

INVESTIGATING DARK TOURISM DRIVERS AND VISITOR LOYALTY AT MATANG MUSEUM, PERAK

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Abstract. This study examines the influence of visitors' dark tourism motivation experiences on their behavioral intentions at the Matang Museum in Perak, Malaysia. Grounded in the Theory of Planned Behavior (TPB), the research investigates three key motivational constructs namely dark experience, engaging entertainment, and unique learning experience, and their impact on post-visit behaviors such as revisiting and recommending the site. A quantitative, cross-sectional survey design was employed, with data collected from 80 domestic visitors using a structured questionnaire based on validated scales. Descriptive statistics, reliability testing, and multiple regression analysis were conducted using SPSS Version 27. Findings revealed that dark experience and unique learning experience significantly influenced visitors' behavioral intentions, while engaging entertainment was not a significant predictor. These results underscore the importance of emotional and educational engagement in dark tourism contexts, while suggesting that entertainment alone may not drive behavioral outcomes. Theoretically, the study extends TPB and the Stimulus–Organism–Response (S-O-R) framework into the under-researched Malaysian dark tourism setting. Practically, the findings offer strategic insights for site managers and cultural tourism stakeholders, emphasizing the need to enhance emotional storytelling and learning-based experiences to increase visitor satisfaction and loyalty. This research contributes to the growing discourse on heritage tourism in Southeast Asia, offering both empirical evidence and actionable recommendations for improving visitor engagement at historically significant yet under-promoted dark tourism destinations.
Keywords: *dark tourism, visitor motivation, behavioral intentions, heritage tourism, Matang museum*

Introduction

Tourism has evolved beyond mere leisure and recreation, encompassing more profound and diverse forms of travel, including dark tourism—the act of visiting sites associated with death, tragedy, and historical trauma. Across the globe, destinations such as Auschwitz-Birkenau, Chernobyl, and Hiroshima Peace Memorial Park attract millions of visitors seeking reflection, education, or emotional connection to history (De Luna et al., 2022; Light, 2017; Biran et al., 2011). In recent years, dark tourism has gained momentum as travelers, particularly post-pandemic, increasingly pursue meaningful, authentic, and emotionally resonant experiences over conventional tourist attractions. This trend aligns with broader shifts toward sustainable heritage preservation, experiential travel, and cultural education, emphasizing both historical understanding and visitor emotional engagement. In Malaysia, dark tourism is an emergent niche with significant potential to contribute to cultural heritage interpretation, national identity, and regional tourism development. Among the country's lesser-known sites, the Matang Museum in Perak offers a rich yet underutilized opportunity for dark tourism. The museum, formerly the residence of Malay leader Ngah Ibrahim presents artifacts and stories from the colonial period, Larut Wars, and the Japanese occupation during World War II (Olsen et al., 2022). Despite this, public engagement with the Matang Museum remains limited, partly due to insufficient digital innovation, lack of

experiential programming, and minimal promotional efforts (Aziz et al., 2020). As digital natives now constitute a major segment of domestic travelers, particularly post-COVID, there is a pressing need for heritage sites to enhance interactivity, storytelling, and emotional immersion (Ramos et al., 2022; Gupta et al., 2020).

Scholars have extensively explored visitor motivations in dark tourism contexts, focusing on emotional triggers, educational value, and cultural authenticity (Light, 2017; Biran and Hyde, 2013; Stone, 2006). For example, studies have shown that motivations such as curiosity, historical interest, and personal reflection are critical in shaping tourist expectations and post-visit behavior (Nawijn and Fricke, 2013; Podoshen, 2012). However, much of this literature is grounded in Western or globally iconic sites, with limited attention paid to Southeast Asian or Malaysian contexts (Chang, 2015). Furthermore, while some studies have identified motivational categories such as “dark experience” or “learning intent,” they rarely examine how these specific factors predict behavioral intentions, such as revisiting or recommending a site. This empirical gap inhibits the development of localized, data-driven strategies for improving visitor engagement in emerging dark tourism destinations. Recent Malaysian studies have begun exploring dark tourism sites like Kellie’s Castle and the Penang War Museum (Norunnajjah et al., 2021), but there is a conspicuous absence of research focused on the Matang Museum. Moreover, the relationship between specific motivational drivers, such as emotional immersion (dark experience), interactive engagement (entertaining storytelling), and educational enrichment (unique learning experience), and behavioral intentions remains underexplored in the local context. Additionally, existing research tends to rely heavily on descriptive insights, with limited application of inferential methods such as regression analysis to uncover predictive relationships among variables.

