Tourist expectation and satisfaction towards pedestrian walkway in Georgetown, a World Heritage Site

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Abstract. Recently, many cities in the world have incorporating walkability as a distinctive feature towards becoming a walkable tourism destination. A high-quality walkable environment has been greatly demanded by pedestrian use as it assures a sense of comfort and safety. In the context of Malaysia, the walkability concept is mostly applicable to any tourism places or the capital of a state long recognized as an urban heritage site. Despite this, there has been little research done in terms of the relationship between tourist expectation and tourist satisfaction towards walkability particularly in Georgetown, which is a World Heritage Site. The main objective of the study was to determine the relationship between tourist expectation and tourist satisfaction towards the existing pedestrian walkway in Georgetown. Research data were gathered via fieldwork observation and an online survey, whereby questionnaires were have distributed to 150 respondents made up of tourists who experienced walking in the study area. The outcomes demonstrate that tourist expectation in terms of the spatial features of the pedestrian walkway was relatively greater than tourist satisfaction. Hence, the findings of the study will be very useful for urban city planners in incorporating walkability to enhance the walking experience within the city.

1. Introduction
Over the last few years, many cities in the world have concluded incorporating walkability as a distinctive feature that can distinguish one city from another. The idea of walkability has been associated often with urban planning area of a city in which it can be determined in several aspects, such as environmental features, transforming a city to become a safe and compact environment, enhancing the potential environments, making the city more liveable, and being the holistic solution to any urban problems [1]. Eventually, the term ‘walkability’ has become a popular instrument in urban planning as it is the basic and key indicator of measuring the overall walking conditions of an area [2]. In the context of Malaysia, the concept is mostly applicable to any tourism places or the capital of a state long since recognized as an urban or heritage site. A walkable tourism place demands a very well connected pedestrian network as it helps to intensify the tourism activities in an area [3]. One of the most significant tourist places that encourage pedestrian walkway facilities in Georgetown, Penang. As mentioned by Mitchell and Wee [4] the Penang local authority has started to improve the accessibility of pedestrian networks, particularly in Georgetown, during recent years. Penang is famously known for its unique and vibrant cultural heritage that can be seen through its architecture, food, and people. These valuable heritage assets can be the biggest reasons for attracting more tourists to visit Penang. However, even though these potential places are great for pedestrians to roam around
freely by walking, weak pedestrian linkages from one place to another can be seen as a major
demotivating factor to explore places found within the city [5]. According to Mitchell and Wee [4], the
local authority has built a 10 km-long pedestrian walkway in the center of Georgetown. Nevertheless,
some inadequacies are faced on the pedestrian walkway as it has not been built accordingly to a proper
standard, is blocked by an illegal obstruction, and insufficient maintenance is done towards the
networks [4].

As a top tourism destination that attracts many tourists, it is highly advisable to create an accessible
or walkability environment in the area; otherwise, it can cause some issues towards the tourists [6].
Thus, it is vital for urban planners to design and provide such facilities to allow tourists to have a
memorable walking experience within the city with a sense of comfort. It is absolutely crucial to
implement a walkable environment within a heritage built-in area as unstoppable development
measures may contribute to the disruption of aesthetic value maintenance of the urban heritage site.
Therefore, integrating a pedestrian walkway into urban planning can be one of the appropriate
implementations in promoting walkability and mobility in these historical areas. In addition, studies on
the effects of the walkable environment affecting tourist satisfaction in a developing urban heritage
area such as Georgetown, Penang, are still lacking. Previously, most of the researches have
concentrated on the city center of Kuala Lumpur [3, 5, 7] or the heritage town of Melaka [8]. Thus,
this study intends to evaluate tourist expectations and tourist satisfaction towards the pedestrian
walkway provided in Georgetown, a World Heritage Site.

2. Attributes of walkability in urban heritage city
The term “pedestrian” means any person afoot or walking instead of traveling in a vehicle, while，“walkway” can be defined as a hard-surfaced pavement that is separated from the road of motorized
vehicles. The walkway must be a little bit higher than the main road; it can be addressed as an integral
component of a street for pedestrians to travel and experience safety, comfort, accessibility, and
efficient mobility [9]. Therefore, the term “pedestrian walkway” can be referred to as an exclusive
path designated for pedestrian usage in a city. On the other hand, the term ‘walkability’ is defined as a
concept to measure the level of pedestrian or walking-friendliness in a certain place [9]. Walkability is
closely related to how the built environment of a city is able to support and encourage walking activity
simultaneously. The walkability or walking behavior is not only limited to urban design qualities, but
it also includes any disciples that may bring benefits to the city, such as the psychological and health
aspects [10].

