Tourists' real-time destination image of Kuala Lumpur

Syed Muhammad Rafy Syed Jaafar, Hairul Nizam Ismail and Nurul Diyana Md Khairi

Abstract

Purpose – *This paper aims to capture real-time images of tourists during their visitation. This effort is to clarify a debate among scholars that there is a lack of current effort to genuinely represent an accurate image of the tourist experience during their visit. Previous studies on destination image focused on measuring and successfully capturing the tourists' perceived image using the perspective of "before and after" visitation.*

Design/methodology/approach – *The paper applies volunteer-employed photography and questionnaire methods to capture real-time tourist images. The paper was conducted in Kuala Lumpur, involving 384 international tourists. The data are analysed by supplemental photo analysis, was categorised into manifest and latent content.*

Findings – *The paper provides empirical insights into the changes in tourists' image when visiting an urban destination. The insights suggest that a city's image during visitation continuously changes based on the tourists' movement and preferences.*

Practical implications – *The findings of this paper are critical in assisting tourism agencies and authorities in portraying an accurate image to achieve greater tourism satisfaction.*

Originality/value – *This paper contributes to the interpretation and portrayal of the real-time image of Kuala Lumpur based on the manifest and latent content of the photos taken.*

Keywords *Destination image, Real-time images, Volunteer-employed photography, Tourist experience*

Paper type *Research paper*

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1. Introduction

The image of a tourist destination plays a key role in tourist destination success. Images are considered critical to destination choice (Law, 2002; Terzidou *et al.*, 2018) and reflect the identity of a destination or location. Tourists will perceive a city's image by establishing a perception of the city as a tourist destination. This perception further influences their purchasing behaviour. The similarity of tourist attractions and activities between cities worldwide often makes it hard to promote a destination as having the most attractive image. There is an intense competition where visitors can freely select from a wide range of available destinations, and these destinations are also interchangeable (Tigu, 2012; García-Almeida, 2019). Therefore, specific tourism destinations must distinguish themselves from other competitors in the target market's minds (Novais *et al.*, 2018). Qu *et al.* (2011) supported this theory, mentioning that each destination needs a unique image because, in the customers' minds, a tourism destination must be positively perceived or ideally distinguished from its competition. There has been plenty of research on the debates regarding destination images, with real destination images identified in the past three decades or more. However, academic researchers have been more interested in capturing and evaluating the components of the overall destination image since the 2000s.

Numerous studies have attempted to investigate and capture disparities in pre- and post-visit perceived destination images (Andreu *et al.*, 2000; Chaudhary, 2000; Liu *et al.*, 2018),

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pre-visitors and post-visitors (Iordanova and Stylidis, 2017). Nevertheless, only a few studies have attempted to capture perceived destination images for during the visit experience. Kadar (2014) and Wang *et al.* (2017) also stressed that evaluating whether the experience continuously meets tourist expectations is imperative. The tourist experience is accurately portrayed by how they perceive the destination during their visit. As stated by previous research (Tasci and Gartner, 2007; Chen and Funk, 2010; Stylos *et al.*, 2017), the satisfaction with a tourism destination depends not only on the ideal images held before the tourist decides to travel but also on the tourist's experiences at the destination. Hence, it is vital for a tourism destination, particularly an urban destination, to focus on the tourists' experiences during their visit, as cities offer many touristic activities that reflect various perceived images. It is also crucial to acknowledge these tourist's perceived images, especially as it represents an in-situ experience or so-called during-visit image.

Acquiring an accurate image benefits the government and attracts responsible tourism authorities to invest and develop the tourism industry in that area. Accurate perceived images also lead to destination satisfaction, recommendation and loyalty towards the destination. Research on the destination image may affect the tourist destination; in this case, the research methodologies were crucial to acquire accurate images (Tasci and Gartner, 2007; Isaac and Eid, 2019). Previous studies have also highlighted some researchers' methodological errors or incorrect interpretation that led to wrong findings and caused tourism resources to be used for the wrong purposes. Consequently, this study aims to capture real-time images perceived by tourists during their on-site experience. Kuala Lumpur was chosen as the study area because of the challenges in portraying an accurate tourist destination image for the city because of its diverse tourism activities. It is, therefore, crucial to determine the destination image of Kuala Lumpur as perceived by tourists' demand.

2. Literature review

The importance of destination image in tourism research has long been discussed among scholars across various fields. This chapter discusses the relevant studies and models that significantly contribute to the previous understanding of destination image research. The literature calls for greater attention to the components and formation of the destination image. Many factors directly or indirectly influence tourist destination image perception. Exposure to various information sources, individual characteristics and preferences are direct factors that can affect destination image formation. Information sources also indirectly influence the tourists' perception of the destination image.

2.1 Destination image and its components

An early attempt by Echtner and Ritchie (2003) showed that images should be conceptualised while acknowledging attribute/holistic, functional/physiological and common/unique components. Firstly, the attribute-based and holistic points of view are the two main components that the image of a place should intentionally have. Secondly, functional (tangible) and psychological (abstract) characteristics must be included in these components. The third and final point is to include "common" functional and psychological characters, including more distinctive and unique features, events, feelings and auras in the images of these destinations. As a result, Echtner and Ritchie (2003) summarised that images are an individual's perception of a destination's attributes based on a holistic impression, which consists of functional characteristics (tangible aspects) and psychological characteristics (intangible aspects). These components can also be arranged according to those frequently used for all tourism destinations or unique destinations.

After the conceptualisation of destination image components was slowly accepted, numerous researchers started to expand upon the work of Echtner and Ritchie (2003), contributing towards a more comprehensive knowledge of destination image conceptualisation. In sum, the destination image should include all three image components (Gartner, 1996; Stylidis *et al.*, 2017; Kim *et al.*, 2019). An effective image refers to the feeling towards a product, while a cognitive image reflects the actions undertaken. Stylos *et al.* (2017) defined the cognitive image component as the information of a destination or product structure, while an affective image component represents the individual's emotional reaction towards a destination or product. In clarifying cognitive, affective and attitude components, Kim *et al.* (2020) stated that cognitive and affective elements are part of the emotional stimuli responses towards the environment, which later form vigorous interactivity. Affective elements can include both positive and negative emotional responses with a variety of intensities. High-level intensity can be referred to as emotions of love and anger that contribute to states of satisfaction and frustration, followed by low-level intensity, which refers to boredom and relaxation. In turn, it contributes to the state of love or hate of a thing.

These studies also mentioned *cognition*, defined as an emotional stimuli response that comprises interpreting, understanding, evaluating and making decisions about an environment, thus justifying that image assessment should involve accurate information, personal views, memories and choices. Marine-Roig and Ferrer-Rosell (2018) discussed how image construction consists of the cognitive and affective evaluation of a product, service or place. Cognitive evaluation is defined as an individual's views and knowledge about an object, while affective evaluation refers to their emotions and feelings towards the said object (Gartner, 1994; Baloglu and Brinberg, 1997; Kock *et al.*, 2016; Artigas *et al.*, 2017). Both cognitive and affective images form the underlying factors that contribute to making the image of a destination. Until recently, the combination of "impression" implies feelings, which influence the holistic impression.