To address these gaps, this study examines the effects of visitors’ dark tourism motivation experiences specifically, dark experience, engaging entertainment, and unique learning experience on their behavioral intentions at the Matang Museum in Perak, Malaysia. Grounded in the Theory of Planned Behavior (Ajzen, 1991), the study investigates how these motivational factors influence visitors’ likelihood of revisiting the site, recommending it to others, or engaging with similar destinations. Correspondingly, three hypotheses are tested to examine the predictive strength of each motivational factor.

Literature review

Dark tourism and visitor motivation

Dark tourism refers to travel to sites associated with death, tragedy, or the macabre (Stone, 2006; Lennon and Foley, 2000). Visitors to these destinations are not merely passive observers but are often motivated by curiosity, empathy, historical interest, and personal reflection (Light, 2017; Biran et al., 2011). These motivations can be shaped by psychological, cultural, and emotional triggers that enhance the depth and significance of the tourism experience. Studies have shown that motivations in dark tourism can be categorized into emotional immersion, educational desire, and entertainment-seeking behavior (Nawijn and Fricke, 2013; Podoshen, 2012). These motivations are essential in shaping behavioral intentions, such as willingness to revisit a site or recommend it to others (Baker and Crompton, 2000). Yet, empirical

exploration remains limited, especially in Southeast Asian contexts such as Malaysia, where cultural factors and historical narratives offer unique insights.

Theoretical foundation: Theory of Planned Behavior (TPB)

The Theory of Planned Behavior (TPB) provides a robust foundation for understanding how attitudes, subjective norms, and perceived behavioral control influence intentions (Ajzen, 1991). In dark tourism, attitudes are formed through emotional and cognitive engagement with historical trauma, while social norms may be shaped by cultural expectations to honor or remember the past. Perceived behavioral control reflects how easily visitors believe they can engage with the site, influenced by accessibility, information, and emotional readiness (Wyatt et al., 2020). The TPB framework has been widely applied to heritage and cultural tourism contexts, reinforcing its relevance in understanding visitor behavior at emotionally charged sites.

Dark experience

The concept of dark experience involves visitors' emotional immersion in the narratives of death, suffering, or historical trauma presented at a tourism site (Biran et al., 2011). Such experiences evoke empathy, reflection, and contemplation, often becoming catalysts for more meaningful tourism engagement. Emotional engagement at dark sites is not merely passive but may deepen the perceived value of the visit, resulting in stronger behavioral responses (Sigala and Steriopoulos, 2021). Empirical evidence supports the notion that emotionally resonant experiences positively impact tourists' satisfaction and behavioral intentions (Nawijn and Fricke, 2013). For instance, at Holocaust memorials or war museums, feelings of solemnity and empathy have been shown to predict intentions to revisit or recommend the site. (H1): Dark experience has a positive effect on visitors' behavioral intentions at the Matang Museum.

Engaging entertainment

While dark tourism is often associated with solemnity, recent scholarship recognizes the value of engaging entertainment, the incorporation of interactive and storytelling elements that enhance the tourism experience (Mackay, 2019; Richards and Munsters, 2010). Elements such as multimedia displays, augmented reality (AR), and guided tours serve to humanize historical events, increasing emotional and cognitive engagement. However, there is an ongoing debate about the appropriateness of entertainment in dark tourism settings. Some scholars argue that entertainment may undermine the site's authenticity or seriousness (Oren et al., 2019), while others find that interactive methods improve knowledge retention and visitor satisfaction (Ramos et al., 2022; Gupta et al., 2020). In heritage tourism, emotional engagement through entertainment has been shown to enhance learning and increase revisit intentions. (H2): Engaging entertainment positively affects visitors' behavioral intentions at the Matang Museum.

