

Embracing tourist behaviour in managing Melaka WHS

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Abstract. Melaka WHS has inherited an outstanding universal value (OUV) that are listed as a World Heritage Site that must be properly managed. Stakeholders and agencies that manage a WHS are faced with a major challenge. In particular, making decisions for Melaka WHS is very challenging. WHS is a complex site where the management of the area requires the coordination of a large number of disciplines. Extending this line of research, the present study aims to understand the different perspectives of stakeholders and agencies that manage tourism resources through the tourist behaviour information gathered. In doing so, face to face interviews is conducted to validate the findings from those responsible and knowledgeable in managing WHS using content analysis in constructing appropriate themes which later can be used to develop a visitor management plan effectively. Evidence from five responsible agencies involved in managing Melaka WHS indicated that knowledge of tourist behaviour helps in assisting them in future planning and management. The results provide a different insights on the management actions and preferences. With proper knowledge, activities of tourists can be recorded and can be further used to inform management decisions such as wayfinding, accessibility, and carrying capacity.

1. Introduction

In reality, most locations, regardless of natural or cultural heritage, faced an increasing number of tourists after being designated as a WHS [1, 2]. Like other WHSs, Melaka WHS is now faced with an increasing number of tourists following its WHS designation in 2008. Up until 2017, Melaka WHS still continues to receive a huge number of tourists each year. However, in many cases, the increase in tourists as a result of the WHS designation has also negatively affected the historic environmental sustainability of the designated sites [3]. According to UNESCO, tourism is the second-most reported threat to World Heritage Sites, next to pressure from development [4]. However, there is a reason to believe that increased visitation does not only result in negative impacts, but also helps increase the financial expansion of local communities. Therefore, it is important to effectively manage tourists in order to sustain the World Heritage Site in the long term.

Many development strategies related to urban heritage have been given priority in managing heritage assets, especially areas where tourism is the main economic source. As highlighted by Pierret [5], to ensure that a destination enjoys long-term success, space around the area must be managed properly. Ertan and Egercioglu [6] mentioned that most heritage cities are now experiencing uncontrolled development due to rapid economic growth, which result in the decay of historic cores. This phenomenon is hugely critical because a city's historic centre is the heart of its urban identity



which once abandoned; the identity of the city diminishes as well. As mentioned by Ismail, Masron and Ahmad [7], there are always issues and challenges when managing such destinations. These include issues arising from the increase in tourists at the surrounding areas. As such, the physical capacity of the site could become strained from having to handle a larger number of tourists. These are among the current challenges faced by Melaka WHS in positioning itself as a major heritage destination in Malaysia.

In the case of Melaka WHS, the responsible authorities in managing and conserving the World Heritage Site are the Jabatan Warisan Negara (JWN), Jabatan Perancangan Bandar dan Desa (JPBD) Melaka (PLAN Malaysia @Melaka), Majlis Bandaraya Melaka Bersejarah (MBMB), Melaka World Heritage Office (MWHO), and Perbadanan Muzium Melaka (PERZIM). The opinions of stakeholders of Melaka World Heritage Site is also crucial in managing the tourism in the area. Therefore, this paper is focusing on the extension of tourist behaviour analysis and how those information help stakeholders in managing Melaka as a World Heritage Site. Based on section 5.2.8 of the Conservation Management Plan (2011), a major threat to WHS is the pressures generated by the onslaught of mass tourism. This is evident in Melaka WHS where the key strength of the site is its tourism attraction and potential where if not managed properly, mass tourism could bring with it undue pressures and challenges that may undermine the long-term sustainability of the WHS. As seen today, Melaka is now facing tremendous growth in tourism activities since its establishment as a World Heritage Site in 2008. [8] also shared the same observation in that tourist interest to travel to Melaka has recently increased and is expected to continue to rise.

2. Literature review

2.1. Managing and conserving Melaka World Heritage Site and its OUV

A conservation management plan report was approved and endorsed by the full council meeting of Majlis Bandaraya Melaka Bersejarah (MBMB) on the 30th of January 2008. Basically, this plan provides a guide to future care and use of the heritage area. It also serves as an important tool in caring for very unique and diverse tangible and intangible heritage that Melaka has inherited from its illustrious historical past. Therefore, this plan is very important, especially for those involved in developing the city centre. This plan considers the protection and enhancement of the World Heritage Site at the early stages of the planning process. It is important to note that Melaka without a doubt is a heritage city. Melaka has a great significant value to Malaysia. Therefore, Melaka needs to be protected from any threat and destruction.

