An Assessment of Place Attachment in Melaka from Tourists' Perspectives and ICT

Penilaian Terhadap Place Attachment di Melaka daripada Perspektif Pelancong dan Teknologi Maklumat dan Komunikasi (ICT)

SYAKIR AMIR AB RAHMAN[1], NUR'HIDAYAH DURA[1], NIK MOHD AIZAT [1], AFZAL AZHARI[2], YUKIHIRO MASUDA[3]

[1]Kulliyyah of Architecture and Environmental Design, International Islamic University Malaysia

[2]Badan Warisan Malaysia

[3]Department of Planning, Architecture and Environmental Systems, Shibaura Institute of Technology Japan

Corresponding author: syakiramir@iium.edu.my

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ABSTRACT *The rapid urban population growth worldwide has given rise to complex cities across the globe, particularly concerned with place attachment and digital technologies. In this new landscape, the emergence of smart devices is highly favorable to connect everyday infrastructures via the present networks available to create a sense of place. The concept of sense of place in heritage and culture is synonymous with Melaka as a famous heritage site which achieved recognition from UNESCO. However, when it comes to tourist behaviors, their place attachment, arrivals and purpose of visit highly influence their perceptions. Their priority in selecting Melaka as their holiday destination might differ based on several place attachment affective factors which are influenced by digital technologies. There are several problems to consider in order to improve place attachment in the study area, which are the prosperity of the tourism industry in Melaka threatening its own authenticity and the rapid modernization of the area dehumanizing its sense of place. Based on these factors, there is seemingly a conflict between the digital world and place attachment among the tourists in the study area. Therefore, the study aims to ascertain the concept of place attachment and determine the relationship between travel behavior (focusing only on trip frequency) and place attachment affective factors in response to digital technologies. By using ANOVA, the level of place attachment can be analyzed using data involving background of respondents, trip frequency and place attachment affective factors.*

Keywords: Sense of place; place attachment; trip frequency; information and communication technology (ICT)

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ABSTRAK *Kepesatan populasi bandar serata dunia telah mengaktifkan bandar-bandar dunia secara kompleks, terutamanya 'place attachment' dan teknologi digital. Oleh kerana keperluan peranti pintar mendapat permintaan yang tinggi, ia menghubungkan infrastruktur harian dengan talian yang sedia ada untuk membentuk 'sense of place'. Tambahan pula, 'sense of place' di kawasan bersejarah dan kebudayaan amat sinonim dengan Melaka sebagai salah satu kawasan bersejarah dibawah pengiktirafan UNESCO. Walau bagaimanapun, untuk definisi 'place attachment' bagi para pelancong, ia mempengaruhi ketibaan pelancong dan tujuan lawatan. Kadang kala, keutamaan mereka memilih Melaka sebagai destinasi pelancongan agak berbeza disebabkan beberapa efektif faktor 'place attachment', serta dipengaruhi oleh teknologi digital. Terdapat beberapa isu yang memerlukan pertimbangan lanjut dalam memperbaiki 'place attachment' di kawasan kajian, antaranya adalah kesejahteraan pelancongan di Melaka telah menggugat keasliannya dan kemodenan yang pesat mengancam 'sense of place'. Dengan ini, ia dapat dilihat bahawa kawasan kajian mengalami konflik digital terhadap 'place attachment' di kalangan pelancong. Oleh itu, tujuan kajian ini adalah khusus kepada konsep 'place attachment' and hubungan diantara tingkah laku ketika melancong atau 'travel behavior' (kekerapan perjalanan sahaja) dan efektif faktor 'place attachment', tindak balas kepada teknologi digital. Dengan menggunakan ANOVA, 'place attachment' boleh menganalisis data yang melibatkan latar belakang responden, kekerapan perjalanan dan efektif faktor 'place attachment'.*

Kata kunci: *Sense of place*; *place attachment*, kekerapan perjalanan; teknologi maklumat dan komunikasi (ICT)

1. Introduction

Place has many definitions from different researchers and various sources. However, the term 'place' itself refers to a space that expresses a strong relationship between a person and place in a particular setting (Sime, 1986). In other words, a place is a particular area or space which presents a combination of meanings, principles and values to the users. Throughout the years, the concept of sense of place has been studied widely by many researchers in the field of architecture and urban design. This concept is rooted in the subjective experience of people, objectives and external influences of the environment that lead to the integration of a place (Hoseini et al., 2013). It is a significant factor in maintaining the quality of environment in a particular area, mainly cities. As cities become increasingly competitive, Information and Communications Technology (ICT) is utilized to coordinate everything, including the activities and services, leading to everything being more connected, and more people being better informed and engaged (Buhalis & Amaranggana, 2013). Therefore, sense of place can be considered as a relationship between man, his imagination and behavior as well as environmental characteristics. It is a complex concept of behavior and attachment created through the relationship of humans and places. Furthermore, place attachment is one of the factors under community attachment that falls within the overarching concept of sense of place. It is used to study the integration of a study area and people's behaviors. In fact, place attachment can be defined as a symbolic bond formed to give emotional meaning and

common sense, as well as explain how people perceive a place (Altman & Low, 1992). It is conceived from an individual's interest, understanding, interaction and experience towards a place based on several factors. At the same time, place attachment acts as a deep human characteristic, suggesting that people express their feelings about the place as if they belong to it (Layder, 1993). According to Low (1992), place attachment is the symbolic relationship formed by people giving culturally shared emotional/affective meanings to a particular space that provides the basis for the individual's and group's understanding of and relation to the environment. On account of that, this study aims to identify the level of place attachment among tourists with application of ICT in the Melaka UNESCO World Heritage Site. By using ICT in the recent era, cities have become more accessible and enjoyable to all through provision of interconnected services and better coordination provided by local organizations such as real-time services and centralized data. In Malaysia, there are only two UNESCO World Heritage Sites which are Melaka and George Town, Penang. George Town is the site of the first British port town along the Straits of Malacca, boasting a rich collection of historical, vernacular, administration and religious buildings constructed by the European trade settlers. Unlike George Town, Melaka has its own townscape which features narrow streets and a mixture of houses, shops and places of worship in different styles and influences. The status of a UNESCO World Heritage Site is expected to provide opportunities to generate income among the locals as well as to increase local participation in the tourism sector. Advanced technologies will help Melaka create a more vibrant sense of place and improve the image of Melaka as one of the UNESCO World Heritage Sites in Malaysia through several improvements in tourists' place attachment.

