimensions therefore appears sensitive to destination typology and visitor familiarity. For urban historical attractions such as Istana Maimun, cultural and cognitive dimensions may matter more for memorability than intensive participation. These findings suggest that successful heritage tourism management should not be evaluated solely according to visitor numbers, preservation status, technological provision, or overall satisfaction. A more informative assessment considers how effectively management enables visitors to interpret, understand, and experience heritage resources across different contexts.

Managerial Implications

The findings have several practical implications for managing Istana Maimun and comparable urban heritage destinations. The central managerial priority is not expanding visitor numbers per se, but improving the destination's capacity to absorb, interpret, and manage growing demand

without weakening educational and experiential quality. In the short term, management should prioritise improvements that can be implemented without major structural investment. These include repositioning and enlarging QR-code signage, integrating AR and virtual-tour features into entrance orientation and standard guide narration, restoring regular digital-content updates, and strengthening temporary guide deployment during peak visitation periods. These measures directly address the observed gap between the availability of digital interpretation tools and visitors' actual use. A second priority concerns visitor-flow and facility management. The evidence indicates pressure on circulation, restrooms, parking, and guide capacity during busy periods. Management should therefore undertake a formal carrying-capacity assessment covering physical, social, and managerial dimensions. Such an assessment should provide the basis for visitor-flow zoning, peak-period staffing, timed-entry refinement, circulation design, and infrastructure planning. The present study identifies carrying-capacity pressure but does not establish a numerical threshold; determining such a threshold should therefore be a management task rather than something inferred from the current qualitative findings.

The third implication concerns interpretation strategy. Istana Maimun currently relies strongly on human guiding, which provides substantial educational depth but is difficult to scale during periods of high visitation. Management should therefore develop a complementary interpretation system in which guides, information panels, QR codes, AR, and virtual-tour features work in coordination. The objective should not be to replace tour guides with technology, but to create a more resilient interpretation ecosystem in which visitors can continue to access historical and cultural information even when guide availability is constrained. Digital interpretation should also be managed as an ongoing content function rather than a one-time innovation project. Formally assign responsibility for content ownership, editorial review, update schedules, technical maintenance, and visitor-orientation materials. This is particularly important because some digital content had not been updated since 2024, reducing the effectiveness of otherwise functional technology.

A fourth priority concerns visitor involvement. The MTE findings show that involvement is the weakest experiential dimension, while local culture, hedonism, knowledge, and meaningfulness are comparatively stronger. Management should therefore introduce selective participatory programmes that strengthen cultural engagement without turning the palace into an entertainment-oriented attraction. Potential programmes may include interpretation-led storytelling sessions, Malay calligraphy activities, traditional cultural demonstrations, or other experiences directly grounded in the historical and cultural narratives of the Deli Sultanate.

Visitor segmentation should also inform interpretation planning. Local and out-of-city visitors experience novelty and meaningfulness differently. First-time and out-of-city visitors may benefit from introductory interpretation, while local and repeat visitors may require deeper thematic narratives, changing exhibitions, or more specialised interpretation to generate additional experiential value. Such segmentation would allow the destination to move beyond a one-size-fits-all interpretation model. In the medium to long term, management should strengthen multi-actor governance by clarifying the respective roles of the Foundation, the Deli Sultanate family, government institutions, tourism actors, and relevant community stakeholders. Formal mechanisms for joint monitoring, heritage interpretation planning, visitor-flow management, and digital-content governance would help reduce dependence on informal coordination and improve institutional resilience. These implications suggest that the most appropriate management strategy for Istana Maimun is one of **quality-led adaptation**: improving infrastructure, interpretive integration, visitor-flow management, and culturally appropriate participation while protecting the historical authenticity that remains the destination's primary experiential asset.

CONCLUSION

This study evaluated heritage tourism management at Istana Maimun by examining the interrelated roles of management conditions, educational value, and memorable tourism experience. The findings indicate that the destination possesses a strong cultural and educational foundation, but its capacity to convert these resources into consistently high-quality visitor experiences remains uneven. Governance arrangements, cultural authenticity, and guide-based interpretation are key strengths, while infrastructure pressure, limited integration of digital interpretation, and low levels of participatory engagement remain significant constraints.

Educational value arises primarily from the interaction between authentic heritage resources and adaptive oral interpretation. Guide narratives successfully translate the history of the Deli Sultanate, architectural characteristics, and Deli Malay cultural values into visitor learning. Digital interpretation, despite the availability of QR codes, augmented reality, and virtual-tour features, contributes less effectively because technological provision has not been fully integrated with visitor orientation, physical accessibility, guide practices, and continuous content updating. The findings therefore indicate that heritage digitalisation should be understood as an interpretive and managerial process rather than simply as the introduction of technological tools.

