

# Communication Factors Contributing to Mindfulness: A Study of Melaka World Heritage Site Visitors

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## Abstract

We investigate the effects of three communication factors (i.e. variety, interactivity, and personal connection) as used in three different types of media (i.e. exhibits, guided tours, and printed materials) on the state of mindfulness of visitors at the Malacca World Heritage Site. Mindfulness refers to a state of mind in which a person actively processes available information. For a relatively new heritage site, such as Malacca, improving a visitors' state of mindfulness is important because mindful visitors have been shown to have superior understanding and learning, thus benefiting the heritage site's management authorities by cultivating responsible and sustainable tourism behaviours. The survey method was employed to measure the state of mindfulness of 200 respondents visiting the Malacca World Heritage Site. The survey results indicate that each communication media has one key communication factor that significantly induces a state of mindfulness in the visitor. For exhibits, variety was found to be the key communication factor while for guided tours and printed material, the key communication factor was interactivity. In response to these findings, we outline a number of specific directions for heritage site management and authorities to identify the most effective communication factors in commonly used communication media.

**Keywords:** communication factors, heritage tourism, mindfulness

## 1. Introduction

According to the World Travel and Tourism Council (2014), the total contribution of travel and tourism to global GDP grew by 3.0% in 2013 and is expected to grow by 4.3% in 2014. Since 2012, International tourism arrivals worldwide have exceeded 1 billion visitors annually, with the Asia and Pacific regions recording the strongest growth with a 7% increase in arrivals. Although these numbers bode well for the economy, there has been increasing concern over the impact of tourism to the physical and environmental sustainability of tourism destinations, particularly heritage destinations (Winkle & Backman, 2009).

Given the strong correlation between World Heritage Sites (WHS) and tourist arrivals (Su & Lin, 2014), and that the negative behaviours of tourists can be as damaging as war and the effects of rising sea levels to ancient and historic sites (World Monuments Fund, 2010), there is a pressing need to ensure more sustainable tourism behaviours at WHSs. In this study, we proposed that part of the challenge in ensuring sustainable tourist behaviours is to ensure that tourists are mindful while visiting sites. Mindfulness refers to a state of mind in which a person actively processes available information. Mindfulness has been demonstrated to result in enhanced learning and understanding (Frauman & Norman, 2004; Moscardo, 1998). It has been suggested that understanding mindfulness may help to reduce irrational tourists behaviours and encourage tourists to learn more and become interested in the site, thereby leading to support for ensuring the site's survival (Frauman & Norman, 2004; Moscardo, 1996). In this study, we investigate the effects of communication factors (i.e. variety, personal connection, and interactivity/participation) used in various communication media (i.e. exhibits/displays/artefact, guided tour and printed materials) on the state of mindfulness of visitors at the Melaka World Heritage Site in Malaysia.

Melaka was declared a WHS in 2008 in recognition of its unique cultural heritage; tracing its history to the 11th century Malay Sultanate and, beginning in the early 16th century, under continual colonisation by the Portuguese,

Dutch and British over a period of 450 years. Since its designation as a WHS, tourist arrivals to Melaka have been consistently increasing and is expected to reach the 15 million mark in 2014 (The Star, 2014). While economic benefits are expected, the increased arrival of tourists may have adverse consequences on Melaka's heritage sites as a result of unsustainable and irresponsible tourist behaviours, such as touching the delicate surfaces of colonial monuments and artefacts, littering, and vandalism. The recent negative experience at the Georgetown WHS, Malaysia, in which murals were scarred with black markings and wax (The Star, 2012) was a wake-up call for many, that attention has to be paid to improving community and visitor education about heritage sites so that they might be better appreciated and respected. As with other WHSs, the Melaka WHS serves not only as a source of economic income, but also a source of pride to the nation in exhibiting its unique culture. Therefore, it is imperative that management and authorities work toward producing mindful tourists who are not only satisfied with the visit, but who are also educated on the customs, traditions and culture of the people they visit and meet, partake in the promotion of heritage conservation, and concerned about the preservation and protection of the host community and its environment.

