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Implementation of Landscape Design as Elements in Creating Values for Housing Areas in Klang Valley, Malaysia

Fitrynadia Mohd Shahli ^{a*}, Mohd Ramzi Mohd Hussain ^a, Izawati Tukiman ^a, and Nurbazliah Zaidin ^a

^a Department of Landscape Architecture, Kuliyyah of Architecture and Environmental Design (KAED), International Islamic University Malaysia (IIUM), MALAYSIA

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ABSTRACT

In Malaysia, concern regarding the implementation of landscape design as one of the indicators for making a value to the house has never been important. Subsequently, enhancement of the quality of life and sustain a livable environment for future development seems crucial and related to the values of housing area. Therefore, this paper is aimed to identify the contribution of landscape design as an element in influencing the values of housing area in urban areas. The method specifically adopts questionnaires survey, interview and observation technique that conducted in the selected housing area in Klang Valley. The findings show the involvement of landscape design in term of its planning, characteristic and elements can influence the value of the house. It is hoped that this paper may provide significant information on the implication of landscape design towards influencing the values of the house and also attract prospect buyers in the future.

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1. Introduction

The understanding of landscape design can be defined as exercise to plan and design housing areas so that it's given a benefit to the community that lives in it. Based on this understanding, the contribution of landscape design is needed to proof can become an element in increasing the values

*Corresponding authors (Fitrynadia binti Mohd Shahli). Tel: +603-61964000 Ext.6286. E-mail addresses: fitrynadia@gmail.com, ©2015. American Transactions on Engineering & Applied Sciences. Volume 4 No.4 ISSN 2229-1652 eISSN 2229-1660 Online Available at <http://TUENGR.COM/ATEAS/V04/219.pdf>.

of housing areas. Regarding the importance of landscape design in housing areas, a good quality of housing area can highlight as an important issue in creating a sustainable living environment. Thus, by applying landscape design it hopes that can contribute to the significance values for housing and encourage a comfortable living environment. According to Kuala Lumpur Structure Plan 2020 (p. 24 - online), the city must be functional, live and impart a sense of community and belonging. In addition, it must also provide a clean, healthy, safe and caring environment that caters to the needs of all. Innovative designs, provision of the latest conveniences and facilities, variety of choice, quality of finish and attractiveness of the layout, shall become a priority concern especially in landscape design. Therefore, the concern about the application landscape design in supporting quality of life is needed, especially in the context of housing development. The main emphasis of this paper is to investigate whether landscape design can become an element in increasing the values of the house. It is can help in promoting sustainable living development and attract prospective of buyers. The particular objective of this paper is to identify the character of landscape design as elements which can influence the values of the house and to determine the impact of landscape design on values towards the development of housing areas.

2. Reviews on Housing Landscape Design and Values

Housing landscape design derives from two importance word 'landscape design' and 'housing'. The landscape is an essential part of the environment. Landscape design can define as the art of developing property in order to create a greater use and enjoyment (Williams and Tilt, 2006 - online). Thus, an efficient landscape design can become an integral part of a safe community environment. Meanwhile, housing defines as a basic requirement that important, rather than a source of food and drink to people's lives. The evolution of function and design make the house can become a measurement of the quality of living for an individual and become an investment for the owner of the house (Hamzah et al., 2011). Meanwhile, the word value can be described as the things that have meaning for someone and it is worth to him/her (The Oxford Dictionary of English - online). The housing landscape design and values are related each other when people appreciate the values that have in landscape design and willing to pay for it. Thus, in relation to the housing area, the attractive setting and good environment which refers to the importance of external landscape can add a value to the housing area (Luttik, 2000). Thus, housing can be seen as the central element which can link together the value of economic development, the environment and social welfare in achieving sustainable living environment for the society.

