

Influence of Building Façade Visual Elements on Its Historical Image: Case of Kuala Lumpur City, Malaysia

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Abstract

Building façade, as an interface between inner and outer space, is mostly the matter of evaluation by visitors of historical districts. Therefore, it imposes important impact on the images of historical districts. The dimension of this impact is mostly reliant on the visual elements of historical building facades. Reviewing studies conducted on the study area, a historical district adjacent to Dataran Merdeka in Kuala Lumpur city, revealed that inconsistency among the elements of historical building facades has negative impact on the historical images of the area. Therefore, the study intended to identify the visual elements that influence the images of historical building facades, based on public's evaluations. Using a quantitative method, the data was collected through a self-administered questionnaire survey. Participants were randomly selected from the public who visited the area. The results showed that architectural style and color were the visual elements that mostly influenced the images of historical building facades. Briefly, the results help to find out how people evaluate the images of historical building facades that assists designers and professionals in their efforts for the future development of historical building facades.

Keywords: Historical building façades; Visual elements; Architectural style

Introduction

Historical building facades are preferred more over new ones (Herzog et al., 1982; Marina and Renato, 2006). Therefore, historical building facades are important as they impose impact on the images of districts. Public's mental presentation of buildings is mostly based on facades (Imamoglu, 2000). Similarly, the appearance of building is mostly the issue of evaluation and influences the façade image and architectural quality (Robbins

and Langton, 1999; Gifford et al., 2000; Brown and Gifford, 2001). Different studies such as Mehrabian and Russell (1974); Russell et al. (1981), and Gifford et al. (2000) have elaborated how observers' responses to their architectural evaluations are related to their evaluations for different building facades. People mostly evaluate the images of historical building façades based on visual elements such as shapes, colors, and architectural styles. This implies that the visual elements of historical building facades

influence the images of districts. Therefore, the study intends to identify the visual elements of historical building facades that mostly influence the images of study area. To do so, the study aims to find out how people evaluate the importance of historical building facades visual elements on the image of the study area. The literature review section discusses the visual elements of building facades, and theories on how people evaluate the images of building facades.

Building Façade and City Image

Façade is the face of the building that shows its value and structure (Huxtable, 2004). It is the connection between inner and outer space (Hayashi, 2004) that imposes considerable impact on the city image (Moughtin et al., 1995; Abu-Ghazze, 1997; Kong and Yeoh, 2004; Hui, 2007). Huxtable (2004) mentioned that even the scale around a building is specified with its facades. Urban space is characterized by building façade, neighboring building facades, streetscape, and environment (Huxtable, 2004). Thereby, building facade influences all aspects of its ambience and illustrates its significance in relation to the images of city and subsequently historical districts. A building façade presents various experiences to the viewers (Moughtin et al., 1995) and is mostly considered for the evaluation of a historical district image. In fact, the image of a historical building façade is presentable through its visual elements that are basic elements of visitors' evaluations. Next section stresses the

importance of these visual elements so as to shape the images of historical building facades.

The Image of a Historical Building Façade

The images of historical building facades are mostly represented through their visual elements. Architectural style (Nasar, 1989; Stamps III, 1991; Karaman, 2005; Hui, 2007), color, volume, perceived value, material (Karaman, 2005; Hui, 2007), visual bulky shapes and elements (Stamps III and Nasar, 1997; Gifford et al., 2000), forms, surfaces, and lights (Swirnoff, 1982) are important elements that shape the images of historical building facades. Curved lines and decorated articulation (Frewald, 1990), cleanliness and ornament (Nasar, 1983; Stamps III, 1999; Akalin et al., 2009), and detail and texture (Stamps III, 1999; Akalin et al., 2009) could also shape the images of historical building facades in districts (Gifford et al., 2000). From different point of view, the age of building façade is also influential on its historical image (Stamps III and Nasar, 1997; Gifford et al., 2000). Herzog et al. (1982) and Marina and Renato (2006) also mentioned that older buildings are more preferred than contemporary ones. In fact, the age of a building façade affects its historical image and root, and augments its visual richness and quality. After identifying the visual elements of historical building facades, the next section opens discussion on theories about visitors' evaluation of historical building facades.

Evaluation of a Historical Building Façade

The significance of building façade evaluation is stressed by numerous studies such as Robbins and Langton (1999); Imamoglu (2000); Gifford et al. (2000), and Brown and Gifford (2001). This significance is critical, whereas they state that evaluation of the built-environment architectural quality is partially achieved based on building physical features. Some studies such as Mehrabian and Russell (1974); Baloglu and McCleary (1999); Gifford et al. (2000), and Beerli and Martý'n (2004) stated that not only physical features, but also some personal factors such as observers' emotional responses to the building affect the evaluation of built-environment architectural quality. In a study, Coeterier (2002) stressed that public's evaluations of historical building facades are based on form, information about identity and background of the building, or knowledge, use or function, and familiarity. The criteria for the attractiveness of a historical building façade are introduced as color, material, and proportion (Coeterier, 2002). Brown and Gifford (2001) stated six cognitive factors of clarity, complexity, friendliness, originality, ruggedness, and meaningfulness as the predictors of a building façade evaluation. Groat (1994) and Gifford et al. (2000) declaring different view on evaluation, mentioned that evaluation of visual quality depends on the degree to which building facades appear consistent with their contexts. Exemplary building facades of prototypes are more matter of evaluations (Purcell and Nasar, 1992; Gifford et al., 2000).