2. Literature review

Throughout the years, the concept of sense of place has been rooted in the subjective experiences of people, objectives and external influences of the environment, leading to the integration of a place (Hashemnezhed et al., 2012). It is a significant factor in maintaining the quality of the environment in a particular area. As shown in Figure 1, place attachment is one of the categories abstracted from the concept of sense of place to study the integration of the study area and people's behavior (Shamai, 1991), whether people have strong internal and external connection with the place. In fact, it is conceived from the individual's interests, understanding, interaction and experience towards a place based on several factors, of which ICT is one of the keys in helping long-term sustainability for a particular site through a multifarious blend of infrastructure and technologies.

2.1 Sense of place

In recent years, sense of place has become a buzzword in justifying the landscape settings for a place called home (Cross, 2001). It is a concept of changing a typical space to become

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a place with significant behavior and sensory characteristics (Hoseini et al., 2013). It means the place can be interacted through activities and anything associated to it that can be created in an individual's living experience (Seamon & Sowers, 2008). Mainly, people participate in their social activities based on their sense of place (Canter, 1977). It seems that sense of place is about the relationship between man and his environmental characteristics. This concept covers two different situations which are experience of people (such as memories, traditions, history, culture and society) as well as external influences of the environment (such as landscape, smell and sound) which lead to various associations (Hoseini et al., 2013). It is a complex concept derived from emotional factors and attachment to human living environments. Thus, people maintain imagination and illusions about the place they live in as it can easily be described by sense of place.

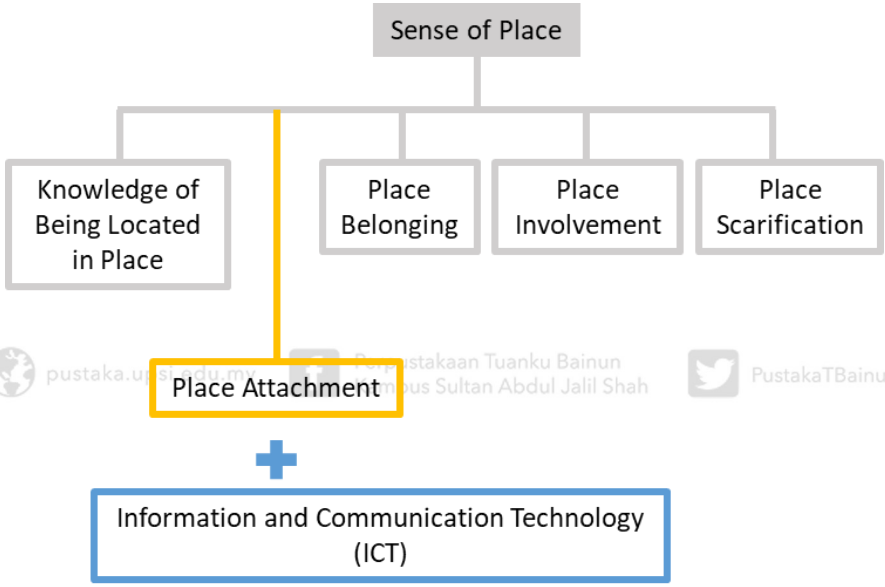

Figure 1: Categories of sense of place

2.2 Place attachment

Place attachment can be defined as a symbolic relationship created by people in giving meaning to a place with basic understanding and relationship towards the environment (Low, 1992). It is not only an emotional and cognitive experience, but it includes cultural beliefs and practices. It can be formed to become many things, including the surrounding environment and places. Altman & Low (1992) stated that a symbolic relationship with a place can be formed by giving meanings and sense to a particular place. In fact, a positive experience is built through positive emotions and beliefs during the interaction with a particular setting. In this process, people develop their relationship with one another and the place itself, which is called a direct relationship (Mesch & Manor, 1998). In addition, place attachment includes cognitive and affective aspects in which people hold certain beliefs and acts in certain ways depending on the setting, instead of expressing a literal feeling about the place (Paul, 2012). Some scholars have argued about this statement.

However, Liu (2005) believes that this can be a possible way to create place attachment, for instance, love at first sight. In some cases, it might integrate with the strong emotional sense representative of a place that they have never been to. In other words, the mental perception represents the strong emotional impacts which at the same time, judges the new setting on how it fits their expectations. It is not a good example of evaluating place attachment, however, it occurs naturally as it is a subjective matter. Overall, place attachment is affected by several factors, such as factors of physical, social, cultural, personal, memories and experiences as well as place satisfaction, interaction, activities, features and time (Hoseini et al., 2013). Based on what was mentioned earlier, place attachment is part of sense of place. Therefore, if one preserves the sense of place, place attachment becomes a positive emotional sense towards the place.