In order to create a good characteristic of landscape design in housing areas, the application

of landscape elements is needed and important. According to Mohd Hussain et al. (2014a) the pleasing landscape designs that have in housing can bring mental and physical benefits to people. It shows that the human interaction with the landscape surround is important to influence the values of housing areas. There are two main elements in landscape designs, namely hard landscape (hardscape) and soft landscape (Softscape) elements. Hardscape is the man-made features include spaces, patios, benches, proportion and among others. While softscape is a soft material known as plants, pattern of plantations, flowers and among others. Usually, hardscape is hard surface elements such as rocks, while, softscape is the living elements in landscape designs which can be permanent such as trees and shrubs. It also can become temporary such as seasonal plants that appreciate for its character such as fruit, flowers which give color to the landscape designs (Hardscape versus softscape, n.d - online). Usually, hardscape employed in an earlier stage of landscaping in order to get the form and space for softscape later on.

Both of hardscape and softscape are important to create balance in landscape designs. In the aspect of landscape design in influencing values of housing areas, study by Mohd Hussain *et al.* (2014b) indicates that people prefer to have basic softscape elements in their housing to express feeling and doing routine activities. The basic elements of landscape design that usually applied such as matured trees, flower pot, shrubs and grass. Besides that, Berger (2007) and Ng (2005) which stated that the existing landscape design that have in housing areas can influence the selling point and become a tool for most developers to attract prospect buyers. In addition, according to Mohd Hussain and Ahmad (2010) the function of hardscape and Softscape especially in the housing area in Malaysia give a sentimental value and contribute to creating images and character of the contemporary landscape. It is can be visualized through the use of varied type of plants such as ornamental plants, herbs / kitchen garden, shaded plants and palm in most of their lawn and front yard area. Thus, the importance of landscape design as an element needs to study weather has a significance effect toward the values of housing areas.

3. Methodology

This paper employed primary and secondary data collections. In terms of primary data collection, data, obtains from the interview session, questionnaire survey and observation. The survey has been done in the selected housing area within Klang Valley and only 250 samples from the total distribution are being used for further analysis. The data gathered, analyses by using content, statistical and visualization analysis. Meanwhile, for secondary data collection, the literature review and document analysis were used to gather information regarding theoretical

aspects of landscape design and understanding the relation and the factors between landscape designs that can influence the current value of housing area. All results from primary and secondary data will be triangulated each other to gain a meaningful finding that helps to answer the objectives that had been outlined in the first section of this paper.

4. Data Analysis and Results

4.1 The characteristic of landscape design in housing as elements in influencing the values

The analysis of the semi-structured interview identified that, most of the interviewee agreed that the basic characteristic of landscape design influenced by the public facilities provided in housing areas. The basic public facilities provide such as recreation areas, open spaces, shaded trees, playgrounds and pedestrian walkway can influence social activities of the society. In terms of the specific characteristic that provided in housing areas, some interviewee stated about the characteristic of landscape design that should have in housing can promote a social interaction, create a sense belonging, support residents' activities, accommodate for all types of users and accessible as well as safe. It shows that the specific characteristics above need to be provided by developers or authorities in promoting their housing developments.

Based on the observation of the area of Taman Dr. Ismail (TTDI), Taman Melati, Taman Wangsa Melawati and Taman Kepong there are four recreation facilities provided which are open fields, playgrounds, multipurpose courts and open spaces with resting and exercise structures. Normally, the size of recreation areas depends on the size of residents that occupied in housing there. From the visualization, analysis also indicate that the availability of recreation facilities usually given in the middle and lower houses in order to provide the need of lack of space to do a recreation in their private spaces. The recreational space serves as a bigger scale of landscape elements that have in housing areas, thus all the facilities need to support the need all types of users and create a beneficial function in society.

Figures 1 and 2 show the significant elements of landscape design that have in housing that can support community activities and spaces. Besides that, by providing a recreational space in housing areas, it will improve human health through the convenient physical activities that provided by the elements such as par course, multipurpose courts, extreme game areas, playfield and also playground encourage people to do physical activities and help to reduce disease but also improve mental health, prevent depression and maintain self-esteem. In other word will help people in

increase the value of a healthy lifestyle and well-being. In other purpose of recreation space also become a place for community events and gathering area.



