Tourist Expectation and Satisfaction towards Physical Infrastructure and Heritage Elements in Melaka UNESCO World Heritage Site

Jamil Jusoh

Tarmiji Masron

N. Fatimah A. Hamid

Norkamaliah Shahrin

School of Housing Building and Planning
Universiti Sains Malaysia
jjamil@usm.my

Abstract

The expectation and satisfaction level of tourists are required in order to identify the weaknesses that exist in an area. From there, improvements could be conducted to fulfil the needs of tourists regarding heritage elements and physical infrastructure that exists in a Heritage City. Heritage elements are significant as a main attraction force for tourists to visit historic areas. The need for infrastructure is important to improve tourist accessibility when they are visiting a destination. This research is conducted with the hope of studying the expectation and satisfaction of tourists when it comes to heritage elements and physical infrastructure at Melaka UNESCO World Heritage Site. This research applies the quantitative analysis through questionnaire survey forms to a total of 161 domestic and international tourists, together with visual analysis and inventories conducted for the core zone of Melaka City. The results from the visual analysis using the principal component analysis with varimax rotation has identified 24 relevant items that could be divided into three main factors such as heritage elements, infrastructure and supporting elements. From the analysis, the most dominant findings for heritage elements is the museum; in aspects of physical infrastructures, is the most accommodating centres, while facilities factor is in terms of trishaw services. This most dominant finding shows the level of satisfaction accepted by the tourists. On the whole, the satisfaction level is higher than the expected outcomes regarding heritage elements, infrastructure and supporting facilities.

Keyword: Expectation and Satisfaction, Heritage Elements, Physical Infrastructure, Heritage Site

1. Introduction

Each tourist possesses a different level of satisfaction between one another. This is due to the fact that every tourist has their own expectations, inspirations and experiences. A deeper understanding of the expected target will provide guidance in regards to the development of areas of attractions which will help enhance tourism services (Aksu et. al., 2010). Infrastructure is deemed an important aspect in determining the development of an area. Potential attractiveness of a tourist destination determined is the basic infrastructure of a country based on Gunn (1988) and Inskeep (1991). Crouch and Ritchie (1999) stated that tourism development plans will not succeed without basic infrastructure such as roads, ports, electricity and water. Meanwhile, heritage tourists concentrate on the story of a community and also the places of interest through interpretations of cultural landscapes and the conservation and preservation of historical appearance (National Association of Tribal Historic Preservation Officers 2011) which are the elements found in the heritage site.

2. The Study Area

Melaka is located south of the Malaysian peninsular, has an area of 1650 square miles and is situated on the waters of the Malacca Straits. The city that is divided into 3 main areas and has 81 parishes is a city rich in history with tangible and intangible heritage from the days of the Malay Sultanate of Malacca in the 15th century until it was conquered by the Portuguese and the Dutch in the 16th century and finally by the British. Now, the city of Melaka is known as a world

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heritage site, recognized by UNESCO together with George Town on 7 July 2008. This world heritage site area is divided into 3 parts; Core Zone, Buffer Zone and Heritage Village (Refer to Figure 1). Division in the area is due to the fact that there are many areas of attraction and constitutes as a move by the local authority to focus all their energies into preservation and conservation. Melaka city is under the management of the Malacca Historical City Council.

Figure 1: Site plan of Melaka World Heritage Site.
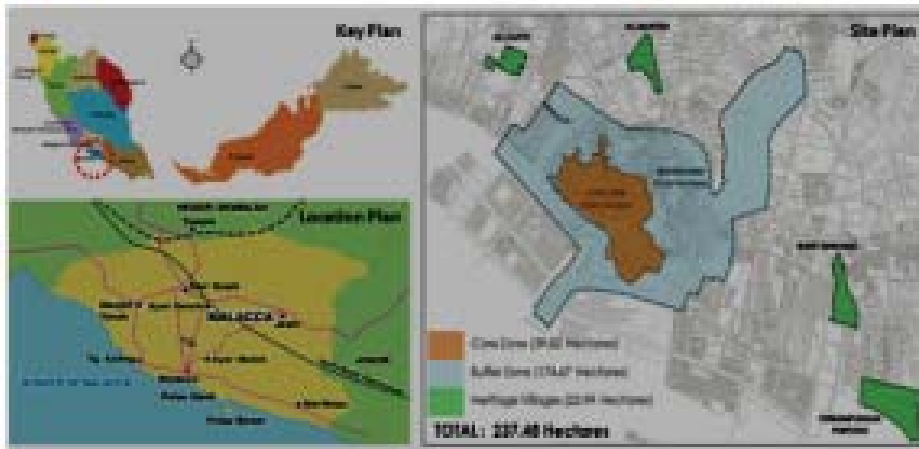
Source: Special Area Plan for Melaka (SAP, 2007)