Some studies believe that emotion toward building affects visitors' evaluations of facades. Mehrabian and Russel (1974); Mehrabian (1976); Gifford et al. (2000), and Aspinall (2001) stressed that evaluation is elicited in terms of pleasure and arousal that building facades inspire. Somewhat similarly, Cubukcu and Kahraman (2008) completed this issue, whereas they stated that evaluation of building facades is feasible through measuring preference (like-dislike), arousal (arousing-sleepy), naturalness (natural-artificial), and relaxation (relaxing-distressing). As a result, this study among all existing theories on evaluations of building facades, has stressed the influence of building facades visual elements that offers the best answer to the objective of the study.

The Study Area

The study area (Fig1) is located near Dataran Merdeka, in Kuala Lumpur city, where Malaysians annually celebrate their independence day. It is a historical district, in the old city center, which stands in the Second Heritage Zone of Kuala Lumpur city. The majority of the buildings include shop-houses appeared in different architectural styles such as Art Deco, Neo Classical, Early Colonial, Utilitarian, and Eclectic. Figure 2 shows an illustrative introduction of the building facades in the study area.

Methodology

The study was conducted based on a quantitative method, meanwhile; the data

was collected through a questionnaire survey. The duration of data collection was from December 2008 until January 2009. Pilot study was used to check the time, efficiency, and wordings of the real questionnaire. Meaning that, during pilot study, some questions that were difficult-to-understand for participants were replaced with easy-to-understand ones. The participants were requested to

evaluate the importance of facades visual elements by asking them how important the building frontage elements are to influence the historical image of the study area. They ranked their evaluations based on Likert scale, in the format of five-scaled questions. The five scales used included unimportant, somewhat unimportant, moderately important, important, and very important.

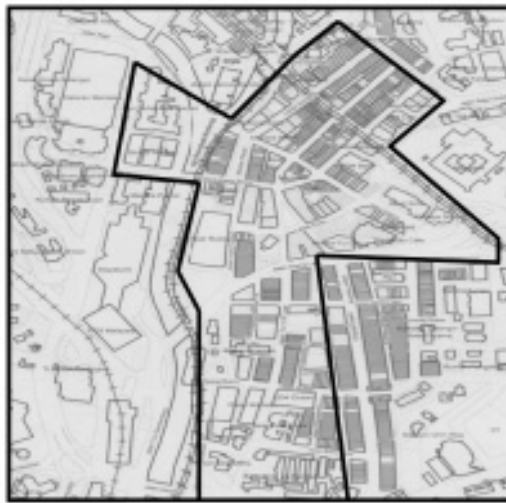


Fig1. The study area
(Source: City Hall Kuala Lumpur, 2008)



Fig2. Building façades in the study area

Participants

Using the method advocated by Mitra and Lankford (1999), with a concentration on sampling error of 0.034, 220 participants were calculated for the study. They were the Malaysians, who worked, lived in, or visited the area. In fact, they were recognized to be more familiar with the area and more willing to answer the questions. Most of participants aged between 20-30 years old (n=94, 42.8%) with equal distribution of males and females. The participants below 20 years old were excluded for they were considered less willing to answer the questions. In the discourse of participant educational level, most participants had SMP (n=82, 37.3%), and the least percentage belonged to the participants with bachelor degree and above (n=58, 26.3%).

Data Analysis

Data analysis was carried out by means of SPSS (Special Packages for Social Sciences) soft-ware. Based on Pearson correlation analysis, the influence of

visual elements of historical facades on the visitors' evaluations was identified. The visual elements that influenced the images of historical building facades were elicited. In other words, the results elicited the façade elements had the highest influence on the visual richness of historical building facades images.

Results

Visual elements impose high impact on the images of historical building facades. In this study, the importance of these visual elements was identified through the consideration of mean scores. After ranking the importance of visual elements, the relationship between these elements and historical building facades with strong and poor images was pursued to ascertain the influence of these elements on the images of historical building facades. Table 1 shows the importance of historical building facades visual elements in representing the historical images.

The results showed that all visual elements obtained mean scores between 3.8 and 4.4. This implicates that their

Table 1. Importance of Historical Building Facades Visual Elements

Visual Elements	Participants		
	N	Mean	S.D
Architectural style of building frontage	220	4.4	0.7
Shape of building frontage	220	4.3	0.7
Decoration of building frontage	220	4.2	0.8
Material of building frontage (brick, concrete, marble)	220	4.1	0.9
Color of building frontage	220	4.0	0.9
Texture of building frontage	220	3.9	0.9
Dimension of building frontage such as height, and width	220	3.8	1.0

S.D. Stands for standard deviation.

importance in representing the historical images ranges from moderately important to very important. Based on this, architectural style of building frontage (mean=4.4), shape of building frontage (mean=4.3), decoration of building frontage (mean=4.2), and material of building frontage (mean=4.1) are the most important factors in representing the images of historical building facades. In contrast, dimension of building frontage (mean=3.8) and texture of building frontage (mean=3.9) are the visual elements of less importance. Nevertheless, they should not be understated for the future development of historical building facades. In this between, color as an important element of historical building facades obtained mean score (4), which this implies its influence on the historical images. The

application of colors on the historical building façades should not tarnish the harmony of streetscape. Colors such as grey and white (shown in Fig3.) are considered to be the most appropriate for the historical building facades. In the next sections, the relationship between these visual elements and historical building facades with strong and poor images is identified. Figure 3 and 4 respectively illustrate historical building facades with strong and poor images.

