

A STUDY ON THE SIGNAGE SYSTEM IN MELAKA, THE UNESCO HERITAGE SITES

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ABSTRACT

Despite of the massive tourist visit to Melaka UNESCO sites; the sites had been one of the most visited places in Malaysia in 2015. Melaka, as one of the important UNESCO heritage sites in Malaysia with many public facilities particularly heritage buildings truly needs to consider effective signage design application to make it easier for tourist way-finding. There has been a variety of research done about user experience and way-finding, but the studies have focused either on the effectiveness of signage design or user experience. However, there is very less study that explores the understanding in connection on tourist experience and signage in prominent areas. Therefore, the aim of this study was to explore the understanding in connection to tourist experience in UNESCO heritage sites by referring to the signage. The data was collected through the pilot survey and photo elicitation in the UNESCO sites of Melaka. The findings indicated that most of the signage in the heritage sites were not effective due to the unsuitable location and ineffective design of the signage. For the directional sign, most of the sign provide the directions within a site or building including arrows. However, usage of symbols in the directional signs are minimal. For information signs at the heritage sites are related to overall orientation within a site or building. Some of the information sign do not contain maps, diagrams and directory signs that able to give the detail information to the users because of the size is too small to fit all the information needed. Lastly for identification sign, due to some of the places are not directed by the directional signs, the tourist still unable to reach the desired sites although the sites have a good identification signage. In conclusion, it is suggested that the signage should be sensitively located, scaled and detailed so as not to obscure ambiguous or distract the integrity of the historical objects.

Keywords: Heritage Site, Signage, Tourism, Way-finding

INTRODUCTION

Melaka uniqueness had attracted quite several tourists visiting in past few years. The increasing number of tourists makes the area crowded and more difficult for them to find their way through the heritage sites and buildings without getting lost and confused. As stated by Chief Minister Datuk Seri Idris Haron, out of the total 12.2 million international tourists who visited Malacca in 2015, 1.1 million or 31.27% were tourists from Singapore, followed by 711,800 from China, Indonesia (484,738), Taiwan (121,799) and

100,462 visitors from Japan (R.S.N. Murali,2016). Research studies on way-finding and focused on signage is less carried out. Therefore, more comprehensive research is required to explore the connection between way-finding ability of the tourist in heritage sites and the users experience while exploring the sites by using the effective signage design.

According to American Heritage Dictionary of English Language (2011) signage is a sign collectively and also referring to multiple of signs that used for display and advertising. Signage system is an essential part of the completeness of the data and guidance essential in the space or building. As indicated by Bitner (1992), signage is the data that helps users arrange themselves in the sites. It adds to betterment of way-finding, characterized as "a spatial critical thinking process" (Arthur and passini, 1992). Signage is a great deal more than a structure denoting the space. It is a mind boggling, intelligent medium of written communication. As stated by Yusita Kusumarini et al (2012), by following the signage can be defined as way-finding, way-signing or sign-posting.

The reason for this research is to explore the understanding in connection to tourist experience in UNESCO heritage sites by referring to the signage. The paper, specifically, adds to propel thinks to tackle the issues of lacking component on signage in Melaka heritage sites.

UNIVERSAL DESIGN PRINCIPLES

Universal Design is the design and composition of an environment so that it can be accessed, understood and used to the greatest extent possible by all people regardless of their age, size, ability or disability. An environment (or any building, product, or service in that environment) should be designed to meet the needs of all people who wish to use it. Unfortunately, there are lack of usage on universal design approach for public building and spaces in Malaysia. The signage system as part of the spatial elements in public facilities, need to be studied and applied with universal design approach.