In 2011, the Malaysian Government submitted Conservation Management Plan (CMP) and Special Area Plan (SAP) documents to the World Heritage Committee, UNESCO, for the Melaka and George Town Historic Cities. The preparation of the Conservation Management Plan and the Special Area Plan for Melaka and George Town World Heritage Site are in accordance with the requirements of the World Heritage Committee at its meeting in Seville, Spain in year 1972. The Conservation Management Plan falls under the general requirements of the World Heritage Committee on conservation management. On the other hand, the Special Area Plan is intended to ensure that the guidelines and recommendations of the Conservation Management Plan are implemented under the Malaysian Law. The preparation of a Special Area Plan is provided under the Town and Country Planning Act 1976 (Act 172).

Melaka WHS has inherited an outstanding universal value where these areas must be free from threats of destruction and must be protected from vanishing. Basically, properties can only be included on the World Heritage List if they have at least one OUV. The intergovernmental World Heritage Committee makes this decision. This committee is an independent body of 21 elected officials representing countries that have ratified the World Heritage Convention in year 1972 [9]. In this context, Outstanding Universal Value (OUV) characterises cultural heritage. The OUV should be interpreted as an outstanding response to issues of universal nature common to or addressed by all human cultures [10].

Since the establishment of Melaka as a UNESCO World Heritage Site in 2008, heritage has significantly emerged as a new trend in tourism. This was also highlighted in the National Tourism Development Strategy through the 9th and 10th Malaysia Plan. In these plans, heritage tourism is listed as one of the nine cores of tourism development in Malaysia. An increasing number of tourists to heritage destinations has been recorded, especially in Melaka WHS. Ismail, Masron and Ahmad [7] also observes the same phenomenon. They mention that there are an increasing number of tourists that seek cultural aspects, historical archaeology, and interactions with local people. It is crucial to understand the different perspectives of stakeholders and agencies that manage tourism resources. This is especially true for a destination where tourism is its main source of income. According to the observation by Kim [3], there are always issues and challenges when managing such destinations. These issues are related to the effect of increasing number of tourists to the surrounding areas. The physical capacity of the site to handle tourists becomes a problem as well. Melaka WHS is now facing these issues as an urban heritage destination. To position itself as a major heritage destination in Malaysia, Melaka must address these issues.

Stakeholders and agencies that manage and conserve a WHS are faced with a major challenge. In particular, making decisions for Melaka WHS is very challenging. WHS is a complex site where the management of the area requires the coordination of a large number of disciplines and agencies. Therefore, there is a need to manage information on the heritage site. With this point of view, the wide range of individuals and organisations involved in managing WHSs should be well recognised. This will help in making decisions pertaining to the heritage site. Apart from that, there is much about the character and condition of the WHS that have yet to be understood. Knowledge of tourists is one of the important aspects that need to be understood, especially in the context of managing WHSs. This is mainly because it is difficult to manage and conserve heritage sites if there is no proper knowledge about the site. With proper knowledge, activities of tourists can be recorded and can be further used to inform management decisions. Visitor management such as linkages, wayfinding, accessibility, and carrying capacity is an example of such a decision. In line with this, acknowledging the responsible authorities that manages the area and their roles is substantial.

2.2. Roles and responsible authorities in managing and conserving Melaka World Heritage Site (WHS)
Managing and conserving a heritage destination are not an easy task, as it requires the active support and commitment of a range of stakeholders. This includes the tourists themselves as the key people that actually use the destination [11]. It is extremely important to control and prevent the Outstanding Universal Value (OUV) from being damaged. Often, this includes making tough decision and enforcing them [12]. However, managing a heritage destination should not solely be based on the collaboration between stakeholders and the Government. The users, which are the tourists, must also be included. In this context, the existence of tourists and how they behave have been studied. This is mainly because it is difficult to manage and conserve heritage sites if there is no proper knowledge about the site. With proper knowledge, activities of tourists can be recorded and can be further used to inform management decisions. Their responses can be further used to shape policies and ensure that the governance methods are fit for the intended purpose.