Unique learning experience

The unique learning experience construct refers to the educational and intellectual benefits gained from visiting a tourism site. Dark tourism destinations, particularly museums, are often valued for their potential to offer deep historical understanding and cultural awareness (Treiblmaier, 2021; Biran and Hyde, 2013). At the Matang Museum,

the narrative of colonial resistance and war trauma offers a distinctive opportunity to connect with Malaysian history. Several studies emphasize the link between learning motivations and post-visit behaviors. For example, Allman (2017) found that learning-based motivations significantly predicted revisit and recommendation intentions in dark tourism. Similarly, Liu and Sutunyarak (2024) observed that immersive educational experiences positively influence behavioral outcomes in museum settings. This aligns with the S-O-R framework, where stimulus (learning content) activates internal states (understanding, reflection) that produce behavioral responses. (H3): Unique learning experience positively influences visitors' behavioral intentions at the Matang Museum.

Behavioral intentions

Behavioral intentions refer to the likelihood that a visitor will engage in future behavior related to a tourism site, such as revisiting, recommending, or supporting the destination (Baker and Crompton, 2000; Ajzen, 1991). In dark tourism, these intentions are shaped by emotional satisfaction, learning value, and perceived authenticity (Liu and Sutunyarak, 2024; Nawijn and Fricke, 2013). Behavioral intentions are central to evaluating site effectiveness and long-term sustainability. When visitors are emotionally and intellectually satisfied, they are more likely to advocate for the destination, contributing to its preservation and relevance. This is particularly important for under-promoted sites like the Matang Museum, where word-of-mouth and revisits are key to sustaining engagement. Based on the above discussion, a conceptual model is proposed posits three independent variables namely dark experience, engaging entertainment, and unique learning experience predict the dependent variable, behavioral intentions.

Materials and Methods

This study adopts a quantitative, cross-sectional, and explanatory research design, following a deductive approach to examine the relationship between visitors' dark tourism motivations and their behavioral intentions at the Matang Museum, Perak. A cross-sectional design is appropriate because data were collected at a single point in time from a defined population (Creswell, 2009). The explanatory purpose aligns with the study's objective to test hypothesized relationships among variables using statistical inference (Asenahabi, 2019). A deductive strategy enables theory testing, specifically applying the Theory of Planned Behavior (Ajzen, 1991) to an empirical Malaysian context. The survey instrument was a structured questionnaire comprising five sections, developed based on validated constructs from previous dark tourism research. Items for the three independent variables: Dark Experience, Engaging Entertainment, and Unique Learning Experience were adapted from Haqimmy et al. (2022), while items for the dependent variable Behavioral Intentions were sourced from Allman (2017). All measurement items were rated on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), a common approach in social sciences to capture respondent attitudes and perceptions (Joshi et al., 2015; Nemoto and Beglar, 2014). To ensure content validity, the items were reviewed and aligned with constructs from established literature. A pilot test involving 30 participants was conducted, and reliability was assessed using Cronbach's Alpha. All constructs exceeded the minimum reliability threshold of 0.70 (Nunnally, 1975), confirming internal consistency: Dark Experience ($\alpha = 0.877$), Engaging Entertainment ($\alpha = 0.898$), Unique Learning Experience ($\alpha = 0.959$), and Behavioral Intentions ($\alpha = 0.917$).

The target population consisted of domestic visitors to the Matang Museum. The purposive sampling technique was applied to ensure respondents had relevant experience and knowledge of the site (Etikan et al., 2016). A total of 80 valid responses were collected using an online survey distributed via social media platforms such as Facebook, WhatsApp, and Instagram, between October 2024 and January 2025. Data analysis was performed using SPSS Version 27, a widely accepted tool for social science research (Field, 2009). Descriptive analysis was conducted to summarize respondent demographics and central tendencies of variables. Reliability analysis using Cronbach's Alpha confirmed the internal consistency of the measurement scales. Correlation analysis (Pearson's r) was used to assess the strength and direction of bivariate relationships among the constructs. Multiple linear regression analysis was employed to test the hypotheses and determine the predictive power of each independent variable on Behavioral Intentions.