Table 1: principles of the Universal Design

Principles of Universal Design
Principle 1 (P1): Equitable use: The design is useful and marketable to people with diverse

abilities.
Principle 2 (P2): Flexibility in use: The design accommodates a wide range of individual preferences and abilities.
Principle 3 (P3): Simple and intuitive use: Use of the design is easy to understand, regardless of the user’s experience, knowledge, language skills or current concentration level.
Principle 4 (P4): Perceptible information: The design communicates necessary information effectively to the user, regardless of ambient conditions or the user’s sensory abilities.
Principle 5 (P5): Tolerance for error: The design minimizes hazards and the adverse consequences of accidental or unintended actions.
Principle 6 (P6): Low physical effort: The design can be used efficiently and comfortably and with a minimum of fatigue.
Principle 7 (P7): Size and space for approach and use: Appropriate size and space is provided for approach, reach, manipulation, and use regardless of user’s body size, posture or mobility.

Source: The principles of universal design by Story (1998: 34-35)

Below is the checklist of signage by referring to universal design that has been simplified and adjusted to the needs of research at UNESCO heritage sites Melaka. The checklist is for the photo elicitation method employed in this research.

Table 2: Checklist entrance and circulation parameter for universal design

Code	Checklist signage and information parameter for Universal Design in UNESCO heritage sites Melaka
P1, P2,P3,P4 ,P5,P6, P7	signage is clear, good combination of colours, consistent and easy to understand
	provide maps, plans and models for larger buildings including tactile information
	select a letter size to suit the viewing distance
	Checklist information signs system parameter for Universal Design in UNESCO heritage sites Melaka
	An aid to overall orientation within a site or building

P1,P2,P4 ,P5	Examples include maps, diagrams and directory signs
Checklist directional signs system parameter for Universal Design in UNESCO heritage sites Melaka	
P1,P2,P4 ,P5	Provide directional guidance within a site or building
	Signs include arrows
	Signs include symbols
Checklist identification signs system parameter for Universal Design in UNESCO heritage sites Melaka	
P1,P2,P4 ,P5	Provide identification within a site or building
	Signs are directed by the directional signs

METHODOLOGY

This research was conducted in Melaka UNESCO heritage sites at Bandar Hilir, Melaka. The site has been added to UNESCO's World Heritage List as the Historic Cities of the Straits of Malacca at the meeting in Quebec, Canada, on 7 July 2008, becoming Malaysia's first cultural World Heritage Site (WHS) property. There are two types of techniques used in this study which are pilot survey and photo elicitation.

Pilot Survey

The pilot survey has been conducted randomly with 30 respondents which are the tourists in the UNESCO sites of Melaka. The aim of the pilot survey is to discover the difficulties of way finding to reach the destination in the UNESCO sites of Melaka. The question that have been asked about the tourist method of wayfinding used by the tourist for traveling within the site.

Photo Elicitation

The photograph had been taken in the UNESCO sites of Melaka and been elicited according to the types of signage. The type of signage used can be referred in table 3 and had been analysed to discover the overall design criteria by referring to the universal design principle. The aim for this method

is to discover the content and composition of the signage in UNESCO heritage site of Melaka.

ANALYSIS AND FINDINGS

Pilot Survey: Difficulties of Way Finding in Melaka

The aim of the pilot survey is to discover the difficulties of tourist's way finding in UNESCO heritage sites of Melaka. The survey had included 30 respondents from different country that visited the UNESCO heritage sites of Melaka at that particular time. The survey are conducted by asking the respondent verbally. The findings of pilot survey that had been done previously determined that most of the tourist which is 64% is lost in their way throughout the UNESCO heritage sites of Melaka. More than that, most of them walk around the area and randomly and find the site that they planned to visit without any guidance. The other 21% of the respondents are using mobile phone application (waze) to guide their way in the heritage sites without getting lost. There are 7% of the respondents are following the signage to find their way. Moreover, 3% of the tourists are using maps, tour guide and relatives for way finding in the UNESCO heritage site of Melaka. The result showed that most of the tourist lost in their way in the heritage sites of Malaka. It showed that there are several possibilities of difficulties in reading the signage. For example, 1) lack of clear information on the signage and 2) some users find it difficult to discover the signage because the signage were installed in improper places. Therefore, it is a need to continue to do several observations to know more about the problem that occurs in the site.