2.3 Information and communication technology (ICT)

The new era of ICT has opened up a wealth of new tools for the tourism industry (Buhalis & Amaranggana, 2014). Innovation in technology also presents new approaches and innovative business models for tourism (Korkmaz et al., 2018) as Liu (2005) stated that tourism is one of the leading industries in e-business to support both communication with customers (business-to-customer) as well as with other businesses (business-to-business). Moreover, in some sectors of the industry, the applications of networking have been introduced since the mid-1970s to support the process of distribution as the industry experimented during different stages of evolution in ICT (Nolan, 1979). ICT could contribute in terms of generating value-added experiences for tourists, while also improving efficiency and supporting automation processes for related organizations (Wertner 2003 cited in Gretzel 2011). Although the physical characteristics of a place may attract the tourists, the complexity of services and their delivery also strongly impact tourists' psychological perception of the destination. However, the tourists could simply use their mobile phones to explore the destination and events of interest using in-situ data collection and reporting.

3. Methodology

3.1 Case Study: Banda Hilir, Melaka, Malaysia

The recognition as UNESCO World Heritage City in 2008 has led Melaka to be the most visited destination in Malaysia. It has a well-known heritage zone located mostly in Banda Hilir. This zone is divided into another two zones, which are the Core Zone and Buffer Zone. The total area of the Core Zone is 45.3 hectares (15.7%), comprising two major areas: The first area is St. Paul's Hill Civic Zone which has a number of previous government buildings, museums, churches, urban square and original fortress town from the 16th Century, during the Portuguese and Dutch Period.

The second area is the historical Residential and Commercial Zone which consists of more than 600 shop houses, commercial and residential buildings, religious buildings

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and tombs located at four major streets: Jalan Tun Tan Cheng Lock (Heeren Street), Jalan Hang Jebat (Jonker Street), Jalan Tokong/ Tukang Emas/ Tukang Besi and Jalan Kampung Pantai; as well as on four perpendicular streets, which are Lorong Hang Jebat, Jalan Hang Kasturi, Jalan Hang Lekiu and Jalan Hang Lekir. In the Core Zone, there are a great number of tourism attractions such as A' Famosa fort, St. Paul hill, Jonker Walk, Melaka River Cruise, Menara Taming Sari, Stadhuys buildings, Little India and Malacca Sultanate Museum, all located within walking distance and are easy to reach by foot.

Meanwhile, the Buffer Zone surrounds the boundary of the Core zone which covers about 242.8 hectares (84.3%) bounded by Jalan Merdeka, Taman Kota Laksamana, Jalan Ong Kim Wee, Jalan Tan Chay Yan, Jalan Munshi Abdullah, back lots of Kampong Banda Kaba and Jalan Chan Koon Cheng. Currently, Bukit Cina is located in the North East of the historic city of Melaka and extends to parts of the Buffer Zone. In addition, the Buffer Zone has its own attractions, mainly historical areas from previous Sultanate eras such as Bukit Cina, Kampung Banda Kaba, Kampung Hulu and several areas that have existed since the colonial era such as Kampung Chetti. Both of these zones play their own roles in the development of the study area as each zone has different land use development, restriction and regulation, physical activities as well as tourism attractions. However, they are the core behind the reputation of Melaka as a UNESCO Heritage Site and is well-known around the globe. Therefore, the areas influence place attachment with their unique essence, making this study area different from other tourism destinations in Malaysia, including Georgetown, Penang.

3.2 Data acquisition and analysis

This study has chosen the quantitative research approach to evaluate the data collected, as well as to achieve goals and objectives of the study. This is because quantitative approach focuses on gathering numerical data and information, then generalizing it across a group of respondents (the inbound and outbound tourists) in explaining a particular situation or study in order to determine the relationship between each of the independent variables and dependent variables. Based on Babbie (2010) and Muijis (2010), the quantitative research approach is a scientific approach that uses statistical, mathematical or numerical data that will be analyzed by using several methods such as polls, questionnaire and survey. On account of that, the data findings will be in the form of numbers and statistics which give high reliability to the study through analysis of a questionnaire survey. For this study, the questionnaire survey was conducted at Melaka UNESCO World Heritage Site located precisely in Banda Hilir, Melaka.

The target groups were identified by selecting available candidates in the study area during the survey period. A pilot study can be identified as a mini version of an overall study, or a feasibility study. It carries the definition of specific pre-testing within a particular research to select the best research instrument in designing a study, through tackling several crucial elements that can be identified beforehand (van Teijlingen & Hundley, 2002). For this study, the pilot study is conducted with 10 random respondents available around the A' Famosa fort, aiming to identify weaknesses and errors while

constructing the questionnaire survey form. In this initial study, probability sampling was chosen as the preferred sampling technique, specifically simple random sampling. It is a basic sampling technique where the sample is selected as a subset of individuals (a sample) from the larger group (population). Each individual is chosen randomly and has an equal chance of representation in a particular population, which means every possible sample is given the same chance for selection. For this study, simple random sampling was conducted by listing all the selected attraction areas in Melaka UNESCO World Heritage Site. Then, 5-10 survey forms were allocated for each location. The numerator selected a respondent randomly from the groups of people who were in the area and conducted the questionnaire survey. The selection of respondents was also random and captures various demographic backgrounds to achieve the best result. Lastly, the completed questionnaire was collected for data analysis. The aim of conducting the questionnaire was achieved by obtaining various responses for future improvement of the study area.