In tourism, the concept of mindfulness has been applied toward examining and understanding how tourists interpret and respond to information presented at tourist destinations (e.g. Frauman, 1999; Langer & Moldoveanu, 2000; Moscardo, 2008), such as information from exhibits, tourist guides, and printed materials. In this context, interpretation broadly refers to educational activities or the process of communicating information to educate visitors (Moscardo, 2003; Poria, Biran, & Reichel, 2009; Reisinger & Steiner, 2006). The interpretation of tourism attractions, products, stories, and history is an important aspect of providing a positive visitor experience. Frauman and Norman (2004) and Moscardo (1996) found that mindfulness promotes memory recall, visitor appreciation, and site understanding. Visitors with a positive attitude toward heritage are likely to support efforts to conserve heritage sites and promote sustainable tourism (Frauman & Norman, 2004).

## **2. Melaka World Heritage Site**

Melaka is one of Malaysia's earliest and most popular heritage tourism destinations among both local and international tourists. Due to its recognition as the birth place of the Malay Sultanate (Ahmad, 1979), the tourism industry in Melaka was established early. As such, it offers a rich array of communication media and approaches, making it the ideal for the purposes of this study.

UNESCO declared Melaka a WHS in July 2008 in recognition of its unique cultural and architectural landscape, reflecting over 500 years of trading between the West and East and without any other parallel examples in Southeast Asia. Melaka is the only town in Malaysia to have been ruled by three Western colonial powers. It was an important centre of world trade in the early 16th century, attracting people from the west to establish trading posts. In 1511, an armada led by Alphonso d'Alburquerque, the Portuguese Viceroy of India, conquered Malacca and established Melaka's first instance of colonisation which then continued, with the later colonisation by the Dutch and British, for almost 450 years. The legacy of this colonial period is the number of historic buildings which exhibit the architectural styles of the colonists.

## **3. The Concept of Mindfulness**

Mindfulness refers to a state of mind in which one becomes engaged with their surroundings and pays complete and careful attention to their present experience on a moment-to-moment basis, actively processing new information as it streams through the senses (Frauman & Norman, 2004; Langer & Moldoveanu, 2000; Moscardo, 1996; Woods & Moscardo, 2003). The concept of mindful can be traced to the Buddhist concept of sati, a reference to having a calm awareness of one's body, feelings and mind (Grossman & Van Dam, 2011). This concept was first integrated into the field of therapeutic psychology and then to other fields, including tourism. In tourism, a mindful tourist is one who is "...active, interested, questioning and capable of reassessing the way they view the world" (Moscardo, 1996, p.382). Mindfulness might result in a number of benefits such as greater sensitivity to one's environment, enhanced openness to new information, the creation of new categories for structuring perception, and enhanced awareness of multiple perspectives in problem solving (Langer & Moldoveanu, 2000).

Moscardo (1996) identified two factors influencing mindfulness, setting factors (e.g. exhibitions and presence guides) and visitor factors (e.g. interest in content, motives, and low fatigue). In the case of setting factors, Moscardo (1996) suggested that exhibits and displays might include materials and facilities that induce learning and curiosity, such as guided tours, large signage, location maps, guidebooks, brochures, and interactive learning. Visitor factors should include familiarity with the place and with heritage sites in general, as well as motivation for the visit (Moscardo, 1996).

Mindlessness, on the other hand, refers to behaviours which are routine, do not involve active mental processing, and little attention paid to what the person is doing. Consequently, mindlessness results in a failure to process new information, and a reliance on existing behaviours or thought structures (Moscardo, 1996). In terms of setting factors, mindlessness is a result of exhibits and displays being repetitive and lacking innovation; exhibit or tour designs that do not allow visitors to control the quantity or quality of the information they receive; and inanimate and/or static exhibits (Moscardo, 1996).