Nevertheless, many researchers agree that most destination image studies place too much emphasis on the cognitive component, such that the affective component is neglected (Woosnam *et al.*, 2020). More studies that examine a destination image's cognitive component can be found in the marketing literature than those on the affective component (Carvalho *et al.*, 2020), proving that cognitive image studies dominate the literature and leaving little room for affective image studies. Therefore, the importance of cognitive images over affective images has been questioned. In truth, combining these two components produces a more effective overall evaluation of a destination (Tosun *et al.*, 2015; Hossain *et al.*, 2016; Andersen *et al.*, 2018). After refining all the arguments and components suggested by the above destination image studies, it is clear that cognitive and affective components make up a comprehensive destination image. Section 2.2 discusses one of the techniques used to capture the destination image in this study.

2.2 Capturing destination image using volunteer-employed photography

The voluntary-employed photography (VEP), a participant-generated image orientation method, was first used by Cherem and Traweek (1977). They discovered that this technique could be used to interpret interpretive planning from the tourist's perspective. Since then, several studies have acknowledged VEP as a planning and management tool, as shown in Table 1. VEP was a highly appropriate tool to gauge tourism aspects, as per Balomenou and Garrod (2019) and Fefer *et al.* (2020), because photographs reveal tourists' perceptions about places and people within the destination. Several researchers have also recognised the potential of VEP in visual research. However, only a few researchers have used this technique (MacKay and Couldwell, 2004; Garrod, 2008; Balomenou and Garrod, 2014, 2019; Nielsen and Moller, 2016). It has not yet gained wide recognition, especially in

Table 1 Voluntary-employed photography used as a planning and management tool

Author(s)	*Scope of research*
Cherem and Driver (1983)	Rivers and other linear environments
Chenoweth (1984)	Landscape architecture
Groves and Timothy (2001)	Visitor experiences
MacKay and Couldwell (2002, 2004)	Investigation of the destination image
Oku and Fukamachi (2006)	Planning for recreational forests
Garrod (2007, 2008); Balomenou and Garrod (2014)	Investigation of the local and tourist perceptions of a tourism destination in tourism planning
Nielsen and Moller (2016)	Studying place practices and consumption through VEP
Balomenou *et al.* (2017).	Tourism planning study and how tourists' photographs can be a rich source of behavioural, perceptual and attitudinal data
Sun *et al.* (2019)	The use of VEP as a method of acquiring data for mapping ecosystem services
Balomenou and Garrod (2019)	Prejudice, power, performance and participant-generated images
Godfrey *et al.* (2019)	The "volunteer tourist gaze": commercial volunteer tourists' interactions

the tourism context. MacKay and Couldwell (2004) explained that, traditionally, quantitative techniques are the preferred method of measuring destination images.

Nielsen and Moller (2016) further verified VEP's capability as a technique in investigating the image of a place. They also discovered that only a limited number of researchers had used photographic methods in investigating destination images. Moreover, most past researchers were constrained when applying researcher-generated photographs, commonly used in photo-elicitation methods. The main weakness of using researcher-generated photography is that the potential respondents might disagree with how the photograph was interpreted and explained based on the researcher's understanding. Balomenou and Garrod (2019) studied destination imagery and found that VEP could also be an alternative technique for the data collection phase, particularly for image assessment. They also suggested that VEP is a favourable method that can be applied in other possible research fields in the future, such as those involving national parks and historic sites.

Balomenou and Garrod (2016, 2019) highlighted VEP's massive potential in providing visual and evidentiary information to support tourist experiences in specific destinations. They also confirmed VEP as a powerful research tool because VEP could also demonstrate the various ways of how tourists see and experience a tourist destination that may not have been clearly understood, especially by the responsible planning and marketing organisations (Haywood, 1990; Nielsen and Moller, 2016). Nowadays, photo-sharing advancements through social media websites such as Instagram, Facebook and Pinterest could also be referred to as VEP. Haslebacher *et al.* (2019) investigated volunteer tourists' motivation through images posted on social media. Researchers who have studied tourist experiences at a destination agree that photographs are one way for tourists to tell stories of their likes, dislikes, expectations and preferences to travel planners and destination managers (Tung *et al.*, 2017). Researchers also agree that VEP is considerably underused as a research tool (Markwell, 2000; Loeffler, 2004; Balomenou and Garrod, 2019). They recommend the combination of VEP and other tourism research tools as an effective research method.

As previously mentioned, the use of VEP in tourism destination image studies is still limited. Even fewer studies have explained the differences in the perceived images between user groups within an identified tourism destination. VEP also provides another dimension in understanding the perceived image, as most people usually think visually; thus, the use of photographs to identify perception is considered most appropriate. Jutla (2000) and Akgun *et al.* (2020) discovered no major differences between the people's evaluation of photos and actual destinations. Balomenou *et al.* (2017) and Balomenou and Garrod (2016)

justified that VEP should be used in urban planning to avoid any risk of destroying the destination's valuable characteristics unless the planners themselves understand the place's essence.

Photography has long been used in the real world, though it is the least-used research method (Garrod, 2008; Godfrey *et al.*, 2019; Sofield and Marafa, 2019). Photo-elicitation is recognised as a way to use photographs in research, particularly in destination image studies. Collier (1967) was the pioneer in describing the use of photo-elicitation, which he considered a technique that could provide better insights overlooked in any other method (Banks and Zeitlyn, 2015). It also functions as a cutting-edge method with infinite potential (Harper, 2002). Photo-elicitation indeed helps in providing better insights into the respondents' world via the elements portrayed in the picture. However, the method could not accurately capture the respondents' perception because of gaps between the photograph captured by the researcher and the respondents' views of their world. Therefore, the current study posits that VEP could be used to efficiently portray and acquire the real image of what tourists perceive during their visitation.

2.3 Kuala Lumpur's position in the Southeast Asian region

Kuala Lumpur's status as a tourism destination at the international level is particularly unclear. Past tourism studies on cities regularly include Singapore and Hong Kong but leave out Kuala Lumpur (Gugler, 2004). Previously, scholars interested in governance issues in mega-cities have selected Bangkok, Jakarta and Manila as their concerns but have generally ignored any comparison with Kuala Lumpur because the city's population has not yet reached the 10 million mark. An empirical work by Hui and Wan (2003), for example, chose to compare Singapore and Hong Kong with Shanghai instead of Kuala Lumpur. At the time of Malaysia's independence in 1957, Kuala Lumpur was not yet a significant city, even at the Southeast Asian level (Rimmer and Dick, 2009). However, within 50 years, Kuala Lumpur has transformed from a country town to the national capital and a well-known global city.

Unlike Singapore and Hong Kong, Kuala Lumpur's image as a tourism destination suffers from a lack of clarity. "Malaysia" and "Kuala Lumpur" are exchangeable in the minds of the branding agencies as well as the people (Lim and Neethiananthan, 2006). Malaysia's close neighbour, Thailand, has approved its respective tourism development plans to strengthen its cities' competitiveness and attractiveness (Nair *et al.*, 2014). Thailand had implemented its National Tourism Development Plan for 2012–2016. Five different strategies were formulated to achieve its vision of becoming a quality tourism destination and is competitive at the international level. The strategies include developing infrastructure that has linkages with domestic and international tourism, developing a creative economy, enlargement and rehabilitation of tourism attractions, first-class image marketing to tourists and participation of the public sector in tourism management.

The Malaysian Government has approved 4bn Malaysian Ringgit for the Economic Transformation Programme, where Kuala Lumpur was given extra attention to act as a revitalising engine for the national economy and to turn the city into "Malaysia's Global city" (PEMANDU, 2010). This plan aims to propel Malaysia into a high-income nation by 2020. Tourism will also become a key factor of the National Key Economic Areas (NKEAs) to boost national income. Table 2 summarises the National Transformation Plan that explains the detailed strategies formulated to achieve the targeted objectives. Thus, this study investigates and compares Kuala Lumpur's image in the past eight years with the image perceived by tourists when experiencing the city.