3. Research Approach

A total of respondents were involved in this study. The choosing of the samples for the survey carried out was done at random at the location identified by the researcher during the course of the previous pilot study. Research has been conducted in the vicinity of the Core Zones which are the Christ Church, along the Melaka River, Independence Park, the Porte De Santiago, Old Quarter of Melaka, Taming Sari Tower and accommodations. This study aims to identify the expected levels of satisfactions of tourists visiting Melaka Heritage City. Quantitative methods were used through questionnaires distributed to tourists. Questionnaires were modified based on research done by Homsud (2012) dan Huh (2002). The main theme of this survey is to assess the effectiveness of physical infrastructures in Melaka heritage sites from the perspective of tourists. There are 3 main sections in this questionnaire; respondents' profiles, travel features and finally, heritage elements. 25 heritage elements were selected and modified following the work done by previous researchers like Homsud (2012), Huh (2002) dan Millman (1993). The expected level of tourist satisfaction was measured using the 5-level Likert scale which are very low (1), low (2), moderate (3), high (4) and very high (5). Data analysis using the SPSS software version 20.0 uses descriptive analysis, crosstabs and paired statistical tests (Homsud, 2012; Lather, 2012; Salleh, 2011; Aksu, 2010; Jaana Tonge & Susan, 2006; Huh, 2002; McQuilken, 2000).

4. Data Analysis and Finding

The objective of this study is to investigate the expectations and satisfaction levels of tourists regarding the heritage elements available in the Heritage City of Melaka. Initial expectations of this study are that most tourists are satisfied with the infrastructural and heritage elements available in this heritage site. Elements that will be discussed is regarding the validity and reliability as well as the expectations and satisfactions of tourists towards the heritage, infrastructural elements and infrastructure support. Based on Table 1, it is found that international tourists overcame domestic tourists with a difference of 4.4%. Meanwhile, the majority of respondents are 21-30 years old totalling at 58.4% and consisted of students by 41% compared to other areas of employments.

Table 1: Profile of Respondents

Profile	Explanation	Frequency	Percentage (%)
Continent	Domestic	77	47.8
	International	84	52.2
Gender	Male	94	58.4
	Female	67	41.6
Age	20 and below	21	13.0
	21-30	94	58.4
	31-40	23	14.3
	41-50	13	8.1
	51 and above	10	6.2
Occupation	Academic / Education	12	7.5
	Technical / Engineering	22	13.7
	Health / Dentistry / Pharmacy	3	1.9
	Management	29	18.0
	Building / Architect / Construction	5	3.1
	Retirees	5	3.1
	Housewife	3	1.9
	Sociologist / Economist	3	1.9
	Researcher	2	1.2
	Student	66	41.0
	Non-government Organization (NGO)	7	4.3
	Others	4	2.5

4.1 Factor Analysis on the Heritage Elements

This study involves expectation and satisfaction levels of tourists in Melaka Heritage City. Thus, factor analysis should be carried out to reduce the data according to the appropriate size. Data entered into the SPSS program will be reduced by an appropriate factor. The researcher listed 25 heritage elements to be evaluated by respondents. Based on the factor analysis, 24 of the 25 heritage elements is an important factor to gauge the estimated and satisfaction levels of tourists to Melaka Heritage City. Elements divided by the factor will be tested using the reliability test (Cronbanch Alpha). Table 2 shows the results of factor analysis and alpha values.

Table 2: Validity and Reliability Test

Factor	Variables	Loadings		
Factor 1	Heritage	1	2	3
1	Architecture of building	.765		
2	Historical Building	.676		
3	Traditional Scenery	.672		
4	Traditional Handicraft	.670		
5	Arts (Music/ Dance)	.640		
6	Monuments	.631		
7	Varieties of Food	.600		
8	Local Community	.576		
9	Museums	.550		
10	Cultural Villages	.448		
Factor 2	Infrastructure	1	2	3
1	Accessibility		.719	
2	Signage for tourists		.685	
3	Tourist information centre		.681	
4	Safety Around City		.659	
5	Accommodation		.634	
6	Climate/Weather		.446	
7	Guides & Assistance		.577	
8	Traffic Congestion		.402	
Factor 3	Supporting Infrastructure	1	2	3
1	Trishaw Services			.541

2	Souvenirs & Gifts			.379
3	Location and Number of Public Toilets			.664
4	Galleries			.609
5	Dirty Environment			.602
6	Shopping Facilities			.521
Cronbach Alpha Value		**.922**	**.868**	**.821**