In their analysis of the dichotomy between mindful and mindless tourism, Woods and Moscardo (2003) proposed a model of communication to promote mindfulness (see Figure 1). According to Woods and Moscardo (2003), the cognitive state of mindfulness and mindlessness is influenced by a combination of communication and visitor factors. In the model, communication factors, which is the focus of this study, include the use of variety and change, multi-sensory media, novelty, conflict and surprise, visitor control, connections to visitors, and the use of questions. At a heritage site, these communication factors can be integrated into various communication media to present information and interpretations by giving more thought to how exhibits are designed, being more deliberate in the choice of designs and wording of content in brochures, and through novel approaches as used by tourist guides when communicating with visitors. Visitor factors that encourage mindfulness include having an interest in the content and their levels of fatigue.

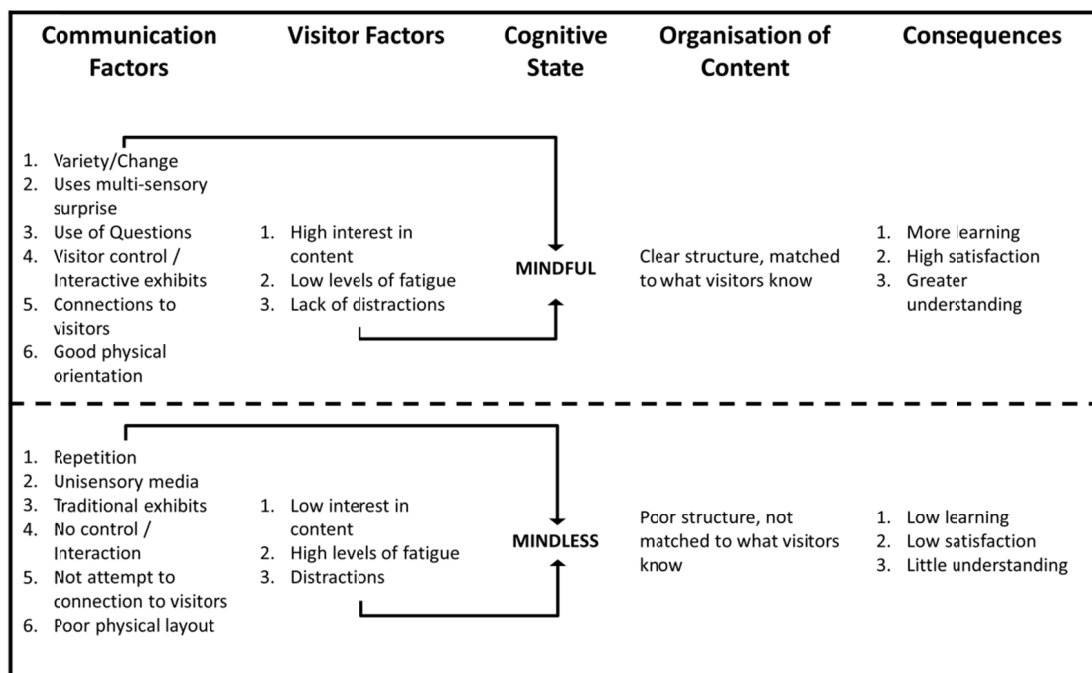


Figure 1. Mindfulness model of communicating with visitors

Source: Woods and Moscardo (2003, p.99).

Woods and Moscardo (2003) note, however, that there are overlapping features in the communication factors as suggested in the model. For example, multisensory media and novelty can be categorised under variety. The use of questions, direct contact with objects, visitor control, and dynamic/animated exhibits can be grouped under participation/interactivity. Physical orientation (i.e. helping visitors find their way) and connection to visitors are elements under personal connections. Following Woods and Moscardo (2003), in this study we investigate the communication factors under three categories; variety, personal connections, and participation/interactivity.

Based on these three communication factors, the following research questions have been proposed for this study: To what extent do the communication factors (i.e. variety/interaction/participation and personal connection) of exhibits affects visitors' mindfulness? To what extent do the communication factors (i.e. variety/interaction/participation and personal connection) of tourist guide interpretations affect visitors' mindfulness? To what extent do the communication factors (i.e. variety/interaction/participation and personal connection) of printed materials affects visitors' mindfulness?