From the various types of tourism attractions that Kuala Lumpur offers to attract domestic and international tourists, most of the attractions are located and focused in the city Central Business District, famously known as Kuala Lumpur's "Golden Triangle" (Figure 1).

Table 2 12 entry points projects in tourism national key economic areas

Key strategies	*Cities/Areas involve*
EPP1: Positioning Malaysia as a duty-free shopping destination	Kuala Lumpur, Penang, Johor Bahru, Kota Kinabalu
EPP2: Designating Bukit Bintang–Kuala Lumpur City Centre area as a vibrant shopping precinct	Bukit Bintang and Kuala Lumpur City Centre
EPP3: Establishing premium outlets in Malaysia	Johor and Sepang
EPP4: Establishing Malaysia as a global biodiversity hub	Kuala Gandah, Royal Belum and Kinabalu Park
EPP5: Developing an eco-nature integrated resort	Sabah
EPP6: Cruise tourism: Creating a Straits Riviera	Penang, Port Klang, Kota Kinabalu, Langkawi, Malacca and Kuching
EPP7: Targeting more international events	Throughout Malaysia
EPP8: Dedicated entertainment zones	Kuala Lumpur, Genting Highlands and Kota Kinabalu
EPP9a: Developing local expertise and better regulating the spa industry	Langkawi, Kota Kinabalu, Johor Bahru and Penang
EPP9b: Golf tourism	Throughout Malaysia
EPP10: Establishing Malaysia as a leading business tourism destination	Throughout Malaysia
EPP11: Enhancing connectivity to priority medium-haul markets	Airlines
EPP12: Improving rates, mix and quality of hotels	Throughout Malaysia

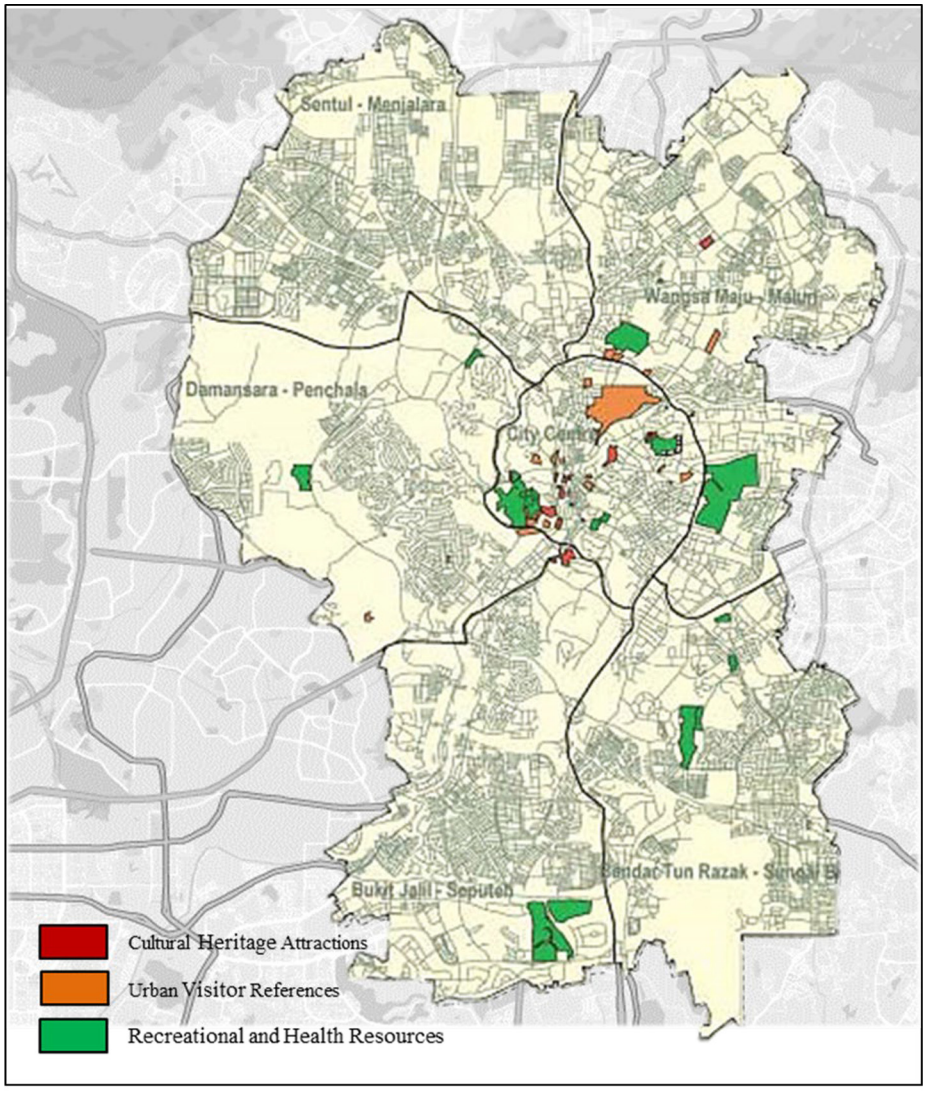
Thus, by referring to the strategies formulated by the Malaysian Government in Table 2 and the concentration of tourism attraction sites, this study focuses on the Kuala Lumpur Business District (KLBD) as the study area.

3. Methodology

The study uses two instruments to collect tourist-perceived images in real time: questionnaires and VEP. The questionnaire form records and collects the respondents' sociodemographic profile and their early or pre-visit images about Kuala Lumpur. On the other hand, VEP is used to obtain the real-time images captured by the respondents during their in-situ experience while visiting the city. Figure 2 illustrates how photography plays its role in interpreting tourists perceived image of a destination. This study combines self-administered questionnaire forms to capture tourist pre-visit perceived image, tourist profiles and VEP to capture the tourists' during-visit perceived image. This combination allows the researcher to obtain important knowledge of the overall tourist perceived image when they visit and experience a destination.

The questionnaire consists of two main phases: a pilot survey and an actual survey. The first pilot survey was conducted in early November 2018 and ran for two weeks. This survey involved 50 respondents sampled from the KLBD. The respondents were approached at 14 light rail trains (LRT) and 7 monorail trains (MRT) stations. These stations were chosen because of the high volume of commuters in the Kuala Lumpur City boundary compared to the volume of commuters using other modes of transportation. Firstly, to be eligible as actual respondents for the study, the potential respondents were approached and asked screening questions. The respondents were then required to fill in the questionnaire form, delivered to them by hand. After completing the questionnaire form, the respondents were asked to continue the process using the VEP method. The first pilot survey involved 50 respondents. Of the respondents, 100% returned the questionnaire, and 76% (38 respondents) agreed to conduct and fully complete the VEP stage. The second pilot survey involved 35 respondents; 100% of them returned the questionnaire form, and from this number, 80% (28) of them agreed to participate and complete the VEP phase. These surveys indicated that this method is acceptable and convenient for the respondents. Even so, the researchers faced difficulties at several train stations. There was no international tourist presence because of some stations being dedicated to local residents and workers for daily transportation. For this reason, several stations were subsequently eliminated, and