The target group in this study are the tourists who visited Melaka UNESCO World Heritage Site. The total number of samples for this study is based on the highest number of probable samples because tourist arrival in Melaka is consistently high. Based on the Technical Report of Melaka Tengah's District Local Plan 2035 (Amendment), the number of tourist arrivals in Melaka in 2017 is about 16,794,468 which showed an increase of 3.1% from the previous year. To determine a sample size for the research, the Table of Determining Sample Size for Research Activities by Krejcie & Morgan (1970) was used. It is an effective method for determining sample size of a given population/ target group. In order to obtain a suitable sample size, the table was referred for 16,794,468 tourist arrivals. However, the limit for this table only for a sample size of 384. This means when a study exceeds a population of 1,000,000, the sample size is still maintained at 384. Therefore, a sample size of 400 was chosen for the study, adjusted to the high number of tourist arrivals in Melaka. Last but not least, Analysis of Variance (ANOVA) was selected as the tool for data analysis because most of the variables used were nominal and ordinal, while the dependent variables were ratio. ANOVA is a form of statistical hypothesis testing used to analyze the differences among a sample which was developed by statistician and evolutionary biologist, Ronald Fisher in 1918. It is useful for testing three or more groups for statistical significance. However, this study used one-way ANOVA between groups in order to test two groups to see if there is a difference between them, by using the F-distribution. A test result (from null hypothesis, H_o and sample) can be identified as statistically significant if it stands no chance in denying the truth of H_o. which happens when the p-value is less than the significance level. The null hypothesis happens when two variables are equal. Otherwise, a significant result means that the two means are unequal.

3. Findings

About 400 questionnaire survey forms were distributed, however only 200 questionnaire surveys were successfully returned, collected and analyzed. By using one-way ANOVA, the findings for this study started with identifying the relationship between place

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affective factors and socio-demographic profile, origins and trip profile. It is followed by the trip information medium chosen by the respondents as a response to the application of ICT in this study. The study has found that there are several place attachment affective factors which responded to trip frequency, which are 1) socio-demographic: age group, occupation, education level, 2) physical or known as tourism facilities factors: types of accommodation, types of transportation mode, and 3) cultural: tourists' knowledge and understanding.

Table 1: Respondents' socio-demographic profile

Variable	Component	Types of Respondent				Total	
		Inbound		Outbound			
		Unit	%	Unit	%	Unit	%
Origin	-	174	87.00	26	13.00	200	100.00
Gender	Male	61	35.06	8	30.77	69	34.50
	Female	113	64.94	18	69.23	131	65.50
Age	15-24	88	50.57	8	30.77	96	48.00
	25-34	60	34.48	9	34.62	69	34.50
	35-44	16	9.20	8	30.77	24	12.00
	45-54	9	5.17	1	3.85	10	5.00
	>55	1	0.57	0	0.00	1	0.50
Marital status	Single	121	69.50	11	42.31	132	66.00
	Married	51	29.31	15	57.69	66	33.00
	Divorced	2	1.15	0	0.00	2	1.00
Occupation	Student	51	29.31	7	26.92	58	29.00
	Government servant	48	27.59	0	0.00	48	24.00
	Private employee	64	36.78	17	65.38	81	40.50
	Others	11	6.32	2	7.69	13	6.50
Education level	SPM/ O-Level	26	14.94	5	19.23	31	15.5
	STPM/ A-Level	10	5.75	0	0.00	10	5.00
	Certificate	6	3.45	2	7.69	8	4.00
	Diploma	46	26.44	2	7.69	48	24.00
	Bachelor degree	76	43.68	9	34.62	85	42.50
	Master degree	9	5.17	3	11.54	12	6.00
	PhD	1	0.57	0	0.00	1	0.50
	Others	0	0.00	5	19.23	5	2.50

Source: Primary data: Questionnaire survey, February 2019

Table 1 above illustrates the respondents socio-demographic profile. The age group of 15-24 was recorded as the highest percentage of inbound respondents, at about 50.57% (n=88). It is followed by the 25-34 age group at 34.48% (n=60), 35-44 age group at 9.20% (n=16), 45-54 age group at 5.17% (n=9) and above 55 age group at 0.57% (n=1). For the outbound respondents, the highest respondents were from the age group of 25-34 at 34.62% (n=9). The age group of 25–24 and 35–44 shared the same percentage of 30.77% (n=8) each, followed by the 45-54 age group at 3.85% (n=1). There were no respondents in the age group of above 55 years. With that, it can be concluded the highest number of inbound respondents were from the 15-24 age group as opposed to 25–34 age group for outbound respondents. The age of respondents affects the trip frequency of the respondents as characteristics of a particular person is based on the maturity of their age. Age also influences behavior, decision-making and motivation factors for travelling.

Generally, the recorded age groups were from the guidelines highlighted by World Health Organization in 2013 which is above 19 years until 64 years (adult). This age group can be considered as being within their early working stage where they are interested in job opportunities and entertainment venues such as sport tourism areas, retail and shopping areas, as well as modern technologies. As presented in the findings above, the number of inbound respondents was higher than outbound respondents and they were predominantly from a younger age group. They were single and most of them were students with high levels of education. This is because the study area has many attractions for the youngsters to relax and enjoy activities like café-hopping while enjoying the views of the river, especially during the night time in areas such as Jonker Walk, Hard Rock Café Melaka, Dataran Pahlawan and Mahkota Parade. Many vendors as well as hipster restaurants can be found along the Melaka River. In contrast, the outbound respondents were mostly married and bringing their families along during travel. The factors affecting their travel plans are different because they need to consider travel fees, budgeting for transportation and accommodation, frequency of trip-making and social factors such as activities during trips. The places that they are attached to and are suitable for their family dependents are different. They are more attracted to park and recreation areas, Menara Taming Sari, museums and A' Famosa fort, as well as St. Paul's Hill. The highest number of inbound respondents is within the range of 15-34 years of age. This is because most of the inbound respondents in that particular age range is in their early working stage where they can freely make decisions of moving from one place to another for solo trips or with friends and families.