Figure 1: Basketball court, playground and mounding area that provide at Taman Wangsa Melawati can give a sense enjoyment and excitement to the teenagers and children users. Recreational area provides a lot of facilities, such as playgrounds, gazebos, benches, reflexology pathways and Futsal courts for residential users Taman TDDI



Figure 2: Recreational area attached with exercise equipment and playground which suitable for all types of users such as children, adults and elderly at Taman Kepong



Figure 3: Recreational area that attached to community centers that provide with playground, playfield, multipurpose court and community hall that serve as activities for residents in Taman Melati

As, for example, in Taman Melati, the recreational space provided with attachment of community hall and open area in order to make easy community doing an event or ceremony there (Figure 3). This result supported a study by Mohd Hussain et al. (2014a) that identified the importance of landscape design specifically green spaces can create a sustainable living environment for residents.

Apart from that, the specific characteristic that can influence the value of the house also identify through the availability of street planting, streetscape elements and pedestrian walkway. Visualization analyses indicate that the street planting can create aesthetic value and identity in the residential areas. The use of *Tabebuia rosea* (Tecoma) and *Lagerstroemia speciosa* (Pride of India) can create harmonious scenery (Figure 4).



Figure 4: The flower *Tabebuia rosea* in certain periods such as in December to March creates beautiful scenery and aesthetic value for areas of producing colorful bloom flowers



Figure 5: Used for street planting to create shade, direct pedestrian movement and segregate the private space of housing areas at Taman TDI and frontage plants of housing area at Taman Melati.

Figure 5, the function of street planting, such as *Peltophorum pterocarpum* (Yellow flame), is important for residential areas in terms of creating a shaded environment by providing a big silara of the tree, especially for pedestrians in the residential areas. It gives a significant impact towards a healthy environment by providing oxygen and breeze for the surrounding neighborhood areas. Besides that, street planting, such as *Mimusops elengi* (BungaTanjung), give a sense direction and act as a buffer zone for residential areas. In addition, there are plants which are used as a frontage in the housing, residential areas such as *Mangifera indica*, *Lagerstroemia speciosa* (Pride of India) and *Mimusops elengi* (BungaTanjung). Usually, the *Mangifera indica* (Mango Tree) are planted at the front of houses for its fruits. It shows that plants have benefits as a source of food for people and also others such as birds and insects.

4.2 Impact of Landscape Design on Values towards Housing Areas

Based on the analysis of the survey questionnaire, a total of 250 questionnaires is completed. Regarding the perception of residents on landscape design in their housing areas, 83.2% of respondent agreed that by providing a good landscape design will increase the value of housing areas. It shows that people have realized the importance of landscape design can create a significant value toward housing areas (Table 1).

Table 1: Response rate on survey

Description		Frequency	% Response
Providing good landscape increases the value of housing areas	Yes	208	83.2
	No	42	16.8
	Total	250	100

In order to achieve the second objective of the paper, to determine the impact of landscape design on values of housing areas, the respondents were asked regarding their preferences on what are the characteristic of landscape design they need in their house. Firstly, respondents are asked regarding the use of soft and hard landscape elements that applied in their housing compound. Based on survey analyses, the used of potted and the small scale of planting preferred to be used in most compounds in the housing area. Tables 2 and 3 indicate the distribution of respondents' feedback.

Table 2: Preferences on landscape elements - Hardscape elements.

Hardscape elements			Frequency	Percentage (%)
a.	Water elements	Yes	63	25.2
		No	187	74.8
		Total	250	100
b.	Gazebos	Yes	55	22.0
		No	195	78.0
		Total	250	100
c.	Benches	Yes	124	49.6
		No	126	50.4
		Total	250	100
d.	Pergolas	Yes	41	16.4
		No	209	83.6
		Total	250	100
e.	Pots	Yes	136	54.4
		No	114	45.6
		Total	250	100

As for hard landscape elements, pots become basic hardscape elements that usually applied in the compound space of the house and it cost is cheaper rather than other elements. It is also easy to install and the used of potted element suitable for limited space of landscape design. In terms of

providing significant value, most of the culture in Malaysia used potted elements as symbols of aesthetic in the landscape garden. As an example, Chinese culture, allied potted plants such as bonsai to symbolize the wealth and property and it is becoming significant in Chinese garden. The importance of landscape elements can influence the culture of the society. Analysis of soft landscape elements indicates that, respondents preferred to have groundcovers as softscape elements in their house compound. It is because; ground covers become a basic soft landscape that usually applied in the house compound. Besides that, this plant doesn't need high maintenance and easy to take care.