Results and Discussion

A total of 80 valid responses were analyzed. *Table 1* provides a demographic summary of the sample. The majority of respondents were from Perak (52.5%), followed by Selangor (22.5%), while other states such as Kedah, Terengganu, and Kuala Lumpur had lower representation. In terms of age distribution, the largest group of respondents was aged 33 years and above (36.3%), followed by the 18–22 age group (26.3%). Most participants (86.3%) had previously visited the Matang Museum, indicating a high level of site familiarity. To assess perceptions of the study variables, mean scores and standard deviations were calculated for each construct. As shown in *Table 2*, respondents reported relatively high agreement across all variables, with Dark Experience ($M = 4.12$, $SD = 0.56$) scoring highest, followed by Unique Learning Experience ($M = 4.05$, $SD = 0.63$) and Engaging Entertainment ($M = 3.98$, $SD = 0.60$). The outcome variable, Behavioral Intentions, also yielded a high mean score ($M = 4.10$, $SD = 0.58$), indicating overall positive post-visit attitudes among respondents. To test the study's hypotheses, a multiple linear regression analysis was conducted with Behavioral Intentions as the dependent variable and the three motivational dimensions: Dark Experience, Engaging Entertainment, and Unique Learning Experience as independent variables. The model summary is presented in *Table 3*. The model explained approximately 49.4% of the variance in Behavioral Intentions ($R^2 = 0.494$), indicating a moderately strong predictive capability. According to Hair (2009), an R^2 value above 0.30 is considered acceptable in social sciences, affirming the model's adequacy for explanatory purposes. The results indicate that Dark Experience ($\beta = 0.378$, $p = 0.001$) and Unique Learning Experience ($\beta = 0.319$, $p = 0.012$) significantly influence Behavioral Intentions at the 0.05 level. In contrast, Engaging Entertainment ($\beta = 0.118$, $p = 0.410$) was not a significant predictor, suggesting that entertainment elements, while positively correlated, do not substantially impact future behavior when considered alongside emotional and educational motivations. These findings support H1 and H3, affirming that emotional and educational motivations play a central role in shaping visitor behavior at dark tourism sites. However, H2 is not supported, indicating that entertainment components may be secondary or context-dependent in dark tourism environments such as the Matang Museum. The findings reveal that emotional immersion (Dark Experience) and educational value (Unique Learning Experience) significantly predict visitors' intention to revisit, recommend, or further engage with the

Matang Museum. The model demonstrates satisfactory explanatory power, aligning with prior studies in dark tourism behavior (Biran et al., 2011; Nawijn & Fricke, 2013).

Table 1. Demographic profile of respondents (n = 80).

Variable	Category	Frequency	Percentage (%)
Place of Origin	Perak	42	52.5
	Selangor	18	22.5
	Kedah	6	7.5
	Kuala Lumpur	4	5.0
	Terengganu	3	3.8
	Others	7	8.7
Age Group	18–22 years	21	26.3
	23–27 years	13	16.3
	28–32 years	17	21.3
	33 years and above	29	36.3
Visited Matang Museum	Yes	69	86.3
	No	11	13.8

Table 2. Descriptive statistics of key constructs.

Construct	No. of Items	Mean (M)	Standard Deviation (SD)
Dark Experience	6	4.12	0.56
Engaging Entertainment	6	3.98	0.60
Unique Learning Experience	6	4.05	0.63
Behavioral Intentions	5	4.10	0.58

Table 3. Model summary of regression analysis.

R	R ²	Adjusted R ²	Std. Error of the Estimate
0.703	0.494	0.474	0.44817

Table 4. Coefficients of independent variables.

Predictor	B	Std. Error	Beta	Sig. (p-value)
Constant	0.814	0.399	—	—
Dark Experience	0.361	0.103	0.378	0.001
Engaging Entertainment	0.127	0.153	0.118	0.410
Unique Learning Experience	0.316	0.122	0.319	0.012