Based on physical assessments, the physical abilities for this age group are at their peak, including reaction time, sensory abilities and cardiac functioning which makes them an active age group, interested in exploring and experiencing new things. Therefore, they can easily form attachment to something that is close to their hearts. This is similar to the outbound age group of 25-34 years but they are more practical in their decision-making and choosing tourism destinations. This is because in this age range, most of them are stable in their professions and economics. Their chosen destinations are usually based on their expenditure and interest of attachment (Solomon, 1996). Based on the survey results, the highest number of inbound respondents were private employees 36.78% (n=64), followed by students 29.31% (n=51), government servants 27.59% (n=48) and only

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6.32% (n=11) were from others segments of the population. However, in terms of outbound respondents, private employees were recorded as the highest percentage of total responses at 65.38% (n=17), and students at about 26.92% (n=7). Meanwhile, other profession was recorded at 7.69% (n=2) and there were no government servant respondents. Overall, about 40.50% (n=81) from the total respondents were private employees, followed by 29% (n=58) students, 24% (n=48) government servants and 6.5% (n=13) others. The study found that both inbound and outbound respondents for the study are mostly private sector employees.

In other situations, this result might affect the whole study but as almost of the total respondents were students, the study could still be carried on as long as the aims and objectives of the study can be achieved. It is because economic factors influence trip-making decisions, including expenditure on transportation, accommodation and activities. Occupation also affects the purpose of trips. Some people travel from one place to another for leisure and entertainment purposes and plan to enjoy their free time experiencing the attachment served by the study area. However, the rest travel for the purpose of working experiences. For example, some were in the study area to attend seminars, conferences and meetings at hotels and conference halls in the study area. After the work day is done, they take a short break to mingle around the study area before going back home. This is similar to those who visit the study area for education and learning trips, usually made by students (Kai & Chen, 2011). This situation shows that attachment of place among visitors is based on their experience of the study area as one of UNESCO's World Heritage Sites.

In terms of educational background among inbound respondents, the respondents with bachelor's degrees was the highest recorded group, specifically 43.68% (n=76) followed by 26.44% (n=46) diploma, 14.94% (n=26) of SPM/ O-level, 55.75% (n=10) of STPM/ A-level, 5.17% (n=9) master's degree, 3.45% (n=6) for certificate and 0.57% (n=1) PhD. Similarly, the respondents with bachelor's degrees were recorded as the highest percentage among outbound respondents, specifically 34.62% (n=9), followed by others 19.23% (n=5), SPM/ O-level, master's degree 11.54% (n=3) and certificate 10% (n=2). The rest with STPM/ A-level and diploma level education both recorded percentages of 7.69% (n=2) each and there were no PhD holders recorded. Overall, from the results for education level among both inbound and outbound respondents, most respondents had bachelor's degrees or 42.50% (n=85), followed by 24% (n=48) with diplomas. Education level drives the attachment of the place chosen by the respondents. The biggest influence for education level is people visiting Melaka for educational programs conducted by their institutions such as schools and universities. Although this situation is not for all respondents, it does presents impacts to the study. Besides that, the educational background of the respondents also leads to the purpose of visiting the study area. Higher educational level creates people who are more rational and knowledgeable that can appreciate all the places they visit and have better understating about the history of the area, which in turn influences the trip making frequency of the respondents.

The highest percentage of respondents chose accommodations located in the study area which are Banda Hilir, 25% (n=70), followed by its adjacent areas such as Kota

Laksamana 12.5% (n=25), Melaka Raya 6% (n=14), Kampung Morten 4.5% (n=13), Peringgit 5.55 (n=11) and Tengkera 10% (n=10). Several areas received moderate number of respondents stays or between 4% to 9% such as Tangga Batu, Simpang Ampat, Bukit Rambai, Bukit Katil, Klebang, Ayer Keroh. However, some accommodations chosen by respondents are located far away from the study area such as Sungai Udang, Alor Gajah, Ujong Pasir, Jasin and Cheng, with between 2% to 3% each. Hence, it can be assumed that the location of accommodation might be influenced by the purpose of the respondent's visit. Generally, the types of accommodation will influence the expenditure of the tourists. However, in terms of trip frequency, accommodation will affect the tourists' decision making on places to stay and trip making within the tourism site due to travel distance between accommodation and the study area. This is due to differences in terms of preference among respondents.

Some people like to have accommodations in the study area where they can enjoy the sense of place and develop a close attachment to the area, during both the days and nights. Banda Hilir is the most popular area for accommodation among respondents because it provides a wide array of accommodation types and is located in the site within walking distance to many attraction areas. Similarly, there are those who chose to stay nearby or adjacent to the site with intention of seeking good environment, as well as still feeling the vibes and attachment from the study area. However, the findings also found that some of the respondents stayed far from the study area due to reasons such as visiting families or staying at a relative's home to save money for their holiday. This might happen because their initial intention of visiting friends and relatives encourages them to make trips to the study area. Overall, most of them still chose to stay within the district of Melaka Tengah.

Table 2: Respondents' origins (inbound)

Percentage of Respondents' Origin (Inbound)		
Origin (State)	**Unit**	**Percentage (%)**
Kuala Lumpur	25	14.37
Selangor	27	15.52
Perak	8	4.60
Negeri Sembilan	18	10.34
Pulau Pinang	5	2.87
Kedah	9	5.17
Sabah	4	2.30
Johor	30	17.24
Pahang	14	8.05
Terengganu	7	4.02
Melaka	19	10.92
Kelantan	8	4.60
Total	**174**	**100.00**

Source: Primary data: Questionnaire survey, 2019.