Principle component analysis (Principle Component Analysis) shows the correlation coefficient is 0.3 and above. Kaise-Meyer Olkin value is .898; higher than the value proposed .6 (Pallant, 2010) and Barlett's Test of Sphericity reached the significant level set (p=.000), which supports the ability of correlation matrix. Then, the validity of the test is done by determining the anti-image correlation. The results show the value of the resulting anti-image is .5 and above. Results of the factor analysis produced 3 factors based on the principal component analysis (Principle Component Analysis) and varimax rotation. This factor is named heritage (factor 1), infrastructure (factor 2), and infrastructure support (factor 3). Reliability test conducted on these factors indicates the alpha value is 0.8 and above. Pallant (2010) suggests that a good alpha value is 0.8 and above.

4.2 Expectation and Satisfaction on the Heritage Elements

The expectation and satisfaction levels of tourists is measured based on the 5-level Likert scale and analysed using the mean and gap analysis. Table 3 shows the results of the mean and the gap between expectations and satisfaction levels of tourists to Melaka Heritage City for heritage dimensions.

4.3 Heritage Elements

According to the analysis that was conducted, all heritage elements show a satisfaction level exceeding the tourist expectations. This difference shows that respondents are satisfied with the provision of heritage elements that exists in Melaka Heritage City. Referring to Table 3, it could be seen that architectural building elements, historical building elements and museums achieve the highest satisfaction level compared to the other elements (Mean difference = >.400). This is supported by Mohd. Samsudin & Sulong Mohamad (2013) who have stated that the accuracy on the shape of monumental outlook and the act of events are main factors that develop the heritage tourist activity as an attraction pull for tourists to arrive in Melaka. Art elements on the other hand had a low satisfaction level with a mean difference = <.193. This is due to the lack of promoting efforts that would have attracted more tourists, especially art elements that are rarely brought forth in terms of heritage elements such as *dondang sayang*, sewn beads on shoes, *baba and nyonya*, and many more, even though there are many such interesting art elements that could be introduced to tourists.

Table 3: Heritage Elements Analysis

Heritage Elements	Estimated Mean	Satisfaction Mean	Difference Mean	Df	t	p	S
Architectural Buildings	3.57	4.01	.437	150	5.058	.000	S
Historical Buildings	3.53	3.93	.405	147	4.732	.000	S
Monuments	3.33	3.70	.368	151	4.367	.000	S
Traditional View	3.44	3.75	.303	141	3.267	.001	S
Traditional Crafts	3.17	3.55	.380	136	4.118	.000	S
Local Dwellers	3.33	3.66	.331	138	3.708	.000	S
Art	3.15	3.34	.193	134	1.915	.058	NS
Food Variety	3.55	3.73	.187	149	2.352	.020	S
Museums	3.13	3.59	.465	143	4.872	.000	S
Heritage Village	3.22	3.57	.341	137	3.737	.000	S

S= Significant   NS= Not Significant

4.4 Infrastructure Elements

According to Getz (1987), tourist infrastructure planning is one of the process that follows the research and continuous

analysis that optimises the satisfaction level of tourists, and also takes into consideration the environmental quality, while at the same time providing high satisfaction level among tourists and locals. By referring to Table 4, the minimum analysis of results shows that not all elements have satisfaction levels exceeding the expectations of tourists. Tourist Information Centre has the expected and satisfaction level that is constant throughout, hence is regarded as insignificant. This is due to the unclear location of the tourist information centre, and its inconsistent operating hours. At times the centres are closed and obtaining information regarding existing tourist facilities provided at the heritage site is proving to be difficult. On the other hand, accommodation centres consists of the highest mean difference = .514, due to the appraised quality of accommodation services, and the abundant options available be it ranging from budget hotels, to 5 star hotels (Tourism Promotion Division, Melaka Chief Minister's Department, 2012).

Table 4: Analysis Results for Infrastructure Dimensions

Infrastructure Elements	Estimated Mean	Satisfaction Mean	Difference Mean	Df	t	p	S
Signage	3.25	3.45	.194	138	2.115	.036	S
Assistance	3.23	3.46	.234	136	2.954	.004	S
Accessibility	3.33	3.64	.310	144	3.429	.001	S
Tourist Information Centre	3.23	3.23	.000	132	.000	1.000	NS
Safety	3.34	3.74	.396	148	4.462	.000	S
Accommodation	3.29	3.80	.514	147	5.265	.000	S
Weather	3.41	3.45	.040	150	.517	.606	NS
Traffic Congestion	3.14	3.23	.083	144	.777	.439	NS