In a wider context, Idid and Ossen [13] claim that the Malaysian Government has also produced development plans for different periods, namely the Tenth Malaysia Plan, Economic Transformation Programme (ETP), National Tourism Policy, National Physical Plan (NPP), and Local Agenda 21 (LA 21). These development plans were introduced and implemented to promote and strengthen the concept of sustainable tourism in the country through various policies and regulations. The central authority is responsible as a tool to enable conservation of culture heritage resources in Malaysia. However, at the State level, local authorities such as the state planning committee (JPBD) and state heritage committee (MBMB, MWHO and PERZIM) serve as the management tool to conserve heritage assets. The collaboration between different stakeholders is very important for Melaka city to ensure a more sustainable tourism development, especially at the world heritage area. Table 1 outlines the stakeholders and agencies involved in protecting, conserving, and managing Melaka as a World

Heritage Site. This ensures that the value of heritage assets in the destination is sustained and protected. Brida and Scuderi [14] also point out that urban planning and heritage conservation are largely locally administered processes in Melaka. Therefore, conflicting objectives between different development policies within the Structure Plan of the Majlis Bandaraya Melaka Bersejarah could further complicate the decision-making process.

Table 1. Existing institutional and organisational set-up for managing and conserving Melaka WHS.

No.	Stakeholders/Agencies	Roles and Responsibilities
Federal level	Jabatan Warisan Negara (Southern Zone)	<ul style="list-style-type: none"> ▪ Formulate policies and issues directives in regard to heritage protection and activities such as the Conservation Management Plan ▪ Conserve, preserve, and protect cultural heritage and natural heritage through research, documentation, enforcement, and promoting awareness of heritage.
State Level	Jabatan Perancangan Bandar dan Desa (JPBD)	<ul style="list-style-type: none"> ▪ Responsible for the planning of development and use of land in Melaka State. ▪ Prepare State Structure Plan, District Local Plan, and Special Area Plan for Melaka.
	Perbadanan Muzium Melaka (PERZIM)	<ul style="list-style-type: none"> ▪ Making improvements to the museum under its control, opening new museums, conserving Malay traditional houses, organising public seminars, and taking an active part in tourist promotions in Melaka – under the Melaka Museum Board Enactment (1992)
Local Level	Majlis Bandaraya Melaka Bersejarah (MBMB)	<ul style="list-style-type: none"> ▪ To act on applications for development in heritage areas, and to liaise with PERZIM on heritage conservation matters. ▪ Manages development applications and enforcement of regulations under its heritage areas
	Melaka World Heritage Office (MWHO)	<ul style="list-style-type: none"> ▪ Protecting, conserving, and promoting the World Heritage Site of Melaka.

The tourism industry has gained prominence in these modern times due to it being a driver for economic growth [15]. The industry has successfully become the leading economic engine for most of the regions in the world [9]. Heritage tourism has also become a driver for development. This type of tourism can enhance the liveability of its surrounding areas as well as sustain its productivity, if properly managed [16]. For the study, the understanding of international tourist behaviour will benefit the local authorities and central authority. This is mainly because managing heritage sites should not only take into account the perspective of stakeholders only (supply). It also needs to consider the perspective of the demand side, which are the tourists themselves. Nasser [17] also mention that heritage tourism is one of the main attractions for international tourists. It therefore contributes to the major source of foreign income exchange. Apart from that, Ung and Vong [18] also states that the symbiosis between tourism and heritage places today has become a major objective in the management and planning of historic areas. Nowadays, marketing of heritage as a product according to the demand of the consumer, mainly tourists, has resulted in the commercialisation of heritage rather than conservation of its value.

Both tourists and destination communities are major stakeholders in heritage tourism. They can be influenced and impacted by heritage tourism development. One of the ways for tourists to satisfy their various needs is through consuming the heritage resources. This also impacts the destination economically, socially, and environmentally. Su et al. [19] clarify that many studies have examined different aspects of heritage tourists. These include motivation, preferences, tourist profile, perceptions as well as satisfaction. Chen and Chen [20] also agree that these aspects are critical for both academicians and practitioners. The information of which will help in understanding the demand for

heritage resources. Besides that, the quality of the services and tourism products can be improved. Ballantyne et al. [21] state that it is critical for planners and managers of heritage sites to incorporate tourist perspectives in tourism planning. In this context, Su and Wall [22] remark that tourists can be categorised as domestic and international tourists.