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Table 3: Respondents' origins (outbound)

Percentage of Respondents' Origin (Inbound)		
Origin (State)	**Unit**	**Percentage (%)**
China	3	11.54
Singapura	14	53.85
Indonesia	5	19.23
Australia	1	3.84
Thailand	3	11.54
Total	**26**	**100.00**

Source: Primary data: Questionnaire survey, 2019.

Based on the Table 2 and 3 above present the respondents' origins. In terms of the inbound responses, most of them were originally from Johor, Selangor and Negeri Sembilan. Geographically, the states are situated adjacent to the study area which greatly influences the area not only with regard to tourist arrival, but also development in terms of urban development, infrastructures and services, as well as demand and supply of housing, public facilities and commercial areas. Specifically, it is affected by the trip duration and travel distance from neighboring state capitals to Melaka UNESCO World Heritage Site. Melaka has the potential to serve in the larger conurbation of Kuala Lumpur-Seremban-Melaka, and this influences the development of Melaka itself in terms of transportation, land use planning and other services. On the other hand, most of the outbound respondents were originally from Singapura, followed by Indonesia, China and Thailand.

These ASEAN countries are neighboring countries of Malaysia. It can be concluded then that transportation mode significantly affects trip frequency. Transportation is one of important factors in deciding trip frequency among tourists based on their marital status and family dependencies. For example, a single traveler may choose public transportation as a preferred mode because it reduces the expenditure during travelling and makes it easy to move freely from one place to another place. However, the tourists bringing their family would choose to drive and use their own transportation (private) during travelling as they have commitments towards their family dependencies. Based on overall responses, they claimed and confirmed that the travel time is shorter for them to make frequent trips to the study area as it reachable and accessible through the expressway. Also, the various attractions serve as one of the factors that encourage them to visit the study area. Most of them make overnight trips to enjoy the vibrancy of the study area during the day time and also night time.

Table 4: Respondents' trip profile

Variable	Component	Types of Respondent				Total	
		Inbound		Outbound			
		Unit	%	Unit	%	Unit	%
Purpose of visit	Holiday	100	55.56	15	75.00	115	57.50
	Visit family	19	10.56	1	5.00	20	10.00
	Business	7	3.89	1	5.00	8	4.00
	Shopping	11	6.11	1	5.00	12	6.00
	Education trip	26	14.44	1	5.00	27	13.50
	Conference	6	3.33	0	0.00	6	3.00
	Others	11	6.11	1	5.00	12	6.00
First visit	Yes	15	8.33	165	91.67	180	90.00
	No	8	40.00	12	60.00	20	10.00
Time visit	0	12	6.67	8	40.00	20	10.00
	1-5	77	42.78	5	25.00	82	41.00
	6-10	49	27.22	5	25.00	54	27.00
	11-15	4	2.22	0	0.00	4	2.00
	15-20	10	5.56	1	5.00	11	5.50
	>20	28	15.56	1	5.00	29	14.50

Source: Primary data: Questionnaire survey, 2019.

Table 4 above illustrates the respondents' trip profile to Melaka. Based on the table, 90% (n=180) of the respondents visited the study area for the first time, of which 8.33% (n=15) were inbound respondents and 91.67% (n=165) were outbound respondents. The rest were not first timers visiting the study area, of which 41% (n=82) visited the study area between one to five times, followed by 27% (n=54) between six to ten times. This is because Melaka's cultural and heritage values affect each visitor differently, which relates how place attachment defines a particular group's identity and identity of a place (Ujang, 2010). Based on responses of inbound respondents, 55.56% (n=100) visited the study area for holiday purposes, followed by 14.44% (n=26) for education trips, 10.56% (n=19) for visiting families, 6.11% (n=11) for shopping and others, 3.89% (n=7) for business and 3.33% (n=6) for conference purposes. Similarly, most of the outbound respondents visited the study area for holiday purpose which was about 75% (n=17) from the total outbound responses. The purpose of visiting families, businesses, shopping, education trips and others shared the same percentage at 5% (n=1). No outbound respondents visited the area for conference purposes. Based on the total responses from both respondent groups, the majority, or about 57.50% (n=115) respondents visited the study area for holiday purpose compared to 13.50% (n=27) for education trips, 10% (n=20) for visiting families, 6% (n=12) for shopping and others, 4% (n=8) for businesses and 3% (n=6) for conference purposes. Therefore, it seems that most tourists visit Melaka UNESCO World Heritage Site for holiday, education trip and visiting families. The state government has put in efforts to make Melaka an authentic tourism destination with a rich of sense of place and

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attachment that cannot be found in other places. However, Melaka is facing issues threatening its charm while driving prosperity for the tourism sector. Knowledge and understanding of the study area are important, so that the historical values are preserved for the tourists to encourage them to make frequent trips into the area. Therefore, further study was carried out to identify the information sources chosen by tourists, including selection of tourist attraction areas, accommodations, transportations, food and beverage, as well as tourism activities.

Table 5: Respondent's trip information medium

Variable	Component	Types of Respondent				Total	
		Inbound		Outbound			
		Unit	%	Unit	%	Unit	%
Information medium	Internet-based engines	157	90.23	13	50.00	170	85.00
	Events (travel fair)	11	6.32	10	38.46	21	10.50
	Brochures	6	3.45	3	11.54	9	4.50

Source: Primary data: Questionnaire survey, 2019.

Table 5 above illustrates the respondents' trip information medium. The table shows that almost 85% (n=170) tourists used internet-based engines (such as social networks, bloggings, consumer review networks etc.) to obtain information about Melaka. A further 10.50% (n=21) obtained information from events like conferences and travel fairs such as MATTA fair. In doing so, tourists can gather all related information about Melaka quickly and conveniently. Also, most of them have developed a trust for reviews from Internet as it based on preference and satisfaction of like-minded tourists.