The relationships that are investigated are shown in Figure 1. The overall relationship between the communication factors and mindfulness will be investigated for each media. These communication factors will be investigated for each medium; namely exhibits/displays/artefacts, guided tours, and printed materials, which represent the types communication media commonly found at heritage sites. Within each media, the contribution of each communication factor toward developing a visitor's state of mindfulness is also investigated.

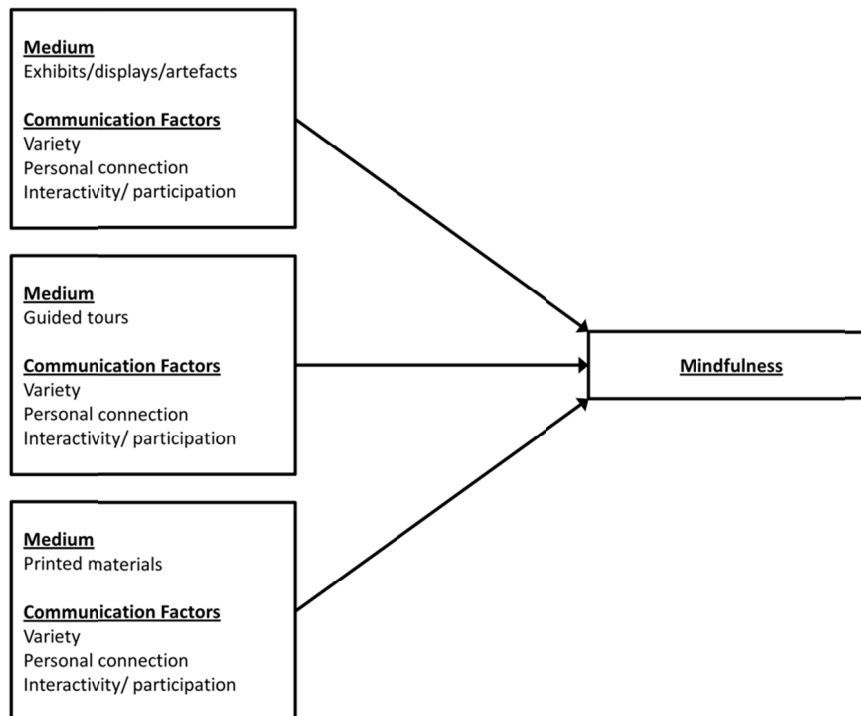


Figure 2. The relationship between communication factors and mindfulness

#### 4. Methods

A survey questionnaire was used to investigate the effects of the communication factors used in three different communication media (i.e. exhibits/displays/artefacts, guided tour, and printed materials) on inducing mindfulness among heritage site visitors. Purposive sampling was used to develop the sample for this study. The sample consisted of visitors who were visiting selected Melaka heritage sites that feature all three communication media. The sites that were chosen in this study were the A Famosa Fort, the Ruins of St. Paul's Church, the Stadhuys, Malacca's Sultanate Palace, the Maritime Museum, and the Franciscan Monastery "Madre De Deus". Attempts were made to approach visitors who have experienced all three communication media; however, few visitors went on a tour with a tour guide. A total of 326 respondents, consisting of both local and international tourists, were approached, of which 200 were selected for the final analysis. Those who did not complete the questionnaire cited that they were not interested or that they felt that the questionnaire was too long. Of the 200 respondents selected for the final analysis, only 76 went on tour with a tour guide.

The study was conducted in the peak tourist season of June 2013, from late morning to late afternoon, within a period of four days toward the end of the week. Respondents were approached toward the end of their tour at a site. They were asked to recall their visit and self-complete the questionnaire based on what they could remember. They were encouraged to ask questions of the questionnaire administrator if they had any problem completing the questionnaire. Most respondents took less than 15 minutes to complete the questionnaire.