Difficulties of wayfinding in Melaka

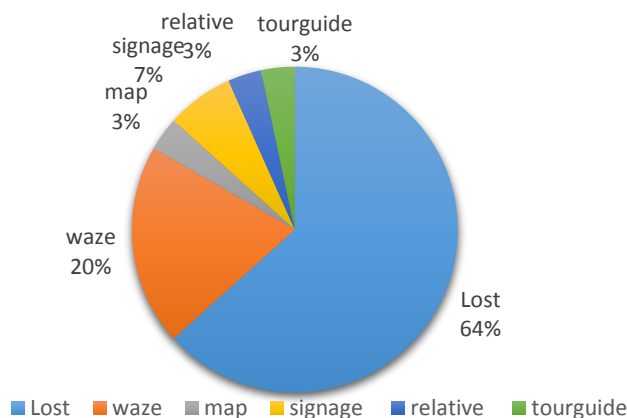


Fig. 1: Pilot survey in UNESCO heritage sites of Melaka.

PHOTO ELICITATION

The observations and documentation of signage system facilities had been conducted in UNESCO heritage sites Melaka. A total of 30 samples of signage from the UNESCO heritage sites Melaka have been analysed to discover the effective design using the checklist by referring to the universal design principle as shown in table 3. The signage is sort according to its type; directional signage, informational signage and identification signage.

Three types of signage design

There are three types of signage in this research. The types and its detail character are as follows:

- 1: Directional signage: shows directions to the road users, pedestrian and etc. It more fully defined as a direction, position, or indication sign.
- 2: Identification signage: shows identification of a place.
- 3: Informational signage: shows the information gives them instruction on the use of something.

The three (3) types of signage are diagnosed by using the checklist that has been developed by referring to the universal design. There are four (4) checklists which is checklist of overall criteria of signage design, criteria of directional signage, criteria of information signage and criteria of directional signage.

Table 3 : Line-up of signage in UNESCO heritage sites of Melaka.

No.	Signage	No.	Signage	No.	Signage	No.	Signage	No.	Signage	No.	Signage
1.		6.		11.		16.		21.		26.	
2.		7.		12.		17.		22.		27.	
3.		8.		13.		18.		23.		28.	
4.		9.		14.		19.		24.		29.	
5.		10.		15.		20.		25.		30.	

Based on the table 3, there are 30 existing signage that have been recorded in the lineup for this study. The lineup was categorized into three (3) category according to the colour. There are 13 items for directional signage that highlighted with blue colour, 6 items that highlighted with orange and 11 items that highlighted with purple.

Most of the design shows in the table 3 shows local identity that tells about the culture and heritage. For directional sign, there are 2 types of design; 1) pointed end of the shape to show arrow or direction and 2) square shape with arrows symbols in it. Next, for informational signage, there are 3 types of signage which has been identified; 1) basic shape 2) pointed design roof 3) sculpture image. Lastly for the identification signage, there are 3 types of design which are; 1) attached with particular building image 2) attached to the main entrance or gate 3) basic shape.