Table 6: Internet-based engines

Variable	Component	Types of Respondent				Total	
		Inbound		Outbound			
		Unit	%	Unit	%	Unit	%
Internet-based engines	Social media	72	45.86	8	61.54	80	47.06
	Media sharing	28	17.83	2	15.38	30	17.65
	Bookmarking and content curation	29	18.47	1	7.69	30	17.65
	Consumer review	28	17.83	2	15.38	30	17.65

Source: Primary data: Questionnaire survey, 2019.

Table 6 above illustrates the internet-based engines. Among the internet-based engines chosen by tourists as preferred information mediums, social media network recorded the highest utilization at about 47.06% (n=80), followed by other three digital information sources: 1) media sharing networks (e.g. Instagram), 2) bookmarking and content curation networks (e.g. Pinterest and Flipboard), as well as 3) consumer review networks (e.g. TripAdvisor) which each recorded 17.65% (n=30) from the rest of the respondents. It shows that social media allows people to be in touch with anyone, not just family's members. It is also one the best ways to find and interact with new people with the same interests because anyone can express their feelings and opinions on a digital platform. In addition, it is a great way to spread information quickly across the globe, such as breaking news and knowledge about a destination which can receive thousands of views in just a few minutes.

To sum-up the findings, the relationship between tourist behaviors and place attachment affective factors is important as different trip profiles with different tourist behaviors influence place attachment affective factors. From the data analysis, the age group and education level showed the highest impact on place attachment. In terms of age group, each age group showed different determinant factors affecting their trip. For example, young tourists tend to spend more, but do not choose to stay overnight during their trips, which could be related to shorter travel distances and their main purpose of visiting the area, which is entertainment. However, this age group highly contributes towards trip frequency because they prefer to revisit an area that they feel attached to. Conversely, older tourists spend more on their trip and stay a bit longer in a particular area depending on their purpose of visiting. Mostly, they choose the location of trip within their home base and stay at non-rented accommodations such as relatives' houses. Even though their overall cost for trips seem lower, they do not contribute much to trip frequency.

4. Conclusion

The study has achieved its objectives as the concept of place attachment and ICT were identified and analyzed through related variables. The findings proved that not all place attachment affective factors affect the result of trip frequency as well as towards use of technologies. Therefore, several recommendations have been outlined for this study. First, the state government and related tourism agencies need to formulate new marketing and promotional plans for heritage and cultural activities. This can be done in terms of distribution of promotional materials (physical and digital), as well as announcements for events and local activities. For example, the tourism promotion unit can promote Melaka UNESCO World Heritage Site to the targeted groups and host huge events, mainly during off-peak season by utilizing various marketing methods such as shows, roadshows, websites, joint ventures and e-newsletters, as well as social media tools such as Facebook, Twitter and Instagram. The power of ICT, mainly through social media, has a huge influence in society, particularly the youth. Bringing the youth into the

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heritage and cultural world will change their perception. Instead of seeming outdated and boring, heritage and culture can be reframed from different perspectives and approaches to make it seem more exciting. Other than that, heritage and cultural marketing should follow modern trends and forego banners and brochures because they are not powerful enough for new-age promotions. In order to attract people to Melaka and engage in heritage and cultural activities, a detailed and advanced marketing strategy should be outlined. Some of them might be attracted to heritage and culture, however, usually it is only limited to their knowledge of museums and forts. The direction towards heritage and cultural activities is still lacking.

In order to overcome that weaknesses, the responsible agencies should provide a digital event planner which contains lists of events and activities along with the dates and operational hours in one particular website, utilizing big data technologies. Also, it can provide other information related to heritage and cultural attractions such as location, ticket fare, public transportation, bicycle rental and upcoming events. These will lead people to other attraction areas, not only Jonker Street and Jalan Kota. By having this system, it would be easy for people to plan their trips to Melaka and gain educational experience. Secondly, as the findings show that the majority of tourists are the youth, the presence of artwork and cultural heritage elements should be improved, not just installing an art piece in a nice location to be observed from afar. It must present something that allows the tourists to feel a sense of endearment towards it. It absolutely cannot be denied that attracting audiences from all age groups is challenging. However, it can happen if the presentation of cultural heritage utilizes modern ICT. It is related to issues mentioned before, where museums should be upgrading and integrating modern technology. It might be through assimilating digital backdrops, subtitling and even slightly changing-up the background music, not just displaying materials behind a glass wall. Improvements in interactivity will attract more people to heritage sites and historical displays.

Presently, heritage and cultural items are deemed fragile and stay untouched and protected from the outside world. However, in this modern era, it is not an attractive experience, particularly to the youth. Some recommendations to solve this issue is by manipulating space with modern technology through introduction of a VR experience showcasing heritage and cultural elements. This will turn boring displays into a more interactive, fun experience while still providing educational input to the visitors. It can educate tourists and promote appreciation of history and culture through something they can experience themselves. Based on this approach, more people will be attracted to pure heritage and cultural elements, instead predominantly social activities with friends and family in Jonker Street and Dataran Pahlawan.

In a nutshell, the concept of sense of place in heritage and culture is strongly present in Melaka as one of heritage sites with UNESCO recognition. However, tourism planning should not only consider the problems in the current conditions of heritage sites and management, but also to find a way to encourage tourists to use ICT while visiting Melaka to delve into heritage and cultural activities and locations which can target all age groups, mainly the youth. If this can be achieved, Melaka will no longer only be a UNESCO World

Heritage Site, but also will become a preferred destination for heritage and cultural activities using advanced technological tools, instead of just shopping and food hunting.