##### 4.1 Questionnaire Development

The questionnaire for this study was adapted from similar questionnaires used in previous studies (e.g. Moscardo, 1999; Woods & Moscardo, 2003). Based on Woods and Moscardo (2003), several communication factors which overlapped were grouped into three communication factors; namely variety, personal connection, and interactivity/participation. In developing each statement for the communication factors, modifications were made to accommodate the elements of the communication factors (i.e. variety, personal connection, and

interactivity/participation) in each of the communication media (i.e. exhibits, guided tours, and printed materials) used at the Melaka World Heritage Sites. For example, for personal connection of exhibits/displays/artefacts, the respondents were asked to respond to the statement, "The exhibit/display/artefact encouraged me to think about how the heritage relates to my own cultural background"; but for guided tour the statement read, "The explanation by the tour guide encouraged me to try to draw connections between the heritage and myself". Modifications were also made to reflect the uniqueness of the communication media. For example, for interactivity/participation in exhibits/displays/artefacts, the respondents were asked to respond to a statement concerning how they were able to touch and feel the exhibits/displays/artifacts (when allowed) and for guided tours there was a statement about how the tour guide encouraged visitors to actively interact with him/her and other people at the heritage site. Effort was also made to construct the statements in different ways to minimize boredom and fatigue in completing the questionnaire.

The questionnaire consisted of three sections (Section A, B, and C). Section A consisted of demographic details for which there were seven questions. Section B concentrated on the independent variables identified this study, targeting the communication factors. Questions were asked regarding the communication factors (i.e. variety, personal connection, and interactivity/participation) for each of the three media (i.e. exhibits/displays/artefacts, guided tours, and printed materials). There were 34 items in this section. The degree of agreement with each statement was measured using a five-point Likert scale ranging from "strongly disagree" to "strongly agree". Section C comprised seven statements measuring mindfulness, the dependent variable in this study. The questions were in both English and Malay.

#### 4.2 Independent Variables

The three independent variables in this study, variety, personal connection, and interactivity/participation were operationalised based on how they had been conceptualised in the previous mindful tourism literature (e.g. Frauman & Norman, 2004, Moscardo, 1999, Winkle & Backman, 2009, Woods & Moscardo, 2003). Following Woods and Moscardo (2003), the communication factors were parsimoniously combined to form three categories. A pilot study was subsequently conducted to test the internal reliability of the items used in the questionnaire.

##### 4.2.1 Variety

For the purposes of this study, variety refers to communication elements reflective of changes in routines, changes in pace, and multiplicity of experiences. Respondents were asked to indicate their level of agreement with the following statements:

Exhibits/displays/artefacts:

- (1) The content of the exhibit/display/artefact has multi-faceted explanations.
- (2) I find the content on exhibit/display/artefact has novelty/unexpected/surprising value for me.
- (3) A variety of media, such as slides, audiovisuals, texts, illustrations, computers, books, and talks were used at this heritage site.
- (4) The exhibits/displays/artefact have both educational and entertainment content.
- (5) Electronic media, such as video or computer displays, were provided at this heritage site.

The reliability test for variety (exhibits/displays/artefacts) revealed  $\alpha = 0.353$ , below the acceptance level of  $\alpha > 0.7$ . Item five was subsequently deleted as it led to the greatest increase in the alpha value.

Guided tours:

- (1) The tour guide provided various activities for visitors to choose from according to their preferences.
- (2) The tour guide encouraged me to participate in different activities during the tour.
- (3) The tour guide presented information about the heritage site in many interesting ways.
- (4) The tour guide used various approaches to generate my interest in the heritage.

The reliability test for variety (guided tour) revealed  $\alpha = 0.789$ , above the acceptance level of  $\alpha > 0.7$ . All items in this category were subsequently retained.

Printed materials:

- (1) There were various printed materials (e.g. brochures, maps, diagrams, guide books, signage, flyers) providing information about the site.

- (2) The availability of different printed materials (e.g. brochures, maps, diagrams, guide books, signage, flyers) facilitated my getting the information that I needed.
- (3) The printed materials (e.g. brochures, maps, diagrams, guide books, signage, flyers) presented information about the heritage site in various interesting ways.
- (4) The printed materials (e.g. brochures, maps, diagrams, guide books, signage, flyers) provided a variety of different information about the site.

The reliability test for variety (printed materials) revealed  $\alpha = 0.945$ , above the acceptance level of  $\alpha > 0.7$ . All items in this category were subsequently retained.