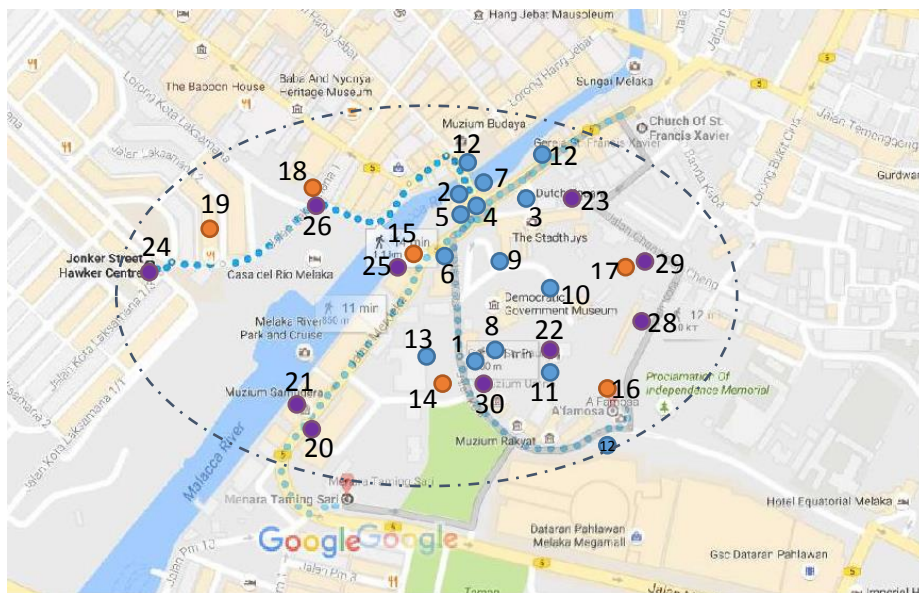


Fig. 2: Mapping of the signage location (google map)

Based on figure 2, the map illustrates each locations of the signage in the table 3. It shows the locations of signage in the specific area that have been circled. The different colour shows the different types of signage as illustrated in the table 3.

OVERALL CRITERIA OF SIGNAGE DESIGN

Table 4 showed the overall criteria of signage design in the heritage site. There are 3 criteria that are analysed: 1) the signage is clear, good combination of colours, consistent and easy to understand. 2) The signage provides maps, plans and models for larger buildings including tactile information. 3) The signage had select a letter size that suit the viewing distance. From all of the criteria that need to be analysed, the aim of the overall criteria of signage design is to determine the effective signage criteria for the heritage site. The signs are analysed to determine its types. The overall criteria of signage design are as follows:

Table 4: Checklist signage and information parameter for Universal Design in UNESCO heritage sites Melaka.

			Directional Sign										Information Sign					Identification Sign														
Checklist 1	Questions	Number of signage	1	2	3	4	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
		1	signage is clear, good combination of colours, consistent and easy to understand																													
	2	provide maps, plans and models for larger buildings including tactile information																														
	2	select a letter size to suit the viewing distance																														

Based on table 4, most of the signage in the UNESCO heritage sites Melaka are clear, had good combination of colours, consistent and easy to understand. The signage also had good selection of typeface and font sizes that suit the viewing distance of the users. Moreover, the signage that provide maps, plans and models for larger buildings including tactile information are less provided in the heritage sites. Only 3 out of 30 signage was provided with maps, plans and models for larger buildings including tactile information.

CRITERIA OF DIRECTIONAL SIGNAGE

Table 5 showed the criteria of directional signage in heritage site of Melaka. There are 13 directional signage was found in Melaka. The criteria that need to be analysed are 1) the signage provides directional guidance within a site or building. 2) The signage had included arrows. 3) The signage had included symbols. The aim of the table is to determine the effective signage design for directional signs in the heritage site.

Table 5: Checklist directional signs system parameter for Universal Design in UNESCO heritage sites Melaka.

			Directional Sign											Information Sign					Identification Sign														
Checklist 2	Questions	Number of signage	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
	1	Provide directional guidance within a site or building																															
	2	Signs include arrows																															
	3	Signs include symbols																															

According to the table 5, the directional signage at the heritage signs are mostly provide the directions within a site or building including arrows. However, usage of symbols in the directional signs are minimal. There are 5 out of 13 signage had included symbols in the design. Example of the directional sign are shown in the figure 2 which the directional sign contain symbols and arrow for users reference.



Fig. 3: Example of the directional sign at UNESCO heritage sites of Melaka.

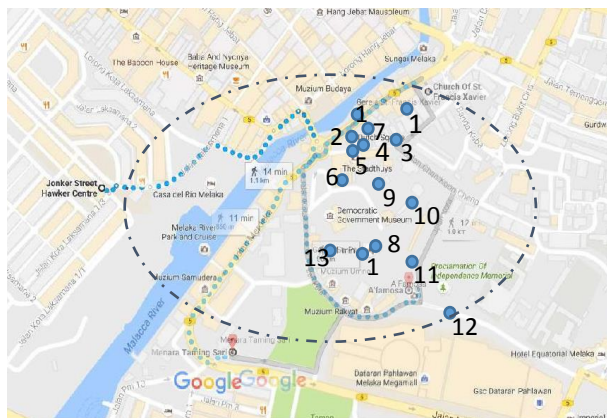


Fig.4: Mapping of the directional signage location.