Figure 1 Tourism attractions in Kuala Lumpur



Source: Kuala Lumpur Structure Plan 2020

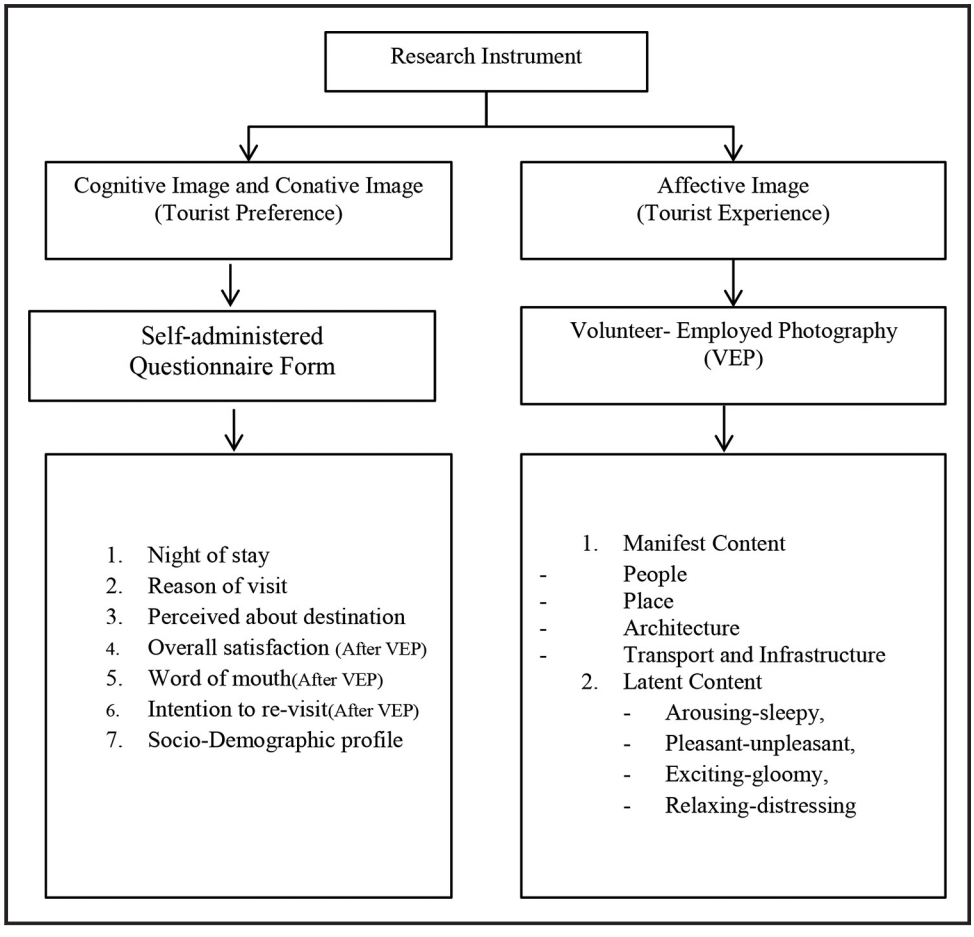
only nine stations were identified as suitable selections for the staging points in this study. Table 3 explains the process used to collect the study data.

Actual data collection was prolonged for six months, and the 384 respondents shared 7,169 photographs as they explored KLBD. The researcher approached respondents via email during the self-administered questionnaire distributions and the three simple questions using scale indicators about their overall satisfaction and intention to revisit Kuala Lumpur.

3.1 Photo analysis method

Usually, visual research mainly uses the qualitative approach, but qualitative quantification or quantitative elements by design are also often applied (Ball and Smith, 1992; Bryman, 2015). Qualitative quantification is appropriate in measuring a real-time image with respect to the qualities and quantities of the pictures taken. In terms of photo analysis,

Figure 2 Flow of the research instrument and questionnaire design



Petersen and Ostergaard (2005) and Warren (2002), all visual researchers, provided various approaches in using and studying photographs. According to them, visual data such as photographs can be used for documentation, confirmation of textual reports and recording an evolving phenomenon. Figure 3 outlines the several ways used to analyse photographs.

For this study, the researcher used the second type of photo analysis. This approach requires respondents to capture the photos from their perspective, but the researchers analyse and interpret the pictures (Petersen and Ostergaard, 2005). Although the best form of photo analysis in terms of reliability and accuracy of photo interpretation is the collaborative photo analysis, this approach requires dedicated time and workforce, a constrain for this study. Visual anthropologists and visual ethnographers have often used this approach to describe the data where the visual dimension becomes an added value (Wagner, 1979). Supplemental photo analysis is ideal when the respondent needs to explain difficult conditions related to their life experience. This approach is often adopted either using photo-documentation or photo-narrative techniques or a combination of both (Harper, 2002). Collier and Collier (1986) stated that photo narratives provoke feelings and perceptions in understanding either the individuals or the cultures projected in the picture. During their visit, respondents were concurrently taking pictures that expressed their perception of the tourism attractions. Each of the respondents was approached by the researcher a week after meeting them. They were asked to share their photos either by

Table 3 Summary of the data collection procedure

	First pilot survey	*Second pilot survey*	
Staging point: LRT and MRT station	Pilot starts at all MRT/LRT stations in Kuala Lumpur Business Centre to test questionnaire and application of VEP	The survey being done at nine LRT/MRT stations that are located in the study area	Actual survey Only 9 stations have been considered as a new staging point
Efficiency of questionnaire	Respondents take too long time to complete the questionnaire Some word hard to being understand by respondent	Respondent able to complete the questionnaire within 10–15 min	No problem regarding the questionnaire form
Application of VEP	Some of the respondent that already completed the questionnaire do not want to continue to the second stage 38 of 50 respondents gave feedback to share the pictures (78% respond rate)	Positive responses from the participants, 4/5 of the respondents willing to contribute 28 of 35 respondents gave feedback to share the pictures (80% respond rate)	
Data input	Instead of using their camera, they are also comfortable using their own smartphone All the respondents respond to share their picture through social sharing	Alone and couple tourist easier to captures rather than in group Elder tourist not comfortable in taking a picture when they on tour	
Problems	Not all the LRT/MRT stations have the presence of international tourist	–	
Implications	Questionnaires need to be revised, so respondent take shorter time The staging point has been revised based on the international tourist presence	Researchers need to take a bigger sample to achieve 384 respondents	