Detailed planning of tourist travel routes is thus vital as it can maximize pedestrian exposure and
tourism walking experiences, as well as their satisfaction. In this study, a theoretical framework
consisting of Accessibility, Connectivity, and Continuity variables has been adapted from [7].
Furthermore, another aspect mentioned by Pratiwi, Zhao and Mi [6], which is Amenities, is also
integrated into the framework of study along with the Safety aspect from Juriah and Norsidah [3]. As
stated by Mahsa and Norsidah [7], these aspects are important to analyze the experience perceived by
tourists who utilize walking as the medium of travel. The three components provide linkages with
other modes, safe accessibility, and comfort when walking, which directly influences the tourists to
walk [4, 11]. Accessibility plays a primary role for pedestrian tourists in determining and selecting
their destinations [7] in which one of the items that fall into the category is easy and short walking
distance. Litman [12] has mentioned that the elements of a pedestrian walkway that are more flexible
to walk in if the distance is shorter compared to a longer one, as the longer distance requires other
public transport modes to be incorporated into. In addition, the elements of proximity to public
transport or distance and directness of travel are associated with these aspects. It can be said that
proximity relates to the distance of origin to a destination, while the directness of travel can be
understood as the ease of travel in an existing pedestrian walkway without any barriers obstructing it.

Next, another two aspects of the framework are safety and amenities. Safety of walking is an aspect
that may influence tourists to walk and is highly associated with pedestrian walkways [3]. Juriah and
Norsidah [3] highly suggested for a safe pedestrian environment to be implemented in urban cities for
tourists to walk comfortably without having any feeling of fear from street-based criminals. An urban city can increase the walkability in its area by first enhancing the condition of the sidewalk as it plays one of the more important roles in the built environment [13]. The sidewalk condition refers to the environment or any facilities available throughout the pedestrian walkway, such as streetscape quality and greenery created. In addition, a walkable city ensures easy access to attractive places and interesting activities, as well as close proximity to pedestrian facilities such as transit shelters. This can ultimately encourage the walking activity of pedestrians [14].

Figure 1. The framework of the study.

3. Georgetown, Penang
Georgetown was awarded the “World Heritage Site” status and listed under the category of Cultural Heritage by the UNESCO World Heritage Committee on 7th of July 2008 [15]. This declaration allocated Penang global recognition and no doubt could be planted due to the accreditation as the title was awarded by UNESCO. This means that the evaluation of Penang as a heritage site is authentic and not a mere gimmick. Penang and its charming ancient heritage and culture can be evidently seen through building architectures, blending of food traditions, a cacophony of local dialects, and the harmoniously different religions inherited for the last 200 years. The multiracial state that involves heritage tourism has bloomed over the years after the declaration; somehow, it transforms Penang into one of the core destinations in the tourism industry and captures tourist attention from all over the world.

In line with the slogan of ‘the City of Living Culture’, Penang has been gearing up its developments to uplift the unique city image by focusing on potential heritage buildings and living cultures. The heritage assets are most likely divided into several zones depending on the specific ethnicities living in the area. In Georgetown, there are three main landmarks that represent the three major races in Malaysia, which are the Little India area and occupied by the Indian population, the Kapitan Keling mosque area with the Malay population, and the Pinang Peranakan Mansion area
resided by the Chinese population. Basically, the capital of Penang is George Town; there are two separate zones identified in this town, which are the Core and Buffer zones.

As illustrated in Figure 2, the buffer zone area is bigger than the core zone area, measuring at 150.04 and 109.38 hectares, respectively. In this research, only the core zone area is selected in order to identify the significance of the walkability in the Georgetown district. Most of the cultural and heritage attractions are situated within the core zone area compared to the buffer zone area; tourists are thus most likely to follow the walkabout tour prepared by several agencies that also cover this area.

A study by Mitchell and Wee [4] has stated that only a colonnaded pedestrian was available in the Penang urban area and no roadside pedestrian in the last decade. A colonnaded pedestrian is a pedestrian exactly located in front of every shophouse of the buildings. During the time, pedestrians faced troubles and must walk nearer to the traffic location due to the unorganized and poor pedestrian networks [4]. It has been further mentioned by Mitchell and Wee [4] that the pedestrians are built not according to the proper standards and did not provide any connectible networks of routes. Furthermore, most of the walkability elements in Georgetown, Penang are available in the Core Zone area instead of the Buffer Zone. However, an observation made has noted that no case study has been done before, specifically within the scope of walkability in Penang. Meanwhile, some related research about the heritage site of Penang is only concerning its bid to become either a liveable or sustainable city [16]. Although there is a lack of studies on the walkability in Penang, there are plenty of other alternatives that provide information on walkable tours in the heritage site.