Jin and Pearce [23] reveal that it is important to examine how tourists use and interact with heritage resources. The tourist preference and perception will later help in assisting heritage planners and managers. This is important to maximise the benefits of management programmes, while reducing the negative consequences. Tourist management at heritage sites is critical, especially for a destination that is consistently receiving a huge number of tourists every year. Therefore, one important way to achieve sustainability in heritage tourism is to manage the tourists in a way that improves the quality of their experiences and preserves heritage resources for future generations. According to Adam and Lawrence [24], there are many approaches that have been suggested in the literature. These studies have discussed the management of heritage sites to minimise the impact of tourist behaviour at the destination. Therefore, it is important to acknowledge tourist behaviour when they are consuming the heritage destination. This information can help tourism players manage heritage sites.

3. Methodology

According to ethical guidelines, studies and research works should be designed so as to increase knowledge on behaviours, situations, or theories [24]. This shows that the researchers have the responsibility to use measures and procedures that will produce meaningful results. Apart from that, [24] also added that violations of ethical standards of the research could occur if unreliable measures or procedures were included. This will not make sense in the overall research findings. Therefore, the study conducted a face validation, which refers to a simple interview/survey with stakeholders (using open-ended questions). This process will validate the analysis and findings from the survey of the respondents in regard to how the findings can help in managing Melaka WHS. Table 2 shows the responsible authorities that were involved in the process.

Trip diaries, GPS tracking and questionnaire surveys of international tourists were used as the primary data collection methods for the study. This method aims to understand tourist behaviour in terms of their non-spatial and spatial characteristics. The data gathered were further analysed to obtain the overall picture of international tourist behaviour when visiting an urban heritage destination. In the case of this study, the destination is Melaka WHS. Interviews with the responsible authorities and the collection of secondary data including related documents and tourism statistics were conducted. This facilitated the effective execution of surveys and complemented the results of the primary data, as illustrated in Figure 1. Representatives from the management agency were contacted and interviewed including MBMB, PERZIM, JPBD Melaka, and MWHO. Semi-structured face-to-face interviews were conducted in February 2017. Interview questions included the current status of tourism development, impacts of tourism, and management structure of Melaka WHS.

Table 2. List of interviewees for data validation.

Respondent 1 (R1) :	
Position	Conservation Architect, Majlis Bandaraya Melaka Bersejarah (MBMB)
Experience	<ul style="list-style-type: none"> ▪ Involved as a conservation architect for PERZIM since 2008. ▪ Worked with the building control department of MBMB in 2015. ▪ Responsible for managing and conserving the WHS. ▪ Referred by most respondents as the ‘key person’ in the conservation and management of the Melaka WHS.
Respondent 2 (R2) :	
Position	Senior Engineer, Majlis Bandaraya Melaka Bersejarah (MBMB)
Experience	<ul style="list-style-type: none"> ▪ Involved as a senior engineer under conservation unit, MBMB since 2008. ▪ Responsible for managing and conserving the WHS.
Respondent 3 (R3) :	
Position	Former Head of Melaka World Heritage Office (MWHO)
Experience	<ul style="list-style-type: none"> ▪ Involved in managing WHS since its nomination in 2008. He has been working for PERZIM for a few years and transferred to MBMB. ▪ After Melaka was listed as a UNESCO WHS, there is a need for an entity that reports and monitors the site. MWHO were further established. ▪ He has been given the responsibility as Head of MWHO from December 2011 until July 2016.
Respondent (R4) :	
Position	Curator, Department of Antiquity, Perbadanan Muzium Melaka (PERZIM)
Experience	<ul style="list-style-type: none"> ▪ Worked with PERZIM since 1992, and has held the position of curator for 8 years. ▪ Responsible for conservation and maintenance works of the buildings in WHS from 2008 up to the present.
Respondent (R5) :	
Position	Chief Assistant Director, JabatanPerancangan Bandar dan Desa (JPBD)
Experience	<ul style="list-style-type: none"> ▪ Worked as a planner for JPBD since 2001 and transferred to Pejabat Projek Zon Selatan (Melaka) in 2012. ▪ Directly involved in the monitoring of development projects such as the Structure Plan, Local District Plan, and Special Area Plan. ▪ Transferred to JPBD Melaka in 2014 and assumed the position of Chief Assistant Director and now involved in all activities/work related to the development plans in Melaka up until now.