Figure 3 Four types of photo analysis

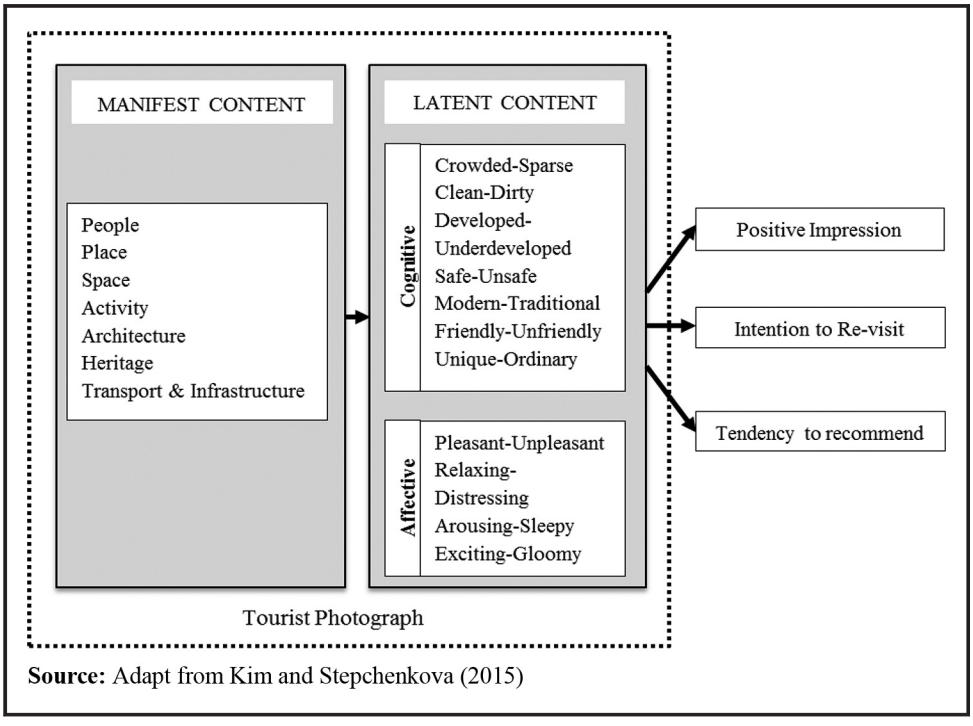
Status of the photos	**Role of the Researcher and Respondents**	
	Photos are taken by the researcher	Photos are taken by the respondents
• **Photos as data or record** • **Direct mode of analysis**	**I : Direct photo analysis** The researcher takes the photos and analyses them	**II: Supplemental photo analysis** The researcher asks research participants to take photos, but analyses them on his or her own
• **Photos as elicitation** • **Participatory mode of analysis**	**III: Participatory photo analysis** The researcher takes the photos and discuss them with research participants	**IV: Collaborative photo analysis** The researcher ask the respondents to take photos and discuss them with research participants

Sources: Petersen and Ostergaard (2005); Wagner (1979); Warren (2002)

email or any photo-sharing medium available to them. Respondents were then instructed to categorise their photos into two groups: positive and negative perceptions and the location of those pictures taken during their city experience. This step minimises the researcher's misinterpretation of the possibility of a "positive" negative image. For example, a crowd picture can be interpreted as negative "hectic" or positive "festive".

To ensure that the analysis of each photo can be categorised and divided smoothly, the researcher adopted Kim and Stepchenkova's (2015) framework, where the effect of tourist photographs on attitudes towards the destination was studied according to their manifest and latent content. Figure 4 illustrates the interpretation of manifest and latent content

Figure 4 Manifest and latent content of photo



Source: Adapt from Kim and Stepchenkova (2015)

suggested by Kim and Stepchenkova (2015). The manifest content is comparable to the surface structure of a message. Berg *et al.* (2004) mentioned that manifest content is a vivid, observable feature of pictures, recorded with high reliability. On the other hand, the latent content is hidden, embedded in the observable pictures that require "reading between the lines" (Holsti, 1969). Hence, the researcher undertook a process that involved cognitive judgments, evaluations and interpretations of impressions and feelings in interpreting the presence of latent content (Riff *et al.*, 2014).

The respondents took photos that meant a lot to them emotionally. From all the captured photos, the researcher then divided them based on each photo's manifest and latent content, where one image could be put into several variables in the manifest and latent content. Figure 5 shows the categories of photos divided based on the images gathered from the respondents.

4. Analysis and results

The analysis and result of the study are explained and discussed based on the manifest and latent content. The 384 respondents shared a total of 7,169 photographs as they explored Kuala Lumpur City. Table 4 shows the summary of data collection using the VEP technique where the response rate of the tourists was 79.2%, indicating a good response rate.

4.1 Respondents' profile

The respondents' profiles were divided based on sociodemographic characteristics, travel characteristics, the cognitive image perceived, the visitor motivation, the preferred place of attraction and the positive and negative images of KLBD. Demographic and travel characteristics are given in detail in Table 5. The respondents were able to capture the KLBD images using the VEP technique.

Figure 5 Respondent's manifest and latent content in Kuala Lumpur Business District

Table 4 Summary of data collection using the voluntary-employed photography approach

VEP survey	*Total*
Respondent	485
Completely returned	384
Response rate	79.2%
Photographs	
Taken	8,329
Usable for analysing	7,196
Positive image	6,804
Negative image	392

Table 5 Respondents' profile

Characteristics		Frequency	(%)
Type of tourist	First-time tourist	144	37.5
	Repeat tourist	240	62.5
Gender	Male	252	65.6
	Female	132	34.4
Travel companion	Alone	163	42.4
	Partner	134	34.9
	Business partner	29	7.6
	Friends and relatives	58	15.1
Age group	21–30 years old	171	44.5
	31–40 years old	135	35.2
	41–50 years old	69	18.0
	>50 years old	9	2.3
Country (Region)	Europe	179	46.6
	The USA	58	15.1
	Asia	28	7.3
	Middle East	27	7.0
	Oceania	92	24.0

4.2 Manifest content (cognitive image) during visit in Kuala Lumpur Business District

Nine types of manifest content were identified from the respondents' real-time images, as indicated in Table 6. The photos taken by the respondents are mostly images of a particular place where 31.70% (n = 2,281) of 7,196 photos were a type of attraction in KLBD, followed by 18.40% (n = 1,324) of images of crowds, 12.94% (n = 931) of images of food and beverages and 11.31% (n = 814) of images of respondents shopping.

The manifest content is significantly different across age groups, regions and travel companions. In terms of age group, photos showing cultural and fun activities differed across age ranges, as shown in Table 7. Pearson's correlation test indicates that photos of fun activities negatively correlate with tourist age, where the number of pictures taken of fun activities decreased as the tourist's age increased. However, the number of photos taken increased with tourist age for pictures showing cultural activities, thus indicating a positive relationship. The results showed that younger tourists in Kuala Lumpur tend to seek fun activities when visiting the city, while older tourists prefer cultural activities. Besides age group, the tourists' country of origin also influenced the pictures taken when experiencing KLBD.

Shopping pictures were significantly different, where Middle Eastern tourists captured more pictures that resembled shopping activities than the other tourists. Known as one of the

Table 6 Score of manifest content in the photos taken in Kuala Lumpur

Content of photo taken by tourist during visit	N	Frequency (N = 7,196) Mean	Rank	(%)
Manifest place	2281	5.94	1	31.70
Manifest people	1324	3.45	2	18.40
Manifest food	931	2.42	3	12.94
Manifest shopping	814	2.12	4	11.31
Manifest architecture	762	1.98	5	10.59
Manifest culture	463	1.21	6	6.43
Manifest fun	289	0.75	7	4.02
Manifest transport and infrastructure	169	0.44	8	2.35
Manifest recreation	163	0.42	9	2.27

Table 7 Manifest content and factors that influence the respondent perceived image