Influence of Visual Elements on the Images of Historical Building Facades

Visual elements were stipulated to affect people's evaluations of historical building facades. To understand the dimension of



Fig3. The historical building facades with strong images



Fig4. The historical building facades with poor images

this influence, the Pearson correlation analysis was used to find the relationship between visual elements and evaluation of historical facades with strong and poor images (table 2. and 3.).

The results of Pearson correlation analysis elaborated that some visual elements influence the evaluations of historical building facades with strong images. Among all elements, architectural style ($r=0.231^{**}$, $p<0.01$) had the strongest relationship with the evaluations of historical building facades. Meaning that, architectural style imposed the highest impact on the images of historical building facades. Material (0.176^{**} , $p<0.01$) and shape (0.149^* , $p<0.05$) were the other visual elements that affected the images of historical building facades. In other words, harmony in shapes and materials imposes

positive impact on the images of historical building facades. The results concur with the previous studies, which stressed that architectural style (Nasar, 1989; Stamps III, 1991; Karaman, 2005; Hui, 2007), visual bulky shapes (Stamps III and Nasar, 1997; Gifford et al., 2000), and materials (Swirnoff, 1982; Karaman, 2005; Hui, 2007) are important elements of building facades evaluations.

Similarly, the results showed that color (-0.191^{**} , $p<0.01$) is the only visual element that negatively influences the images of historical building facades. In fact, inconsistency of the color is the most important factor that negatively imposes impact on the quality of historical building facades. Applying color should strengthen the visual richness and historical image of façade. Colors such as pink, yellow, and blue are recognized

Table2. Correlation between Visual Elements and Historical Building Facades with Strong Images

Scene (n) (Shown in Fig3.)	Architectural style of building frontage	Shape of building frontage	Material of building frontage
28	0.231** 0.001		
37	0.223** 0.001		
30	0.185** 0.006		
24	0.189** 0.005	0.149* 0.027	0.176** 0.009
27	0.229** 0.001		

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Table3. Correlation between Visual Elements and Historical Building Facades with Poor Images

Scene (n) (Shown in Fig4.)	Color of building frontage
4	-0.149* 0.027
5	-0.191** 0.004
10	-0.150* 0.026

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

to weaken the images of historical building façades (as shown in Fig4.). The results are parallel with the findings of Swirnoff (1982); Karaman (2005), and Hui (2007) that introduced color as an influential element on the evaluation of a building facade image.

Conclusion

Historical building façades impose impact on the historical images in the

districts. For the sake of brevity, visitors' evaluations of historical districts are mostly concentrated on the historical building facades. In other words, the architectural and historical quality of a historical district is mostly evaluated by the images of its historical building facades. Evaluations of historical building facades are elicited through both visual elements and the emotion that is aroused toward facades. Hence, the study focused on the evaluations of historical building facades based on the visual

elements such as shape, color, material, and so on. The results showed that architectural style, shape, decoration, and material were respectively the most important visual elements in presenting the images of historical building facades. Color and texture were less important visual elements in shaping the images of historical building facades. Nevertheless, their influence should not be understated in the future conservation or development. In the further step, results showed that architectural style, material, and shape positively influenced the visual richness of historical building facades images. In fact, these visual elements were contributive to enhancing the historical images in the districts, which among all; architectural style was considered as the most influential element. On the other hand, color was the only visual element that negatively influenced the images of historical building facades. The use of inconsistent colors such as pink, yellow, and blue tarnishes the historical images of building facades in the districts within the city. Colors such as grey and white are the most suitable for historical building facades and enhance the quality and visual richness of streetscape. As mentioned before, most of visitors agreed with the importance of architectural styles in influencing and shaping the images of historical building facades. This implies that visitors regardless of possessing architectural background are aware of importance of architectural issues in historical districts. Since, public's evaluations of historical building facades are different from that of professional, a future study is recommended to compare the evaluation of these two groups. The

limitation of the results did not allow the researcher to find out how culture and ethnicity influence the evaluations, which is left for future studies. Totally, the results of this study bridged architecture and people's environmental evaluations of historical building facades as an important issue in today urban design. In fact, the accuracy in the use of results derived from people's evaluations assists designers in their attempts for the future tropical development of historical building facades. Therefore, the contribution is the effort for improving the environmental sustainability of the area. The future conservation of historical sites should not be the domain of professionals only, as public should be allowed to participate in the planning and designing of historical areas.

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