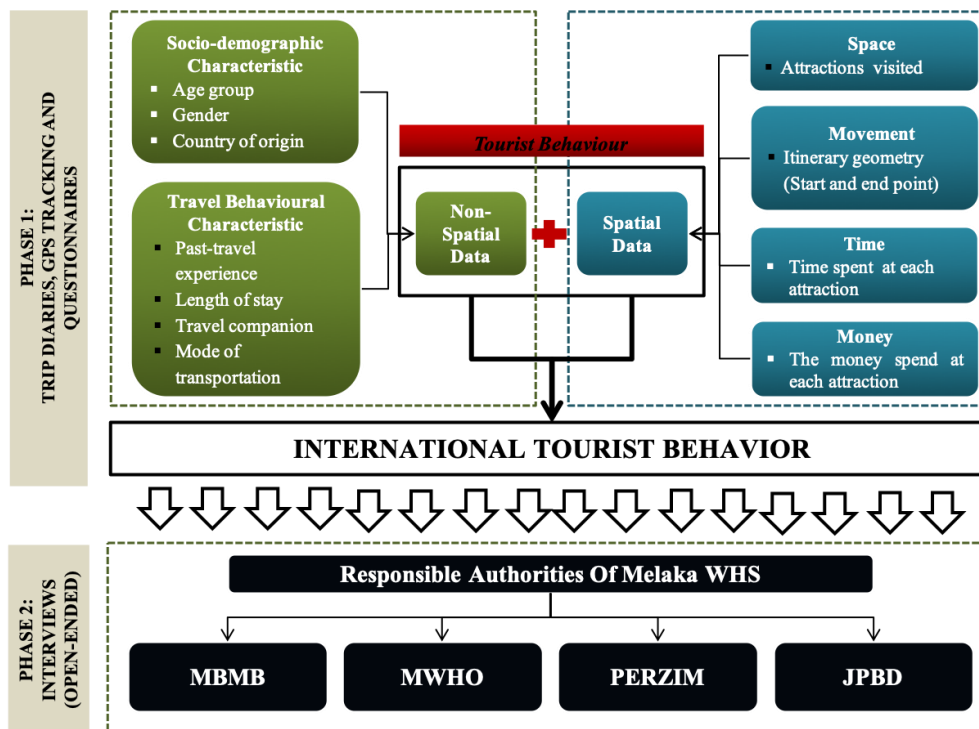


Figure 1. Responsible authorities in managing Melaka WHS.

4. Tourist behaviour in assisting responsible authorities in managing Melaka as a World Heritage Site

After all the information on tourist behaviour have been analysed and accumulated, the data were bring forward to the responsible agencies in Melaka WHS for validation. The questionnaire were structured into an open-ended questions based on the data that have been analysed earlier. The interview provides a different way and perspective for responsible authorities to understand tourist behavioural information gathered from the analysis of the study. It also relates how this information can be used as valuable data and information in managing Melaka as a World Heritage Site. The UNESCO guidelines, Conservation Management Plan, and Special Area Plan of Melaka Historical City are used as a basis for the open-ended guide questions. The questions are mainly focused on visitor management and how it contributes towards protecting the Outstanding Universal Value of Melaka WHS. Among the responsible authorities involved are Majlis Bandaraya Melaka Bersejarah (MBMB), Melaka World Heritage Office (MWHO), Perbadanan Muzium Melaka (PERZIM), and Jabatan Perancangan Bandar dan Desa (JPBD) Melaka.

In this context, MBMB and MWHO are not directly involved in tourism development and management in Melaka WHS. This is because this aspect is under a different indicator like Melaka Tourism Promotion. However, MWHO and MBMB are directly involved in the site management, and therefore interact with the users of the site. In other words, the users are the tourists. After 9 years of Melaka's establishment as a World Heritage Site, there is still no visitor management plan in place. The local authorities should provide this plan in order to safeguard the heritage site from the pressure of the growing number of tourists. Currently, any development or activity within Melaka WHS is dependent on the Conservation Management Plan and Special Area Plan of Melaka. These focus more on physical aspects. The findings indicate that there are several tools for visitor management, which the responsible authorities regard as critical when considering tourist behavioural information. This indicates the importance of managing tourist movement and behaviour. It also justifies the basis for developing an effective visitor management plan for Melaka WHS. Based on Table 3, carrying capacity is the most important tool for effective visitor management plan followed by wayfinding and transportation management.