4. Study methodology
The method of this research was a quantitative design that used descriptive analysis. This study adapted the sample size made by Juriah and Norsidah [3], whereby only 150 respondents were needed in one destination of an urban heritage area to complete the questionnaires. Therefore, the population was taken from the local and international tourists who had explored and experienced the streets in Georgetown by walking as their mode of transportation. Basically, the questionnaire consisted of four
sections, which were: (a) personal background, (b) traveling information, (c) tourist expectations on walkability, and (d) tourist satisfaction on walking experience.

A Likert scale measurement was used in both Sections C and D. For Section C on Tourist Expectation, the scale ranged from 1 = Not Important, 2 = Less Important, 3 = Neutral, 4 = Important, and 5 = Very Important. Meanwhile, Section D on Tourist Satisfaction used a scale of 1 = Very Dissatisfied, 2 = Dissatisfied, 3 = Neither dissatisfied nor satisfied, 4 = Satisfied, and 5 = Very Satisfied. An average mean score was utilized to indicate the highest aspects, namely accessibility, connectivity, continuity, safety, and amenities for both variables, whereas the second mean score was tested to identify the mean score of variables (i.e. tourist expectation and tourist satisfaction) that was higher. The mean values were classified according to the mean range of 5-point scale, namely Strongly Disagree, Disagree, Neutral, Agree, and Strongly Disagree [16]. Last but not least, the Spearman Correlation Test was included to evaluate the relationship between the two variables of the study towards the pedestrian walkway in Georgetown, Penang. The absolute value of r = 0.10 to 0.29 was considered as small, r = 0.30 to 0.49 was considered as medium, and r = 0.50 to 1.0 was considered as large. Herein, the absolute value of r indicated the strength of the correlation.

5. Findings and discussion
Based on the findings, a majority of the respondents were female (70.7%; N=106) and within the age range of 18-24 years old. From the total sample size of the respondents, the highest number of local tourists were from Kuala Lumpur with 25.3% (N=38) and followed by Selangor with 17.3% (N=26). Meanwhile, the international tourists were mostly from Indonesia with 4.7% (N=7), and Germany (3.3%, N=5) came second. For the respondent’s occupation, 62.7% (N=94) were students and a majority were Diploma or Bachelor Degree holders.
Table 1. Profiles of the respondents.

| Variables          | Items              | Mean | Percent |
|--------------------|--------------------|------|---------|
| Gender             | Male               | 44   | 29.3    |
|                    | Female             | 106  | 70.7    |
| Age                | 18–24 years old    | 102  | 68.0    |
|                    | 25–40 years old    | 43   | 28.7    |
|                    | 41–60 years old    | 5    | 3.3     |
| Origin             | Selangor           | 26   | 17.3    |
|                    | Kuala Lumpur       | 38   | 25.3    |
|                    | Johor              | 7    | 4.7     |
|                    | Penang             | 11   | 7.3     |
|                    | Pahang             | 4    | 2.7     |
|                    | Kedah              | 14   | 9.3     |
|                    | Perak              | 2    | 1.3     |
|                    | Negeri Sembilan    | 1    | 0.7     |
|                    | Sarawak            | 5    | 3.3     |
|                    | Perlis             | 2    | 1.3     |
|                    | Kelantan           | 4    | 2.7     |
|                    | Terengganu         | 3    | 2.0     |
|                    | Sabah              | 2    | 1.3     |
|                    | Indonesia          | 7    | 4.7     |
|                    | Singapore          | 1    | 0.7     |
|                    | US                 | 1    | 0.7     |
|                    | China              | 1    | 0.7     |
|                    | Denmark            | 3    | 2.0     |
|                    | France             | 3    | 2.0     |
|                    | Australia          | 2    | 1.3     |
|                    | United Kingdom     | 1    | 0.7     |
|                    | Spain              | 1    | 0.7     |
|                    | Russia             | 1    | 0.7     |
|                    | Japan              | 1    | 0.7     |
|                    | Czech Republic     | 1    | 0.7     |
|                    | Germany            | 5    | 3.3     |
|                    | Canada             | 1    | 0.7     |
| Education Background| SPM/O Level        | 6    | 17.3    |
|                    | Foundation         | 22   | 25.3    |
|                    | Diploma/Bachelor's Degree | 108 | 4.7 |
|                    | Master's Degree    | 14   | 7.3     |
|                    | SPM/O Level        | 6    | 17.3    |
| Occupation         | Student            | 94   | 62.7    |
|                    | Business           | 8    | 5.3     |
|                    | Professional       | 15   | 10.0    |
|                    | Self-Employed      | 5    | 3.3     |
|                    | Salary/Wages       | 17   | 11.3    |
|                    | Unemployed         | 10   | 6.7     |
|                    | Retired            | 1    | 0.7     |