Figure 3 showed on of the directional sign for pedestrian in Melaka UNESCO sites. The sign is located in front of the Saint Paul church. Through observation, some of the directional signage is not ergonomic in size which

is the signage is too high or too low and makes it difficult for the user to identify and read the contents provided. This type of signage are mostly located at the red area which is the main attractions based on Figure 4. Thus, with improper signage design, it will makes user facing problems such as easy to get lost in their wayfinding throughout the sites. With today's technology, there are many method to assist the users in wayfinding such as using apps; waze. Therefore, the existing signage in prominent places need to be analysed again so that it is aligned with the current offered technology and able to help the tourist in their wayfinding.

CRITERIA OF INFORMATIONAL SIGNAGE

Criteria of information signs was analysed in table 5. The criteria include 1) an aid to overall orientation within a site or building and 2) an examples include maps, diagrams and directory signs are included in the signage. There are 6 types out of 30 information signs in the heritage site.

Table 6: Checklist information signs system parameter for Universal Design in UNESCO heritage sites Melaka.

			Directional Sign										Information Sign					Identification Sign															
Checklist 3	Questions	Number of signage	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
	1	An aid to overall orientation within a site or building																															
	2	Examples include maps, diagrams and directory signs																															

Table 6 showed the information signs at the heritage sites are related to overall orientation within a site or building. Some of the information sign do not contain maps, diagrams and directory signs that able to give the detail

information to the users because of the size is too small to fit all the information needed.



Fig.5: An example of the informational sign at UNESCO heritage sites of Melaka.

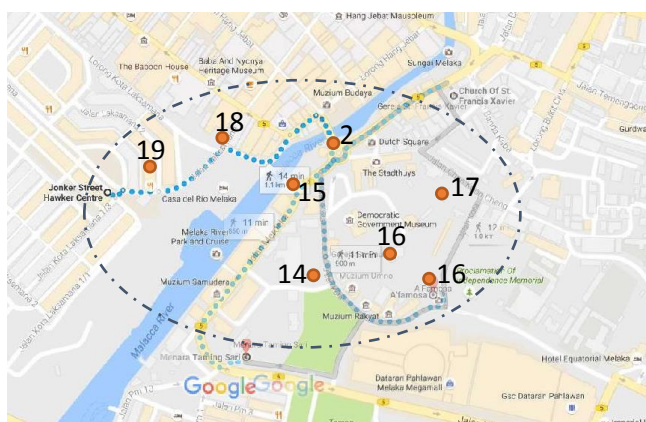


Fig. 6: Mapping of the informational signage location.

Figure 5 is the example of informational signage that located inside the Dutch graveyard in the UNESCO sites of Melaka. The signage gives the

detail information about the graveyard history. The graveyard features 5 Dutch officers and 33 British officers and their spouses that have been deceased in the 1800s. The signage also contains the plan of the graveyard. It were identified that most of the information signs throughout the heritage sites do not have a standard design and colour coordination; blue and white in Dutch graveyard, and maroon and white in A'famosa. There are some of the informational signage embedded the local identity into its design. For example the signage in figure 5 showed the traditional rooftop image, to show the nearest prominent historical area that should be visited by the tourist. It is identified that there are many places in the heritage sites do not have detail information for the tourist. Therefore, more effective informational signage should be allocated in many places in tourist route so that more information can be given to the users, to promote local identity and history and to assist them in wayfinding.

CRITERIA OF IDENTIFICATION SIGNAGE

Table 7: Checklist identification signs system parameter for Universal Design in UNESCO heritage sites Melaka.