Table 3. Importance of tourist behaviour in managing Melaka WHS.

Responsible Authorities	Visitor Management Tools		
	Wayfinding	Carrying Capacity	Transportation Management
Majlis Bandaraya Melaka Bersejarah	√	√	√
Melaka World Heritage Office	√	√	√
Perbadanan Muzium Melaka	X	√	X
Jabatan Perancangan Bandar dan Desa	√	√	√

4.1. Carrying capacity

Carrying capacity is one of the effective tools in managing tourism pressures especially for heritage sites like Melaka WHS. Carrying capacity is basically expressed as 'the number of people visiting the site without causing irreversible damage to its natural and built environment and without decreasing the quality of the experience gained by the tourists'. Therefore, carrying capacity of tourists is a very important tool for effective visitor management. This element has to be considered in the context of heritage and destination management plans. This is supported by PERZIM:

"Too many tourists in the heritage area may negatively impact the buildings by causing vibrations and pollution. These are mainly due to the transportation's heavy use of the main streets. To make it worse, most of the streets in Melaka WHS are located between old buildings." (R4, Curator, Department of Antiquity)

This is mainly because tourists are always congregated in specific locations and times in a day. As a result, heritage protection and tourist safety are paramount. Overcrowding, noise, traffic congestion, physical degradation of monuments, and other types of impacts that occur in Melaka WHS might affect the city's heritage and/or tourist experience. In this context, carrying capacity also serves as a basic guideline in managing tourists. It takes the means of distributing the tourists, eliminates obstructions and bottlenecks, and enhances traffic flow, so as to calculate and control tourist flow effectively. Consideration of tourist flow and movement information can help the authorities plan a basic strategy for regulating tourist flows within Melaka WHS. One MajlisBandaraya Melaka Bersejarah (MBMB) officer in support of this fact, states:

“Increasing the capacity of urban tourism will reduce the pressure on the heritage area. Tourists could be distributed through the entire heritage area. Thus, the pressure on popular attractions can be reduced.” (R2, Senior Engineer, MBMB)

The State Government of Melaka has resorted to implementing this measure by dispersing the tourism attractions in Melaka rather than concentrating on the World Heritage Site only. For example, the Government has built the theme park in Ayer Keroh while Freeport A'Famosa is located in Alor Gajah, Melaka. This is one of the ways and initiatives that the Government employs to reduce congestion in Melaka city centre, especially within the Melaka WHS. Based on the tourist statistics provided by the Tourism Promotion Division, the growth in tourist numbers each year shows that it is on the increase. However, one MWHO officer adds that there is still no proper tourism plan for dispersing tourists. This can prevent overcrowding and congestion in the WHS at certain times. As seen now, the WHS area is too crowded especially during the school holidays. There is no proper time management; some of the tourists are walk-ins and others come with buses (travel agent). There are also domestic tourists that come with cars, which make the site more crowded. Furthermore, there is a limited number of parking, as MBMB has not allocated any parking areas within the core zone area. This shows that understanding how the tourists behave and move within the city can help in better managing the site. Former Head of MWHO also supports this fact. He mentions that:

“Designing an effective tourist management plan requires an analysis of tourist behaviour. Carrying capacity also has to be considered in the context of heritage management plans. This is indicated in the Conservation Management Plan and Special Area Plan of Melaka” (R3, Former Head of MWHO)

Apart from that, tourists who come to Melaka WHS come from different backgrounds. Therefore, issues related to tourists may vary because the tourists themselves are made up of different categories. There are tourists who walk in, Free Independent Tourists, tourists on fully guided tours, or on travel packages. Their intention may not necessarily be to visit Melaka but the destination has already been listed in their itinerary. Based on the findings from the study, Jonker Walk is the most visited attraction compared to other streets like Hereen Street (JalanTun Tan Cheng Lock). This is mainly because from the Second World War, Jonker Street (Jalan Hang Jebat) was already serving as a commercial street. The only difference is that some of the old grocery shops have been turned into cafes for tourists. The target market for Jonker Street has changed, and so have the activities. Jonker Street is seen as a more crowded area compared to others because its main focus is on tourists. Contrarily, Harmony Street (Jalan Tukang Emas) is quieter with lesser tourists because it only has three attractions. It also does not have any tourist facilities or cafes around the area except budget hotels and small hotels. For Hereen Street, the road looks busy and crowded because it serves as the main road for cars to go out from the old town. This phenomenon is unavoidable because cars have to use the same road. Otherwise, Hereen Street is not that busy and crowded, as the only attraction available is the Peranakan Museum.