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References

Altman. I., & Low. S. (1992). *Place attachment*. Plenum Press.

Atzori, L., Iera, A., & Morabito, G. (2010). The internet of things: A survey. *Computer Networks*, *54* (15), 2787–2805.

Babbie, E. R. (2010). *The practice of social research*. 12th ed. Wadsworth Cengage.

Buhalis, D. & Amaranggana, A. (2014). Smart tourism destination. In Z. Xiang, & L. Tussyadiah (Eds.), *Information and communication technologies in tourism* (pp. 553-564). Springer.

Canter, D. (1977). *The psychology of place*. Architectural Press.

Chin, C. (2016). Are we losing the 'real' Malacca? Star2.com (newspapers). *The Star Online*.

Cross, J. E. (2001). *What is sense of place, research on place and space*.

Erb, Y. (2011). *Some aspects about the Internet of things, the advantages and challenges: Business aspects of the Internet of things*. ETH Zurich.

Gustafson, P. (2001). Meaning of place: Everyday experience and theoretical conceptualizations. *Journal of Environmental Psychology*, *21*, 5-16.

Gutiérrez, V., Galache, J. A., Sánchez, L., Muñoz, L., Hernández-Muñoz, J. M., Fernandes, J., et al. (2013). Smart Santander: Internet of things research and innovation through citizen participation. In A. Galis, & A. Gavras (Eds.), The *future Internet* (pp. 173-186). Springer.

Hashemnezhed, H., Heidari, A. A., & Hoseini, P. M. (2012). "Sense of place" and "place attachment": A comparative study. *International Journal of Architecture and Urban Development*, *3* (1), 5-10.

Hoseini, P. M., Hashemnezhad, H., & Heidari, A. A. (2013). Sense of place and place attachment. *International Journal of Architecture and Urban Development*, *3* (1), 5–12.

Kai, B., & Chen, C. B. (2011). *Edutourism: The study of tourism behaviour of international students in Malaysia*. January.

Korkmaz, H., Atay, L., & Yalçınkaya, P. (2018). An evaluation on smart tourism. *China-USA Business Review*, *17* (6), 308-315.

Krejcie, R.V. & Morgan, D.W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*.

Layder, D. (1993). New strategies in social research, Cambridge: Polity; Mesch, G., &

Geografi Vol.8(2), 48-65
ISSN 2289-4470 /eISSN 2462-2400

Manor, O. (1998). *Social ties, environmental perception and local attachment. Environment and Behaviour, 30*, 504-519.

Liu, S. (2005). A Theoretic Discussion of Tourism E-commerce. In 7th International Conference on Electronic Commerce. *ACM Press*, *New York*, 1-5.

Low, S. M. (1992). Symbolic ties that bind: Place attachment in the plaza. In I. Altman, & S. Low (Eds.), *Place attachment* (pp. 165-168), Plenum Press.

Mesch, G. S., & Manor, O. (1998). Social ties, environmental perception, and local attachment. *Environment and Behavior*, *30*, 504-519.

McKeever, S., Ye, J., Coyle, L., Bleakley, C., & Dobson, S. (2010). Activity recognition using temporal evidence theory. *Journal of Ambient Intelligence and Smart Environments*, *2* (3), 253-269.

Majlis Bandaraya Melaka Bersejarah (2019). Technical Report of Melaka Tengah District Local Plan 2035 (Amendment). *Department of town and Country Planning MBMB.*

Mingjun, W., Zhen, Y., Wei, Z., & Xishang, D. (2012). A research on experimental system for Internet of Things major and application project. *3rd International Conference on System Science, Engineering Design and Manufacturing Informatization (ICSEM)*.

Muijis, D. (2010). *Doing Quantitative Research in Education with SPSS*. 2nd edition. SAGE Publications.

Najafi, M., & Shariff, M. K. B. M. (2011). The concept of place and sense of place in architectural studies. *World Academy of Science, Engineering and Technology*, *80* (8), 1100–1106.

Nolan, R. L. (1979). Managing the Crisis in Data Processing. *Harvard Business Review*, March-April, 115-126.

Paul M. M. (2012). Psychology Applied to Work: An Introduction to Industrial and Organizational Psychology. *Tenth Edition Paul*, *53* (9), 1689–1699.

Rapoport, A. (1990). *The meaning of the built environment: A nonverbal communication approach*. The University of Arizona Press.

Roughneen, S. (2018). Melaka's tourism drives prosperity but threatens its charm. *Nikkei Asian Review*.

Seamon, D., & Sowers, J. (2008). Place and placelessness (1976): Edward Relph. *Key Texts in Human Geography*, January 2008, 43–52.

Shamai, S. (1991). Sense of place: an empirical measurement. *Geofmm*, *22*, 347-358.

Sime, J. D. (1986). Creating places or designing spaces? *Journal of Environmental Psychology*, *6* (1), 49-63.

Solomon, M. R. (1996). *Consumer behavior* (3rd ed.). Prentice-Hall.

Steele, F. (1981). *The sense of place*. CBI Publishing Company, Inc.

Werthner, H., & Ricci, F. (2004). E-commerce and tourism. *Communications of the ACM*, 47 (12), 101–105.

Van Teijlingen, E., & Hundley, V. (2002). The importance of pilot studies. *Nursing Standard*, 16 (4), 33–36.

Zhang, D., Zhou, J., Guo, M., Cao, J., & Li, T. (2011). TASA: Tag-free activity sensing using RFID tag arrays. *IEEE Transactions on Parallel and Distributed Systems*, *22* (4), 558–570.