	Age (mean)					*Region (mean)*						*Travel companion (mean)*				
Manifest content	*21–30 (n = 171)*	*31–40 (n = 135)*	*41–50 (n = 69)*	*>50 (n = 9)*	*ρ*	*EU (n = 179)*	*AM (n = 58)*	*AS (n = 28)*	*ME (n = 27)*	*OC (n = 92)*	*ρ*	*AL (n = 163)*	*PR (n = 134)*	*FR (n = 58)*	*BP (n = 29)*	*ρ*
SH	2.09	2.14	2.16	2.00	0.978	2.10	2.07	1.79	3.11	2.00	0.004*	1.93	2.73	2.59	1.19	0.000*
FD	2.35	2.55	2.38	2.33	0.723	2.56	2.28	2.29	2.07	2.40	0.484	2.52	2.31	2.40	2.48	0.691
FN	1.10	0.78	0.54	0.33	0.000*	0.88	0.71	1.00	1.37	0.75	0.035	0.74	0.82	1.47	0.62	0.000*
CL	1.13	1.15	1.38	2.22	0.015*	1.30	1.28	1.14	0.52	1.21	0.017*	1.44	1.19	0.90	0.62	0.000*
RC	0.37	0.44	0.55	0.22	0.306	0.45	0.43	0.29	0.11	0.51	0.136	0.33	0.49	0.19	0.42	0.000*
PL	5.87	5.77	6.43	6.11	0.331	6.00	6.14	6.11	5.70	5.72	0.824	6.07	5.75	5.60	6.79	0.137
PE	3.32	3.51	3.57	4.11	0.315	3.58	3.62	3.11	2.96	3.34	0.166	3.63	3.28	3.21	3.69	0.105
AR	2.04	1.91	2.01	1.78	0.826	1.98	2.14	2.11	1.96	1.87	0.812	2.14	1.78	2.00	2.00	0.175
TI	0.39	0.41	0.59	0.67	0.338	0.44	0.40	0.43	0.33	0.50	0.674	0.45	0.44	0.41	0.41	0.963

Notes: SH = Shopping, FD = Food, FN = Fun, CL = Culture, RC = Recreation, PL = Place, PE = People, AR = Architecture, TI = Transport and Infra. EU = Europe, AM = the USA, AS = Asian, ME = Middle East, OC = Oceania. AL = Alone, PR = Partners, FR = Friends/Relatives and BP = Business Partners

world's biggest-spending powers, each Middle Eastern tourist took an average of three pictures showing shopping activities compared to the other regions (average of two photos). A report issued by the World Tourism Organisation in 2014 supports this result, indicating that Middle Eastern tourists are among the top spenders at top world tourism destinations, such as Spain, Germany and the UK. Besides the photos differing based on tourist country of origin, shopping activities also differed across tourist travel companions when visiting Kuala Lumpur. The results show that tourists accompanied by their partners tend to capture more pictures of shopping activities than tourists who travel alone. The finding reconfirms an earlier finding that showed that female tourists expressed a more positive attitude toward shopping than men. Although shopping photos did not significantly differ based on gender when travelling with a partner, the destination's activities could still be influenced and changed.

On the contrary, the results show that more cultural activities were captured if the tourist travelled alone than when with a partner. Figure 6 illustrates the concentration of photos taken by the respondents, which was clustered based on the manifest content (cognitive image) of the photos. The finding clearly shows that Kuala Lumpur City has five main activities: shopping, architectural heritage, culture (food and heritage) and recreation.

4.3 Latent content (affective image) during visit to Kuala Lumpur Business District

Other than the manifest content, the other content present in a captured photo is the latent content, hidden and embedded in observable photographs. It requires the researcher to "read between the lines", which involves a process of cognitive interpretations of the impressions and emotions of the picture taker to interpret the existence of the latent content (Riff *et al.*, 2014). Table 8 shows the latent content that has been interpreted from the picture taken by the respondents in Kuala Lumpur. There are 12 types of the latent content, including negative and positive impressions and emotions towards the destination when visiting KLBD.

Figure 6 Distribution of manifest and latent content of Kuala Lumpur Business District

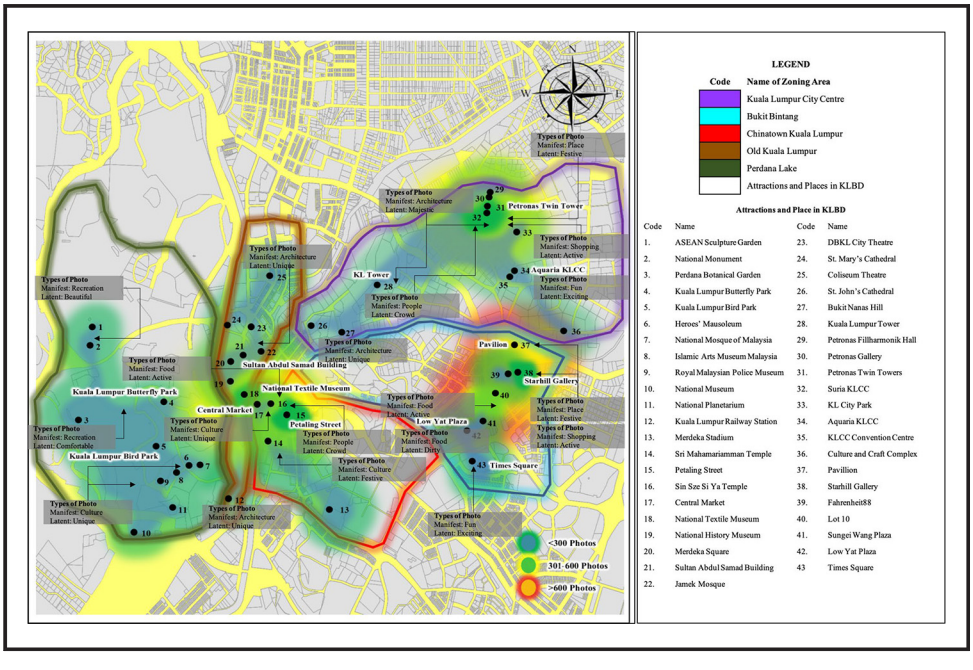


Table 8 Score of latent content in photo taken at Kuala Lumpur

Content of photo taken by tourist during visit	Frequency (N = 7,196) N	Mean	Rank	(%)
Latent festive	2,450	6.38	1	34.05
Latent active	1,709	4.45	2	23.75
Latent crowd	1,131	2.95	3	15.72
Latent majestic	553	1.44	4	7.68
Latent exciting	343	0.89	5	4.77
Latent unique	340	0.89	6	4.73
Latent comfortable	194	0.51	7	2.69
Latent hectic	179	0.47	8	2.49
Latent unsafe	92	0.24	9	1.28
Latent beautiful	85	0.22	10	1.18
Latent dirty	68	0.18	11	0.94
Latent frustration	53	0.14	12	0.74

Table 9 shows that the photo's latent content has differed significantly across tourist age groups and travel companions. Excitement is an expression that resembles the picture of the tourist having fun activities; tourists between 21 and 30 years old expressed more emotions of excitement compared to other age groups. Tourists who travelled with friends and families also expressed more excitement than tourists who travelled alone or with a partner. The findings indicate that younger tourists (21–30 years old) and tourists travelling with friends and families captured more fun activities that expressed positive emotions of excitement (mean = 2.37) compared to the other groups of 31–40 years old (mean = 2.15) and 41–50 years old (mean = 2.20) when experiencing Kuala Lumpur. The findings also indicated that respondents between 41 and 50 years old captured more negative-filled images (mean = 0.285) than the 21–30 years old (mean = 0.20) and 31–40 years old (mean = 0.26) age groups.