Former Head of MWHO states that the spill over of tourists in Melaka WHS is seen as one of the issues related to tourism development (R3, Former Head of MWHO). MWHO does not know whether tourists who come to Melaka WHS are heritage tourists or otherwise. The Former Head of MWHO

states that it is highly likely that most of the tourists are not heritage tourists. This can be seen in Jonker Walk. The street has become like a '*pasarmalam*' or night market. However, it still manages to attract a lot of tourists to come. One MBMB officer states that the appearance of Jonker Walk as a night market also acts a good community initiative. This brings people from outside to come and gain benefit together from the increased number of tourists in Melaka. As a result, Melaka is positively impacted by tourism and thus needs tourists. However, tourism has also brought negative impacts. In particular, tourism and heritage are conflicting when it comes to managing the site (R3, Former Head of MWHO). It is also difficult to ensure the sustenance of the site in the long term, while still preserving its main assets, which are its Outstanding Universal Value (OUV).

4.2. Wayfinding

Knowledge of tourist behaviour, especially their spatial characteristics, will help local authorities provide better wayfinding for the tourists. Majlis Bandaraya Melaka Bersejarah (MBMB) has already provided wayfinding for tourists within Melaka WHS. However, the information gathered needs to be frequently updated, as the way tourists behave and move within the city centre frequently change according to time and space. The wayfinding provided for tourists now is basically based on a previous survey made by one MBMB officer. This officer acted as a tourist to design the wayfinding. This approach leads to misleading information when assisting real tourists that want to experience Melaka city. An effective way to provide tourists with the best experience is by understanding tourist preferences and movement style. Therefore, this study provides valuable information for the authorities to develop a better wayfinding system for Melaka. Although wayfinding only helps tourists with proper directional signage, it is still an important element that needs to be considered. According to one MBMB officer, wayfinding refers to the streets that are used by the tourists every day. The signage in Melaka WHS now is basically designed based on the survey made by the MBMB. However, the location of the signage should be based on real tourist behaviour. As indicated by one MBMB officer:

“The design of wayfinding in Melaka WHS responds to the challenges of helping and dispersing tourists. It also captures more tourists and guides them to walk by enhancing the tourism experience within the core and buffer zone through connectivity and visibility.” (R1, Conservation Architect, MBMB)

Due to the increasing number of tourists in Melaka, it is imperative that tourists can easily find their way around the site and other supplemental attractions. This will encourage the tourists to explore and discover Melaka WHS further. It will also establish physical connections between heritage sites to increase the quality of the tourist experience. Wayfinding also makes the tourist experience easier and more comfortable. The main idea of wayfinding is to bring tourists to other streets like Harmony Streets (JalanTukang Emas) rather than just focusing on Jonker Street (Jalan Hang Jebat). This way, tourists can use wayfinding to get to other places easily and not only concentrate on famous attractions. However, it should be noted that tourists that come with travel agents do not need to use wayfinding. This is because the buses that carry them have their own pit stops. Due to the time limitation imposed by the travel agent, tourists will not have the time to explore Melaka using the wayfinding provided by MBMB. Gathering information from the tourists themselves can enhance the wayfinding design of Melaka. It can also help the local authorities increase accessibility to spatial information. The integration between the non-spatial and spatial characteristics of tourists can be used to identify and develop different wayfindingbehaviours according to different types of tourists in terms of their demographic and travel behavioural patterns.