This study investigated the influence of dark tourism motivation experiences namely dark experience, engaging entertainment, and unique learning experience on behavioral intentions among visitors to the Matang Museum in Perak, Malaysia. Grounded in the Theory of Planned Behavior (TPB) and supported by empirical regression analysis. The most significant finding of the study is the positive and statistically significant relationship between dark experience and behavioral intentions. This result supports Hypothesis 1 (H1) and aligns with previous research emphasizing the emotional intensity of dark tourism sites as a key determinant of visitor behavior (Nawijn and Fricke, 2013; Biran et al., 2011). Visitors who emotionally connect with the narratives of loss, suffering, or resilience such as those presented at the Matang Museum are more likely to revisit the site or recommend it to others. Emotional engagement at such destinations fosters a deeper understanding of historical trauma and personal reflection, which enhances the perceived value of the experience (Sigala and Steriopoulos, 2021). The second supported hypothesis, H3, confirms that unique learning experience significantly influences behavioral intentions. This is consistent with earlier findings

that educational motivations are central to dark tourism (Treiblmaier, 2021; Biran and Hyde, 2013). Visitors who perceive the museum as a platform for acquiring historical knowledge or cultural insight are more inclined to form favorable post-visit attitudes. Educational satisfaction contributes to intention formation by promoting cognitive understanding, especially in younger or digitally engaged audiences seeking meaningful learning opportunities (Liu and Sutunyarak, 2024).

However, Hypothesis 2 (H2) was not supported, as engaging entertainment did not have a statistically significant effect on behavioral intentions in the regression model. This finding diverges from some prior studies that advocate for the integration of multimedia and interactive storytelling in dark tourism (Mackay, 2019; Richards and Munsters, 2010). One possible explanation is that in solemn or historically sensitive contexts like Matang Museum, entertainment may be perceived as trivializing or detracting from the gravity of the subject matter (Oren et al., 2019). While engagement methods may enhance on-site interest, they may not significantly influence long-term behavioral outcomes such as revisitation or recommendation. The findings make several contributions to tourism theory, particularly the application of the Theory of Planned Behavior (TPB) in the context of dark tourism. The study reinforces TPB's claim that attitudes in this case shaped by emotional and cognitive motivations are strong predictors of behavioral intentions (Ajzen, 1991). The results empirically validate that constructs like dark experience (emotional attitude) and unique learning experience (cognitive attitude) are aligned with TPB components and serve as robust explanatory variables in predicting post-visit behaviors.

The study offers several actionable insights for dark tourism site operators, museum curators, tourism marketers, and policymakers. First, enhancing emotional storytelling. For example, museums should prioritize curating emotionally resonant experiences. This includes guided storytelling, visitor reflections, and thematic exhibitions that provoke empathy and historical contemplation. Next, strengthening educational content. As unique learning experiences significantly influence behavior, museum managers should incorporate interactive educational tools, such as augmented reality (AR), touchscreens, and narrative-driven exhibits to improve knowledge transfer. Furthermore, museum operators should reassess entertainment strategies. While engaging entertainment can enhance on-site experience, it may not drive repeat visitation. Site managers should ensure that entertainment methods do not compromise historical authenticity or emotional impact. Another way is to promote revisitation through feedback and community-building. By establishing feedback loops, visitor loyalty programs, and alumni visitor groups may encourage repeat visits and social sharing, particularly for local heritage institutions with limited international visibility. Finally, operators and marketers should target to emotionally and educationally motivated segments. Marketing campaigns should emphasize the historical depth and emotional value of the site rather than solely highlighting its touristic appeal, particularly to schools, educators, heritage travelers, and culturally sensitive tourists.

Despite its contributions, this study has several limitations. The sample size ($n = 80$), though adequate for exploratory regression, limits the generalizability of the findings. The construct of engaging entertainment may require further refinement, as the items used may not have adequately captured the range or relevance of entertainment features offered at the Matang Museum.

Conclusion

In conclusion, this study examined the influence of dark tourism motivation experiences on behavioral intentions among visitors to the Matang Museum. The results demonstrate that dark experience and unique learning experience significantly shape visitor intentions, while engaging entertainment was not a significant predictor. These findings highlight the emotional and cognitive depth of dark tourism, emphasizing the need for heritage sites to craft experiences that educate and emotionally engage. Theoretically, the study advances the application of TPB and the S-O-R framework to dark tourism, while practically it provides guidance for enhancing visitor engagement, promoting cultural heritage, and improving destination sustainability. As dark tourism continues to rise globally and regionally, such insights are crucial for preserving historical memory while responding to evolving visitor expectations.

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Conflict of interest

The authors confirm that there is no conflict of interest involved with any parties in this research study.

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