Table 10 shows the results of a significant difference across respondent age to their overall satisfaction, recommendation and intention to revisit. The results also show a significant difference in the variable of "Will decide to visit Kuala Lumpur again", with (N = 384) = 8.964, p = 0.03 and "Will return to the destination in the future", with (N = 384) = 8.489, p = 0.037. As the two variables were found significant, a pairwise comparison among the age groups was made. The comparisons were conducted using the Mann–Whitney U test, which produced matching results with the earlier test. This test was run because the earlier

Table 9 Latent content and factors that influence international tourist perceived image

	Age (mean)					Travel companion (mean)				
Latent content	21–30 (n = 171)	31–40 (n = 135)	41–50 (n = 69)	>50 (n = 9)	ρ	Alone (n = 163)	Partner (n = 134)	Friends/Relatives (n = 58)	Business partner (n = 29)	ρ
Festive	7.32	6.16	6.08	8.33	0.001*	6.12	6.61	6.00	7.03	0.167
Active	4.61	4.33	4.49	4.11	0.701	4.30	4.55	4.28	4.97	0.419
Crowd	3.04	2.81	3.06	3.22	0.442	3.13	2.79	2.81	2.90	0.232
Majestic	1.47	1.42	1.45	1.11	0.858	1.61	1.28	1.33	1.48	0.114
Exciting	1.10	0.82	0.57	0.56	0.001*	0.77	0.82	1.48	0.76	0.000*
Unique	0.81	0.87	1.09	0.89	0.296	0.97	0.83	0.86	0.72	0.503
Comfortable	0.42	0.56	0.61	0.67	0.094	0.52	0.52	0.31	0.72	0.033*
Hectic	0.36	0.50	0.45	0.69	0.181	0.47	0.46	0.34	0.69	0.219
Unsafe	0.25	0.24	0.25	0.11	0.868	0.28	0.22	0.21	0.17	0.466
Beautiful	0.20	0.22	0.29	0.11	0.608	0.14	0.27	0.09	0.72	0.000*
Dirty	0.10	0.19	0.19	0.44	0.111	0.22	0.17	0.16	0.10	0.508
Frustration	0.08	0.14	0.25	0.11	0.025*	0.13	0.12	0.21	0.10	0.460

Table 10 Respondent satisfaction, recommendation and loyalty influenced by age

	Destination satisfaction, recommendation and loyalty	*Age (Mean rank)* *21–30* (n = 171)	*31–40* (n = 135)	*41–50* (n = 69)	*> 50* (n = 9)	*df*	x^2	p
S1	Overall satisfaction towards the destination is high	4.39	4.30	4.36	4.44	3	1.864	0.601
S2	I am pleased that I decided to visit this tourist destination	4.45	4.36	4.24	4.56	3	5.616	0.132
S3	The visit to this tourist destination exceeded my expectations	4.20	4.09	4.22	4.33	3	3.436	0.329
R1	I will highly recommend my friends and relatives to this destination	4.23	4.13	4.28	4.11	3	3.218	0.359
L1	I will choose this destination again if had the chance to revisit	4.32	4.39	4.08	4.57	3	8.964	0.030*
L2	I will return to this tourist destination in the future	4.29	4.26	4.06	4.33	3	8.489	0.037*

test did not clarify the respondent age group that differed. The pairwise comparison was based on group interest (e.g. 1 vs 2 and 1 vs 3), and the alpha level was adjusted, where the value was divided by the number of comparisons (Bonferroni adjustment). The formula k (k − 1)/2 was used to decide on a new adjustment to the alpha level's significant value, where k refers to the number of groups compared. Table 11 shows the post hoc test result using the Mann–Whitney U test, where the new significant value was 4(4 − 1)/2 = 6, 0.05/6 = 0.008. However, the study used a sophisticated Bonferroni adjustment rather than just a simple adjustment. Therefore, the significant values were 0.008, 0.01, 0.013, 0.017, 0.025 and 0.05, where the smallest number was the most significant and the largest number was the sixth most significant value.

The post hoc test using the Mann–Whitney U test showed that respondents between 41 and 50 years old had a lower tendency of choosing Kuala Lumpur as their preferred destination again compared to respondents aged 31–50 years, $z = -2.12$, $p < 0.05$ or above 50 years old, $z = -2.16$, $p < 0.05$. For the tendency to revisit Kuala Lumpur in the future, respondents between 21 and 30 years old showed more enthusiasm to return to Kuala Lumpur compared to the respondents between 41 and 50 years old, $z = -2.74$, $p < 0.006$. However, no significant difference was observed in the rest of the age groups when it came to the intention to revisit Kuala Lumpur in the future. It can be seen that the tendency to revisit the destination highly correlates to the image perceived during their experience in Kuala Lumpur. The more negative image perceived about the destination, the lower the tendency of respondents to revisit Kuala Lumpur.

5. Discussion

The study results showed that the perceived image of the tourist when experiencing the city is different based on their age group, country of origin (region) and travel companion. This information can significantly contribute towards the theoretical understanding of destination image literature and serves as a more practical contribution in assisting the Kuala Lumpur Local Authorities.

Table 11 Tourist satisfaction, recommendation and loyalty towards Kuala Lumpur Business District (compared by age group)

	31–40				*41–50*				*>50*			
	L1		*L2*		*L1*		*L2*		*L1*		*L2*	
Age	p	*Z*	p	*Z*	p	*Z*	p	*Z*	p	*Z*	p	*Z*
21–30	0.068	−1.83	0.692	−0.40	0.441	−0.77	*0.006**	−2.74	0.089	−1.70	0.991	−0.01
31–40					*0.034**	−2.12	0.061	−1.87	*0.031**	−2.16	0.304	−1.03
41–50									0.175	−1.35	0.850	−0.19

Note: *p* – significant value and Z – Z scores

5.1 Implication on theoretical understanding of destination image literature

Numerous studies on destination images have been done, especially on tourism perception. For example, Di Marino (2008), Beerli and Martin (2004), Baloglu and McCleary (1999a) and Fakeye and Crompton (1991) agreed that many factors (external or internal stimuli) influence the destination image perceived by tourists in the process of forming the image. The perceived image is affected and modified by the broad spectrum of on-site experiences and sources of information. The image that tourists perceive from on-site experience represents the actual image of the destination, as mentioned by Ross (1991), Tasci and Gartner (2007), Chen and Funk (2010) and Kim *et al.* (2019), where satisfaction with a visited destination depends on experiences while at the destination, as experiences influence the actual images. Echtner and Ritchie (1991) determined that the definition of a destination image is unclear, incomplete and lacking in the literature, which led them to conclude that the components of an image measured in some studies are not clear or solid.

When travelling, the satisfaction level is one of the during-visit elements impacted by the destination image. The sense of satisfaction when experiencing the destination depends on understanding the tourists' eagerness and expectations regarding the destination image before the visitation (Tasci, 2007). Some researchers theorised that if the destination could match the pre-visit expectation and anticipation, then the tourist will experience satisfaction; if not, then frustration would result (Ross, 1993; Tasci and Gartner, 2007; Chen and Funk, 2010; Senarath and Ranasinghe, 2019). However, Tasci (2007) stressed that satisfaction because of realistic positive images or frustration because of unrealistic positive images have not yet been documented empirically. The study findings discovered that the impression of the positive and negative images towards the destination highly correlated with tourist satisfaction and their tendency to revisit the destination.

In other words, it can be concluded that tourist's during-visit perceived image could bridge the gap between the image the tourists hold before visitation and after visitation. According to previous research (Ross, 1993; Tasci and Gartner, 2007; Chen and Funk, 2010; Balomenou and Garrod, 2019), tourists' satisfaction with their destination not only depends on the ideal images that they hold in their minds before visitation but also on their experiences when visiting the destination. Kim and Yoon (2003) highlighted that the affective dimension has more impact on destination image formation than the perceptual component. Several researchers also support this statement because emotions have more influence on individual behaviour than the cognitive component (Li *et al.*, 2010; Yu and Dean, 2001; Akgun *et al.*, 2020). The findings obtained in this study validate the importance of affective images in influencing the development of on-site destination images that have been captured and portrayed via photograph latent content. On-site experience plays a role in modifying how tourists dynamically form the destination image in their minds. It seems that the experience of tourists at the site alters the perceptions held in their minds and affects their overall perceptions of the destination.