Mean score analysis was used to identify the spatial features of a pedestrian walkway that encouraged walkability in the World Heritage Site of Georgetown, Penang. Table 3 shows a summary of the mean scores for the attributes of walkability.
Table 2. Summary of the mean scores for the attributes of Walkability.

| Variables | Items                                | Mean | Average Mean |
|-----------|--------------------------------------|------|--------------|
|           |                                      | Tourist Expectation | Tourist Satisfaction | Tourist Expectation | Tourist Satisfaction |
| Accessibility | Availability of alternatives routes | 4.11 | 3.70 |
|             | Easy access and short walking distance | 4.25 | 3.76 | **4.14** | 3.66 |
|             | Proximity to public transportation   | 4.06 | 3.55 |
| Connectivity | Walkways availability along the routes | 4.21 | 3.59 |
|             | Walkways directness                  | 4.15 | 3.69 | **4.18** | 3.64 |
|             | Walking routes signage               | 4.17 | 3.65 |
| Continuity | Continuity of walkways               | 4.12 | 3.65 | **4.19** | **3.63** |
|             | Walking freely with less obstruction | 4.26 | 3.60 |
| Safety     | Comfort of walking                   | 4.30 | 3.64 |
|             | Condition of pavement                | 4.13 | 3.64 | **4.29** | 3.68 |
|             | Safety (crime/traffic)               | 4.43 | 3.76 |
| Amenities  | Availability of interesting activities | 4.25 | 3.85 |
|             | Many attractive places               | 4.26 | 4.05 | 4.25 | **3.87** |
|             | Pedestrian facilities                | 4.20 | 3.66 |
|             | Visual attractiveness                | 4.27 | 3.90 |

Based on Table 2, for every aspect of a pedestrian walkway, the mean score of tourist expectation is relatively higher compared to the mean score of tourist satisfaction. Subsequently, the findings also showed the mean score analysis for tourist expectation towards pedestrian walkway that could be arranged from ‘Safety’ as the highest-ranked aspect with the mean score of 4.29. This was followed by ‘Amenities’ with a 4.25 mean score, followed by the ‘Continuity’ and ‘Connectivity’ aspects that obtained the mean scores of 4.19 and 4.18, respectively. Finally, the least mean score was 4.14 for ‘Accessibility’. On the other hand, the highest mean score for tourist satisfaction was 3.87 for ‘Amenities’, whereas ‘Safety’ obtained a 3.68 mean score and ‘Accessibility’ with a 3.66 mean score. Meanwhile, the difference in terms of the results for ‘Connectivity’ and ‘Continuity’ was minimal as the mean score for ‘Connectivity’ and ‘Continuity’ was 3.64 and 3.63 mean, respectively.

Last but not least, the data collected from 150 respondents were also tested for their correlation; the results of the Spearman correlation test showed the relationship between tourist expectation and tourist satisfaction towards pedestrian walkway in Georgetown, Penang. The finding showed that the significant Spearman correlation coefficient value of $r = 0.287$ confirmed a weakly positive correlation between the two variables as the value of $p = .001$ ($p = 0.000$). Hence, it can be concluded that there is a relation between tourist expectation and satisfaction, but the correlation of the strength is weak.

6. Conclusions

Based on the findings, it can be concluded that pedestrian walkways are one of the important elements in a developing urban heritage town. This is due to people having the option to choose their mode of transportation, which also includes walking as one of the choices. Regardless, the main issues of walkability in Georgetown as a World Heritage Site are fewer number of paved pedestrian walkways and some drawbacks in terms of the connectivity, continuity, and other aspects. Despite this, Georgetown still captures a higher number of tourists compared to other urban cities as there are many pull factors, such as tourism attractions, local and street foods, and big events. Nevertheless, the local authority must take action in order to enhance the walkability in Georgetown, Penang by improvising...
several aspects, namely accessibility, connectivity, and continuity. The satisfaction felt by the respondents was strongly highlighted as it was related to the fulfillment of their needs due to the place itself, which was also considered as the indicator for successful urban development. Hence, the findings of this study can be very beneficial for urban city planners in providing a pleasant pedestrian environment towards easing the tourists in experiencing the city on foot.

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