			Directional Sign											Information Sign								Identification Sign											
Checklist 4	Questions	Number of signage	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
	1	Provide identification within a site or building																															
	2	Signs are directed by the directional signs																															

Table 7 showed that most of the identification signage provide an identification to a site or building in the heritage sites. However, due to some of the places are not directed by the directional signs, the tourist still unable to reach the desired sites although the sites have a good identification signage.



Fig.7: An example of the identification sign at UNESCO heritage sites of Melaka.

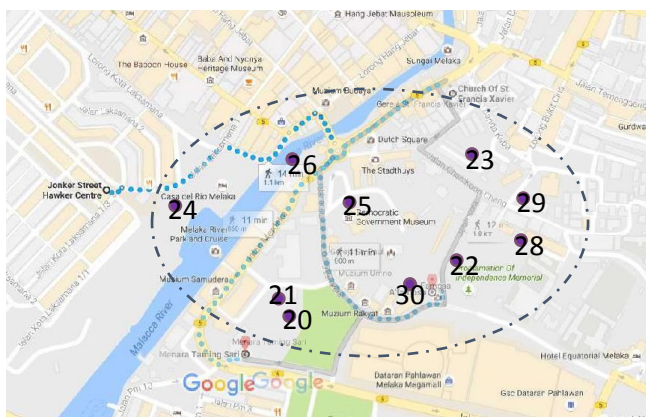


Fig.8: Mapping of the Identification signage location.

In figure 7, it is identified that the identification signage of Jajaran Tembok Kota Melaka is not directed by the directional sign installed within the site. In other words, some of the identification signage and directional signage do not have connection to each other in wayfinding. With such

condition, the tourist will easily to lose in their wayfinding and cannot rely to the signage given by the sites.

There are 10 identification signage placed at heritage building and sites in the UNESCO site Melaka as shown in Figure 8. The purpose of these signage are made for the user identify the destination. However, it is identified that there are many prominent places and building without the identification signage. For example, A' Famosa do not have any identification signage to identify the heritage site. To give more clear information or direction to the tourist, it is a need to have a suitable identification signage to assist wayfinding of the tourist who comes from many different countries and areas.

CONCLUSIONS

Achieve the status of UNESCO world heritage site, Melaka had given a new phase in the tourism industry. The number of tourists that visited Melaka rose rapidly every year. Thus, the infrastructure in Melaka such as signage should had been designed more efficient for reference of the tourist who visited Melaka. With the efficiency of the signage, tourist time to visit each heritage sites in Melaka can be reduced and plan accordingly.

The aim of this study is to explore the understanding in connection to tourist experience in UNESCO heritage sites by referring to the signage. Findings from the pilot survey showed that most of the tourist having difficulties in way-finding while travelling in the sites. Moreover, findings from the observation of the signage that located in the UNESCO heritage sites of Melaka are the signage still had many problems regarding to the universal design aspects and most of the existing signage design are not standardize based on colour, shape and typography. Thus, as stated by Yusita Kusumarini et al (2012) solutions for the signage in the UNESCO heritage sites of Melaka that can be done are the customization of design with universal design standards. Regardless the types of the signage, the signage also should be sensitively located, scaled and detailed so as not to obscure ambiguous or distract the integrity of the historical objects. With the development of digital technology today's, the signage should able to be connected through the latest technology application to help to ease the tourist or user in many potential ways. According to United Nation Sustainable Development Goals number 11 for sustainable cities and communities, tourism can advance urban infrastructure and accessibility, promote

regeneration and preserve cultural and natural heritage, assets on which tourism depends.

REFERENCES

Signage. (n.d.) American Heritage Dictionary of the English Language, Fifth Edition. (2011). Retrieved January 18 2017 from <http://www.thefreedictionary.com/signage>

Patton, M. Q. (2005). Qualitative research. John Wiley & Sons, Ltd.

Plattner, H. (2010). An Introduction to Design Thinking Process Guide. The Institute of Design at Stanford: Stanford.

Kusumarini, Y., de Yong, S., & Thamrin, D. (2012). Signage System of Malls in Surabaya: Universal interior design applications and suggestions for solution. *Procedia-Social and Behavioral Sciences*, 68, 515-525.