The MTE analysis further reveals a dimensionally uneven visitor experience. Hedonism and local culture represent the strongest dimensions, while knowledge and meaningfulness are also relatively well developed. Novelty varies according to visitors' prior familiarity with the destination, refreshment is constrained by congestion and facility pressure, and involvement remains the weakest dimension because visitors predominantly experience the palace through viewing, listening, and photographing. The findings demonstrate that memorable heritage experiences can therefore emerge strongly through aesthetic, cultural, and cognitive pathways even when opportunities for active participation remain limited.

Conceptually, this study contributes to heritage tourism research by showing the analytical value of examining destination management, educational interpretation, and memorable tourism experience as interconnected rather than independent domains. Educational value is particularly important as an interpretive interface that makes heritage resources understandable and meaningful to visitors. At the same time, the findings suggest that the relative strength of individual MTE dimensions depends on destination characteristics, management conditions, interpretation quality, and visitor familiarity.

Overall, the case of Istana Maimun demonstrates that the sustainability of an urban heritage destination cannot be assessed solely through increasing visitation, cultural authenticity, or the presence of interpretive technology. Its longer-term capacity to deliver meaningful visitor experiences depends on how effectively management aligns visitor pressure, heritage interpretation, infrastructure, and culturally appropriate engagement opportunities. The central challenge is therefore not to transform the palace into a more entertainment-oriented attraction, but to ensure that its historical and cultural significance remains accessible, interpretable, and memorable as visitor demand evolves.

Limitations and Future Research Trajectories

This study has several limitations to consider when interpreting its findings. First, the research uses a qualitative, single-destination design. The results provide contextually rich insight into Istana Maimun but are not statistically generalisable to other heritage destinations. The proposed relationships among management conditions, educational value, and memorable tourism experience should therefore be understood as analytical and interpretive rather than universally applicable. Second, the study involved 13 purposively selected informants. Although data saturation was reported by the eleventh interview and two additional interviews were conducted to confirm the emerging themes, the informant composition remains relatively limited. In particular, the study did not include government representatives or community organisations as

primary informants. Future studies should incorporate these stakeholders to provide a more comprehensive assessment of collaborative governance, regulatory relationships, and community participation.

Third, the study is cross-sectional. It captures management conditions and visitor experiences during a specific period characterised by rapid post-pandemic growth. The design cannot determine whether the increase in visitation represents a sustained structural trend or a temporary fluctuation. Longitudinal research is therefore needed to examine whether visitor growth, management adaptation, and experiential outcomes change over time. Fourth, the qualitative design does not statistically test causal relationships among management quality, educational value, and MTE dimensions. The integrated framework developed in this study is therefore heuristic rather than causal. Future research could use quantitative or mixed-methods designs to test relationships among these constructs with larger visitor samples.

These limitations and findings suggest several research trajectories. One promising direction is to validate the integrated framework developed in this study quantitatively. Future research could operationalise heritage management quality, interpretation effectiveness, educational value, and MTE dimensions and test their relationships using structural equation modelling. Such work could examine whether educational value functions as a mediator, moderator, or parallel outcome under different destination conditions.

A second trajectory concerns the effectiveness of digital heritage interpretation. Experimental or quasi-experimental studies could test whether changes in QR-code placement, visitor orientation, guide prompts, interface design, or content updating significantly increase digital-media adoption and knowledge acquisition. This would directly extend the present finding that low digital use appears more associated with structural integration problems than with visitor disinterest. A third trajectory involves formal carrying-capacity research. Future studies could combine spatial analysis, visitor-density observation, time-motion analysis, and satisfaction measurement to estimate physical, social, and managerial carrying-capacity thresholds. This would provide a stronger empirical basis for visitor-flow planning and peak-period management.

A fourth direction concerns visitor segmentation. Comparative studies could examine whether local, repeat, domestic non-local, and international visitors differ systematically in novelty, meaningfulness, knowledge acquisition, and interpretation preferences. This would help test the present finding that prior familiarity shapes the experience of heritage destinations. A fifth trajectory concerns participatory heritage experience. Future research could evaluate whether culturally grounded activities strengthen involvement without reducing perceived authenticity. Experimental comparison between conventional guided visits and visits incorporating participatory interpretation would be particularly valuable. Finally, comparative multi-site studies should apply the framework to other urban heritage destinations in Indonesia and Southeast Asia. Such research could determine whether the dimensional pattern identified at Istana Maimun—relatively strong cultural, aesthetic, and educational experience but weaker involvement and infrastructural adaptation—is specific to this destination or characteristic of a broader category of historically significant urban attractions. These future trajectories would move the research beyond descriptive evaluation toward theory testing, comparative explanation, and intervention-based assessment, thereby strengthening the cumulative development of heritage-tourism management scholarship.

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