#### 4.2.2 Personal Connection

Personal connection refers to the visitors' sense that the heritage found at the site was somehow personally relevant. Statements that were presented to the respondents were intended to measure their level of agreement as to how the content being presented in the exhibits/displays/artefacts, printed materials, or by the tourist guide could create a sense of personal relevance to the visitor. The statements also revolved around the approaches used by tour guides in creating feelings of personal connection towards the site's heritage.

The respondents were asked to provide their level of agreement to the following statements:

Exhibits/displays/artefacts:

- (1) The exhibit/display/artefact encouraged me to think about how the heritage at this site relates to my own cultural background.
- (2) The exhibit/display/artefact generated questions on how the heritage at this site is linked to my heritage.
- (3) The exhibit/display/artefact encouraged me to think about my own heritage.
- (4) The exhibit/display/artefact has increased my interest in my own heritage.

The reliability test for personal connection (exhibits/displays/artefacts) revealed  $\alpha = 0.863$ , above the acceptance level of  $\alpha > 0.7$ . All items in this category were subsequently retained.

Guided tours:

- (1) The explanation given by the tour guide has, to a certain extent, made me think of my own heritage.
- (2) The explanation given by the tour guide encouraged me try to draw connections between the site's heritage and myself.
- (3) The information provided by the tour guide increased my interest in my own heritage.

The reliability test for personal connection (guided tour) revealed  $\alpha = 0.901$ , above the acceptance level of  $\alpha > 0.7$ . All items in this category were subsequently retained.

Printed materials:

- (1) I could relate myself with this heritage site better after reading the content of the printed materials (e.g. brochures, maps, diagrams, guide books, signage, flyers).
- (2) The printed materials (e.g. brochures, maps, diagrams, guide books, signage, flyers) here have increased my curiosity about my own heritage.
- (3) The information on the printed materials (e.g. brochures, maps, diagrams, guide books, signage, flyers) stimulated my interest in the link between my heritage and the site's heritage.
- (4) The information from the printed materials (e.g. brochures, maps, diagrams, guide books, signage, flyers) encouraged me to draw connections between my present situation and the past.

The reliability test for personal connection (printed materials) revealed  $\alpha = 0.890$ , above the acceptance level of  $\alpha > 0.7$ . All items in this category were subsequently retained.

#### 4.2.3 Independent Variables: Interactivity/Participation

Interactivity/participation refers to the opportunity for visitors to participate directly in the interpretation or communication of the heritage, and the control that visitors have in interpreting that heritage. Respondents were asked to provide their level of agreement to the following statements:

Exhibits/displays/artefacts:

- (1) I was able to touch and feel the exhibits/displays/artefacts.

(2) I was able to control the amount of information I got from the exhibits/displays/artifacts.

(3) The exhibits/displays/artefacts allowed me to gain information in various ways.

The reliability test for interactivity/participation (guided tour) revealed  $\alpha = 0.740$ , above the acceptance level of  $\alpha > 0.7$ . All items in this category were subsequently retained.

Guided tours:

(1) The tour guide encouraged me to actively interact with him/her and other people at the heritage site.

(2) The tour guide encouraged me to actively explore all the exhibits/displays/artefacts.

(3) The tour guide encouraged me to be an active participant in all the activities at the heritage site.

(4) The tour guide encouraged me to ask questions during my visit to the heritage site.

The reliability test for variety (exhibits/displays/artefacts) revealed  $\alpha = 0.251$ , below the acceptance level of  $\alpha > 0.7$ . The third item was deleted as it led to the greatest increase in the alpha value.

Printed materials:

(1) The information in the printed materials (e.g. brochures, maps, diagrams, guide books, signage, flyers) were presented in ways that encouraged me to seek more in-depth information on my own.

(2) The printed materials (e.g. brochures, maps, diagrams, guide books, signage, flyers) included activities such as games/puzzles/Q&A/FAQ that encouraged me to participate actively in seeking information or finding answers.

(3) The printed materials (e.g. brochures, maps, diagrams, guide books, signage, flyers) are quite interactive.