Still, previous studies on identifying the destination's perceived image during visitation are still limited. Therefore, further enhancement to this field of study is needed, focusing on the demand-side reaction to the image formation process. How the images will affect what tourists would or would not want to do during their travel is critical in designing the correct image formation of the destination. Thus, further research is needed to investigate the distinction between tourists' image perception before visit, during visit and after visit. The findings of this study provide some implications to the theory of destination image, where the during-visit image perceived by the tourist is the real-time image of the destination that most closely represents the destination's actual image. This is because tourists future purchase behaviour is influenced by how positively or negatively they perceive the destination's image during visitation. The more positive the image tourists perceive, the higher the possibility of repurchasing to visit the destination (Senarath and Ranasinghe, 2019). The positive and negative images of a destination are closely related to tourist emotion towards the destination, which can only be acquired when they experience the site.

This statement is based on the study findings that the emotion (tendency to revisit) is potentially lower if more negative images been perceived during the visit when experiencing the city.

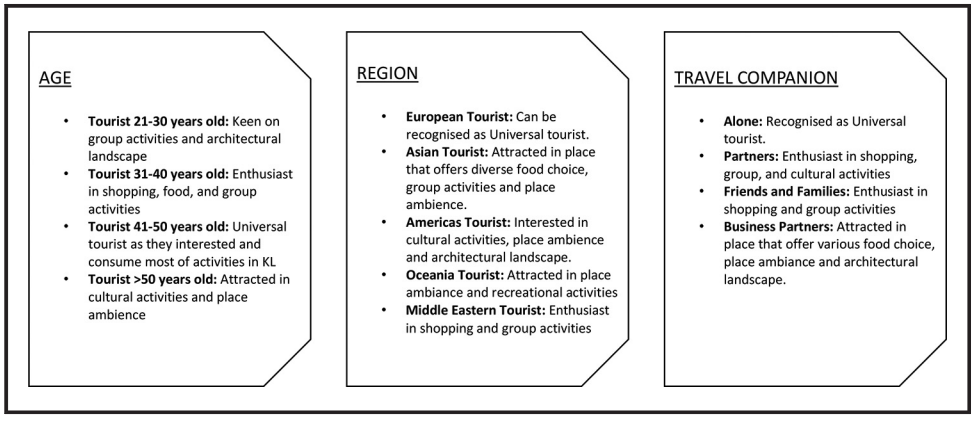
5.2 Practical implication

The findings of this study also have practical implications on image-making and destination marketing for tourism authorities and stakeholders when promoting Kuala Lumpur internationally. The most significant practical implication in this study is identifying the real-time image of Kuala Lumpur City, which helps promote an accurate tourism image for the city. This study also shows that different tourist segments have different needs and preferences, which lead to different perceived images of the destination. Although the Government has formulated strategies for boosting tourism through the NKEA, which placed Malaysia in a more positive light (Table 2), the study adds insightful information into the specific image perceived by tourists during their on-site experience. The real-time tourist image varies based on their sociodemographic profiles and travel characteristics.

The study findings show that the tourist age group highly correlates with their perception of Kuala Lumpur – the younger tourists preferred active activities filled with adventure and fun. In contrast, the elder or grey tourists preferred more calm and relaxing activities with a touch of cultural value. This finding suggests that youth tourists could be the targeted segment for sports, shopping and entertainment tourism in Kuala Lumpur, while recreational, cultural and heritage tourism would suit grey tourists more. The Kuala Lumpur tourism industry aims to increase its tourism receipt. This study found that Middle Eastern tourists should be the targeted segment because this group is enthusiastic about all the shopping and fun activities available in Kuala Lumpur. Based on the overall findings, the image of Kuala Lumpur as a shopping destination that offers "affordable luxury" should be highlighted as its primary image. Figure 7 illustrates the potential of the projected image that can be implemented in promoting Kuala Lumpur as an urban tourism destination.

The study findings are beneficial not only to the tourism industry players but also to other local authorities in Kuala Lumpur. Currently, Malaysia Government has established Malaysia Urban Observatory unit under the Ministry of Housing and Local Government Malaysia to efficiently monitor and manage human interaction and mobility using the advantages of big data and artificial intelligence. This study findings provide the foundation for the local authorities to evaluate and predict tourist movement patterns and flow based on the picture they capture. This situation is possible with the advancement and willingness of people to upload and share their pictures and location instantly through social media applications.

Figure 7 Summary of key factors in determining the real-time image of Kuala Lumpur



6. Conclusion

Kuala Lumpur's cognitive image is based on evaluating the availability of physical attributes in the city. In contrast, the effective image refers to the tourist-based evaluation of their feelings and emotions towards Kuala Lumpur. The VEP technique allows for the successful acquisition of the real-time tourists' perceived city image. The respondents' photos show that VEP is a reliable approach that can be implemented in destination image studies. Adapting and modifying the framework from Russell and Pratt (1980) and basing off the interpretation of Kim and Stepchenkova (2015) regarding the contents of photos, tourists perceived images in terms of their cognitive and affective could be understood more comprehensively.

The tourists had captured images that attracted their attention based on positive or negative impressions at this stage. However, this finding contradicts Urry's (2002) statement that tourist photographs exclude as much as they include, where tourists do not usually take photographs of waste, rubbish or spoiled landscapes on vacation. In this study, the tourist's real-time image contains positive and negative images of the city that vary based on their age, region and travel companion. Senarath and Ranasinghe (2019) highlighted that tourists who have a positive image of the destination are more likely to revisit the destination. These tourists make this decision mainly because their future purchase behaviour is influenced by how positively or negatively they perceive the city's image in real time. The more positive the image that the tourists perceive, the higher the possibility of them repurchasing the destination.

Therefore, it can be concluded that tourists' experience on-site could alter the perceptions held in their minds and affect their overall perceptions of the destination. These findings indicate the importance of capturing and measuring real-time images to accumulate optimal positive and negative images. This valuable information will help distinguish images that need to be highlighted and improvised for better destination competitiveness. The key factors that influence tourist decisions to visit Kuala Lumpur in the future are essential information that the city's tourism authorities and stakeholders can capitalise. Kim *et al.* (2019) also highlighted that image plays an essential role in a tourist destination's success, as it is deemed essential to destination choice. The study findings can be used as a reference and guideline to formulate strategies to promote Kuala Lumpur as one of the world's most visited cities.

Although the application of the VEP approach and photo analysis method provide added value knowledge towards the destination image literature, the conventional way of approaching respondents face to face has impacted this study timeline, as it required exhaustive human workforce, high enumerators fees and time consumption. It takes approximately six months for the study to complete the data collection phases. However, with people's advancement and willingness to upload, sharing their photos and location through the social media platform could make VEP approach and photo analysis method more efficient. Moreover, trends in sharing videos using social media provide better and enriched data that does not involve filtering and selecting images to be shared. The advancement and openness of this big data information could be extended the destination image research in interpreting the image perceived by the tourist accurately with consideration of manifest and latent content, negative and positive impression and location of the image taken.

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