S= Significant   NS= Not Significant

4.5 Supporting Infrastructure Elements

According to Table 5, the mean analysis result for supporting infrastructure discovers that the satisfaction level has exceeded the estimated level. The trishaw and shopping facilities factor exceeded expected level of satisfaction with a mean difference =.441. The trishaw factor attracted tourists by providing services to go about discovering the heritage site at a reasonable price. Same goes to the shopping activities that offer a variety of products on sale at the heritage area. However, public toilets provision shows a relatively low mean difference =.149 because most tourists are unsatisfied with this particular supporting infrastructure provision. According to Jamil et. al (2012), there are 3 public toilets in this heritage area that were built at shop housing lots and at a position that is not strategic. Besides that, the clear lack of maintenance and upgrading, added to unsuitably located signage indicating directions to the public toilets add to the low satisfaction level of tourists. This is compared to the other elements that have exceeded the expected satisfaction level.

Table 5: Analysis Results from Supporting Infrastructure Elements

Supporting Infrastructure Elements	Estimated Mean	Satisfaction Mean	Mean Difference	Df	t	p	S
Trishaw	3.15	3.59	.441	101	3.881	.000	S
Souvenirs and Gifts	3.44	3.79	.353	138	4.287	.000	S
Toilets	2.96	3.11	.149	140	1.495	.137	NS
Gallery	3.09	3.50	.409	131	4.794	.000	S
Dirty Environment	2.96	3.21	.252	146	2.534	.012	S
Shopping Facilities	3.29	3.73	.441	144	5.357	.000	S

S= Significant   NS= Not Significant

According to Table 6, the highest mean difference is observed at the heritage factor (Mean Difference = .35) and supporting infrastructure (Mean Difference =.35). This difference shows the acceptance of respondents on the provision of heritage elements and supporting infrastructure at Melaka Heritage Site that have exceeded expectations. This difference shows the existence of significance between estimated level and satisfaction on heritage factors (p=.000) and supporting infrastructure (p=.000). Infrastructure factor shows the slight difference between the estimated level and tourist satisfaction. However, coupled t-analysis shows that there exists a significance for this factor (p=.008).

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Table 6: Estimated Level and Satisfaction of Tourists according to Factors

Elements	Estimated Mean	Satisfaction Mean	Mean Difference	Df	t	p
Heritage	3.35	3.69	.35	110	-4.524	.000
Infrastructure	3.31	3.49	.18	120	-2.690	.008
Supporting Infrastructure	3.19	3.54	.35	96	-5.132	.000
Average	3.28	3.57				

Positive responses are received from respondents concerning the heritage elements infrastructure and supporting infrastructure at Melaka Heritage Site. However, a research done by Aksu et. al. (2010) discovers that the expectation of tourists exceeds even their own satisfaction level. In a general perspective, tourists are satisfied with the heritage element infrastructure and supporting infrastructure that are provided a Melaka Heritage Site. Observations that were conducted by the researcher discovered that there are many unique heritage infrastructure elements that are well preserved and maintained in Melaka Heritage Site. According to Mohd. Samsudin & Sulong Mohamad (2013), heritage elements are significant elements and are main reasons as to why tourists visit heritage sites. Further into that, infrastructures are elements needed by tourists in order to increase their level of accessibility to attraction sites. This is supported by Jamil et.al.(2013) by stating that infrastructure provisions play significant roles in supporting and preserving heritage elements. Local Authorities are very particular concerning the provision of infrastructure elements for the continuous development of the tourism sector in this city (SAP, 2007).

5. Conclusion

According to the findings from this research conducted, infrastructure plays an important role in ensuring the effectiveness in mobilizing the heritage elements. Without infrastructure provision, it would be relatively harder for an area to continuously develop and attract tourists to constantly arrive and explore the heritage site. According to Aksu et. al. (2010), tourists have their own personal expectations regarding tourist destination chosen, according to the source and attraction pull of an area. A certain expectation could be high or otherwise according to the publicity and marketing conducted in developing a particular tourism destination. Expectation and satisfaction level aspects that are known are fairly hard to predict, because every tourist has their own personal opinion which differs from one tourist to another. In general, there is no clear list on infrastructure that is needed in this world heritage site (Jamil et. al., 2012). According to Jamil et. al. (2012) however, the infrastructure that is of existence at Melaka heritage site is available and adequate in accordance with the heritage city status owned by Melaka. The success of Melaka obtaining UNESCO recognition as a historic heritage city is associated with the maintenance of historical monuments of the Portuguese and Dutch in their current form (Mohd Samsudin & Mohamad Sulong, 2013). This includes elements of infrastructure provision, and strong based tangible and intangible heritage relating to the history of the golden age of the Malay Sultanate of Melaka that gave a profound impact on attracting tourists from both within and outside of the country.

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