(4) The information provided in the printed materials (e.g. brochures, maps, diagrams, guide books, signage, flyers) and guidebooks have encouraged me to pursue my interests and ask questions about the heritage site.

The reliability test for interactivity/participation (guided tour) revealed  $\alpha = 0.827$ , above the acceptance level of  $\alpha > 0.7$ . All items in this category were subsequently retained.

#### 4.3 Dependent Variable: Mindfulness

Mindfulness refers to a state of mind in which one becomes engaged with their surroundings and pays careful attention to present experiences on a moment-to-moment basis (Frauman & Norman, 2004; Langer & Moldoveanu, 2000; Marlatt & Kristeller, 1999; Moscardo, 1996; Woods & Moscardo, 2003). Items used to measure mindfulness were adapted from Frauman and Norman (2004). The respondents were asked to provide their level of agreement to the following statements:

(1) I had my interest captured.

(2) I searched for answers to questions I may have had.

(3) I had my curiosity aroused.

(4) I inquired further about things at the heritage site.

(5) I explored and discovered new things.

(6) I was involved in what is going on around me.

(7) I was in control of what is going on around me.

The reliability test for mindfulness revealed  $\alpha = 0.799$ , above the acceptance level of  $\alpha > 0.7$ . All items in this category were subsequently retained.

## 5. Results

Three multiple regression tests were conducted to predict how well the communication factors (i.e. variety, personal connection, and interactivity/participation) predicted the visitors' state of mindfulness. The first analysis, Model 1, sought to elucidate the predictive value of the communication factors in exhibits/displays/artefacts for mindfulness. The second analysis, Model 2, sought to predict how well the communication factors predict visitor mindfulness for guided tours. The third analysis, Model 3, predicts how well the communication factors predict visitor mindfulness for printed materials. The analyses revealed that the regression equation for all communication media were significant. For Model 1 (exhibits/displays/artefact),  $R^2 = .149$ , adjusted  $R^2 = .136$ ,  $F(3, 197) = 11.146$ ,  $p < .000$ . For Model 2 (guided tours),  $R^2 = .152$ , adjusted  $R^2$

= .117,  $F(3, 73) = 4.304$ ,  $p < .001$ . For Model 3 (printed materials),  $R^2 = .218$ , adjusted  $R^2 = .206$ ,  $F(3, 197) = 18.205$ ,  $p < .000$ . Table 1 presents a summary of the multiple regression analysis for the three models. Based on these results, the communication factors appear to contribute toward predicting mindfulness for the three communication media. Of the three communication media, printed materials seem to gain the most from the communication factors in influencing visitors' state of mindfulness, whereby 20% of the variability of mindfulness was accounted for by the communication factors compared to only 13% for exhibits/displays/artefacts and 11% for guided tour.

Closer inspections on the models showed that for Model 1 (exhibits/displays/artefacts), variety ( $\beta = .264$ ,  $p < .05$ ) was found to be the only significant predictor of mindfulness. In Model 2 (guided tours), interactivity/participation ( $\beta = .385$ ,  $p = .018$ ) was found to be the only significant predictor of mindfulness. In Model 3 (printed materials), interactivity/participation ( $\beta = .326$ ,  $p < .05$ ) was found to be the only significant predictor of mindfulness. These results indicate that the communication factors that influence mindfulness differ from one media to another. For exhibits/displays/artefacts, variety is the central contributing factor, and for guided tours and printed materials, interactivity/participation is the key contributing factor. Interestingly, personal connection does not seem to contribute towards mindfulness in any of the three communication media.

Table 1. Multiple regression analysis of communication factors predicting mindfulness

Communication factors	Mindfulness		
	$\beta(p)$ Model 1 Exhibition/displays/artefacts	$\beta(p)$ Model 2 Guided tours	$\beta(p)$ Model 3 Printed materials
Variety	<b>.264*</b> (.004)	.107 (.530)	.008 (.936)
Personal connection	.071 (.343)	-.111 (.522)	.173 (.066)
Interactivity/participation	.112 (.206)	<b>.385*</b> (.018)	<b>.326*</b> (.001)
$R^2$	.149	.152	.218
Adjusted $R^2$	.136	.117	.206
$F$	4.304	18.205	
$Sig.$	.008	.000	

$N = 200$  (exhibits and printed materials);  $N = 76$  (guided tour) \* $p < .05$ , \*\* $p < .001$ .