4.3 Transportation management (linkages, accessibility and traffic planning)

In most heritage destinations, tourist and traffic congestion are key issues. Understanding tourist activities, the places they have visited, the time they have spent at each attraction, and the services as well as facilities they have utilised will therefore provide valuable information for tourism scholars

and the authorities to improve tourism management. In this context, the Government agencies, especially JPBD Melaka and MBMB, can use this information to inform decision makers, redirect tourist flows to avoid overcrowding, minimise adverse impacts on sensitive area/attractions, identify potential places for leisure activities, and advise transport policies. Pedestrian facilities are very important in Melaka WHS, as walking serves as the main mode of transportation for tourists around the city centre. It also serves as an important aspect in the design of traffic management systems, as it also has implications on the overall traffic system, especially at the city centre. One JPBD officer mentions that:

“Good accessibility around the city centre and links between attractions is important. This will affect the overall tourist experience while visiting Melaka WHS” (R5, Chief Assistant Director, JPBD)

Another MBMB officer adds that more parking for cars and pedestrian walkways are in the process of being built. This is to encourage both locals and international tourists to walk within the city centre. However, limited spaces at the city centre are one of the limitations that the authorities need to acknowledge. The MBMB officer also highlights that understanding tourist movement and the routes they undertake as well as where they spend their money are important indicators. This can be used for traffic dispersion and decreasing congestions, especially at Jalan Hang Jebat, JalanLaksamana, and JalanGereja. This will fulfill the mission of MBMB, which is to provide the overall site with high accessibility and linkages. In turn, the tourists will find it easier to move around the city centre.

5. Discussion and conclusion

The aim of this paper was to understand the different perspectives of those responsible and knowledgeable in managing WHS using tourist information gathered. This was done through interviews with Majlis Bandaraya Melaka Bersejarah, Melaka World Heritage Office, Perbadanan Muzium Melaka and Jabatan Perancangan Bandar dan Desa. The study validates the information on tourist behaviour and how it helps in assisting the responsible authorities to manage Melaka as a World Heritage Site. Based on the interviews with respected authorities, several indicators were found. This will in turn help in designing an effective visitor management plan for Melaka WHS. Three main indicators have been determined based on the open-ended questions. Results from the analysis can be summarized into three main findings which includes:

- Identifying time and spatial characteristics of the routes in a destination helps to develop appropriate plans to prevent capacity overload. Carrying capacity.
- Wayfinding must be designed based on the actual behaviour of tourists and the routes they take while visiting Melaka WHS, and
- Information on tourist movement patterns and tourist flow is crucial for good transportation planning.

The findings show that understanding tourist behaviour particularly at a destination that relies on tourism is very important. The growing number of tourist arrivals in Melaka WHS can be managed using this information. An effective management plan will also help Melaka sustain its WHS status in the long term while still preserving its Outstanding Universal Value (OUV). Despite of that, findings also show that tourism development in Melaka has contributed positive impacts towards the economy of the State based on the increasing number of tourists. However, tourism can also negatively impact the heritage value of Melaka WHS if no proper actions were taken. The management and conservation of the value of heritage attractions, especially a UNESCO city, is still far from promising. The results of the study validate that information of tourist behaviour is important especially for those who responsible in managing the area. Using this information, a proper visitor management can/should be implemented and provided by the local authorities to ensure the effective management of Melaka WHS in line with the growing number of tourist arrivals as well as their behavioural pattern. This is crucial so as to maintain Melaka's status as a World Heritage Site and to protect its Outstanding Universal Value (OUV).

As a conclusion, the findings from the study is very crucial in terms of practical implications especially for the local authority, which is the MBMB. The information on tourist behaviour will help to better manage Melaka as a WHS. Using the findings, the MBMB will be able to make decisions for and manage the attractions and activities provided within the Melaka WHS. This way, the needs of the various groups of tourists can be catered for. This is crucial in practice so that destinations that offer heritage elements as their main tourism product can attract and satisfy tourist demands. Despite of that, the study also shows that it is important for Melaka WHS to have a visitor management plan. This plan can help address the growth of tourist arrivals each year. Local authorities and responsible agencies can effectively use the results of the study as a guide to develop a better visitor management plan. Melaka will soon reach its 10th year as a World Heritage site. Therefore, the local authorities should prepare a practical and effective visitor management plan. By doing so, Melaka WHS can sustain its position as a major tourism destination in Malaysia. The assessment of carrying capacity and the introduction of a visitor management plan for Melaka WHS are important initiatives for managing the increasing number of tourists and congestion at the site. A visitor management plan is one of the efforts that the local authorities need to take seriously. They must design, implement, and plan new ways of managing the growing numbers of tourists in Melaka WHS.

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