## 6. Discussion

This study provides insights on how communications factors in different communication media contribute towards visitors' states of mindfulness at heritage sites. The results of this study concur with those of previous studies (e.g. Norman & Frauman, 2009; Woods & Moscardo, 2003) in showing that communication factors play an important role in influencing visitor mindfulness. However, the results of this study provide more specific insights on how the communication factors work for different media. Firstly, while previous studies suggest that all the communication factors (i.e. variety, personal connection, and interactivity/participation) are important in influencing mindfulness (e.g. Moscardo, 1999; Norman & Frauman, 2009; Woods & Moscardo, 2004), the results of this study indicate that only variety and interactivity/participation contribute toward mindfulness. Personal connection does not seem to play a significant role in any of the communication media used at heritage sites in Melaka. Secondly, the study indicates that the effects of the communication factors on mindfulness depend on the type media. Specifically, the results indicate that variety is important in influencing mindfulness for exhibits/displays/artefacts; but not for guided tours or printed materials. On the other hand, interactivity/participation is important in influencing mindfulness for guided tours and printed materials; but not for exhibitions/displays/artefacts. It is noted, however, that the context of the study, that is the communication of



heritage, may have some implications on how the communication media work. Therefore, further investigation is necessary across other tourism communication contexts, such as the communication of nature or culture.

The findings of this study underscore the importance of understanding how each communication media works in influencing visitors' states of mindfulness and provides some preliminary input for managerial actions at tourism destinations. For heritage site management, when it comes to creating mindfulness, the way that the information is communicated must be matched to the communication media. As postulated by Moscardo (1999), exhibitions that provide variety, personal connection, and interactivity/participation lead to mindfulness which consequently creates more learning, more satisfaction, and greater understanding among visitors. The findings of this study indicate that variety in exhibitions/displays/artefacts contributes toward creating mindfulness; but the same cannot be said for personal connection and interactivity/participation. Therefore, heritage site management should focus on building variety, such as using different techniques in presentations (e.g. mannequins and 3D video presentations to depict Melaka's historical figures) and presenting varied perspectives on the heritage (e.g. the economic, social, and cultural perspectives) of Melaka's colonial era. Alternatively, interactivity/participation in guided tours and printed materials contribute toward mindfulness; but not variety or personal connection. Therefore, an emphasis on interactivity should guide the development of content and presentations in guided tours and printed materials. Tour guides should be trained to engage tourists in two-way communication, during which tourists are given opportunities to ask questions, debate issues, present their own opinions, or contribute their own knowledge. Tourists should feel that they have control over their experience of the heritage site. As for printed materials, the information and interpretations should be presented in such a way so as to solicit the tourists active participation in constructing new knowledge, such as by encouraging them to draw from their own experiences and past knowledge to help them understand what is being presented with respects to heritage. Interactivity might also be bolstered by the introduction of mental or physical challenges, such as trivia questions or games that require the tourist to search for information or artefacts at specified locations.

## 7. Conclusion

The findings in this study provide some insights on how best to design the communication approaches used in media that is used to deliver heritage information and interpretations. These actions are intended to improve tourists' learning, understanding, and satisfaction at heritage sites and to consequently produce tourists who are more educated and appreciative of the heritage and exhibit more responsible behaviour at the site; more willing to communicate and promote the heritage site to others, and more likely to be supportive toward efforts to conserve and preserve the heritage site. To conclude, this study confirms the importance of leveraging communication factors in developing mindfulness among tourists. However, in contrast to previous studies, the key findings of this study suggest that personal relevance does not play a significant role in any of the communication media investigated in this study, and that each communication media relies on one specific communication factor which is most likely to induce mindfulness. Since this study is one of the first mindful tourism studies carried out in Malaysia, more studies involving different heritage settings might provide a better understanding of the relationship between the communication factors and mindfulness.

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