Table 3: Preferences on landscape elements - Softscape elements

Softscape elements		Frequency	Percentage (%)	
a.	Climbers	Yes	84	33.6
		No	166	66.4
		Total	250	100
b.	Groundcovers	Yes	170	68.0
		No	80	32.0
		Total	250	100
c.	Kitchen plants	Yes	114	45.6
		No	136	54.4
		Total	250	100
d.	Fruit trees	Yes	72	28.8
		No	178	71.2
		Total	250	100
e.	Shrubs	Yes	154	61.6
		No	96	38.4
		Total	250	100

People will more appreciate the landscape design that provided in housing if the condition and the characteristic of it have a significant value to be expressed. Therefore, the respondents were asked about the important value they need in housing that can give impact toward their life. The environmental, aesthetic, functional and social values of landscape design become a subject to be analytical. The subject of values was identified based on the summary of the characteristic of landscape design that analyzed in previous objective. Tables 4-7 present the frequency distribution of each value.

From the survey analysis, Table 4 show that the landscape design that can create shade have the highest important values rather than other environmental values ($M = 3.91$). It shows that the importance of shaded trees can promote good environmental values of the house. Mohd Rejab (2000) explains that plants provide a several functions for the area housing especially urban areas. Since urban areas are full of hard surface, this leads to high temperature in the surrounding areas.

Therefore, shaded trees are important to protect the housing area from sun radiation, keep the microclimate balance and provide a comfortable environment surrounding. Another significant value can be analysed regarding the landscape design that can give impact to the aesthetic values of the house. Table 5 indicates that the landscape design can give a pleasant view to the environment of the house ($M = 4.20$) have the highest important values rather than other criteria.

Table 4: Environmental values of landscape design

Environmental values		Mean	Rank
a.	Landscape design can create shades	3.91	1
b.	Landscape design provides cooling environment for pedestrian users	3.89	2
c.	Landscape design can reduce pollution, such as noise and air pollutions	3.84	3
d.	Landscape design as natural buffers	3.61	4

Note: Rating scale is 1= Very important, 2 = Important, 3 = Moderate, 4 = Less important

Table 5: Aesthetic values of landscape design

Aesthetic values		Mean	Rank
a.	Landscape design can give a pleasant environment	4.20	1
b.	Scent and smell of plants can give soothing environment	4.04	2
c.	Type and color of plants can give character for the housing	3.96	3
d.	Landscape design can give a visual identity of the place	3.88	4

Note: Rating scale is 1= Very important, 2 = Important, 3 = Moderate, 4 = Less important

The functional values of the landscape design also need to be measured. Landscape design with functional characteristic serves various forms of landscape design in housing areas. The used of plants more focused on delivering a functionality of the landscape design. Table 6 indicates that the shade trees that can enhance the microclimate of the area have the highest important values ($M = 3.89$). Thus, it is shown that the user of structured trees in controlling the climate of the area is important especially for the pedestrian user.

Table 6: Functional values of landscape design

Functional values		Mean	Rank
a.	Shade of trees can enhance microclimate around the place	3.89	1
b.	Create a buffer to segregate public and private space	3.86	2
c.	Fruit plants as source of food	3.62	3
d.	Green space encourages crime prevention in housing areas	3.55	4

Note: Rating scale is 1= Very important, 2 = Important, 3 = Moderate, 4 = Less important.

Lastly, landscape design also can give impact on social values of residents in housing areas. Table 7 indicates the distribution of respondents answer.

Table 7: Social values of landscape design.

Social values		Mean	Rank
a.	Enhance community interaction	3.76	1
b.	Influence social neighborhood	3.62	2
c.	Help in crime prevention	3.18	3
d.	Help to reduce traffic problems	3.15	4

Note: Rating scale is 1= Very important, 2 = Important, 3 = Moderate, 4 = Less important

Based on a ranking of importance in Table 7, most of respondents agreed that landscape design can enhance the community interaction among the residents in housing areas ($M = 3.76$). It shows that, the importance of interaction among each other can enhance the social values. This is in line with the study of Memlük (2012) identifying that parks and recreation facilities are linked to sense of community. Most people engage in leisure activities so that they can socialize. Thus, landscape design is designed to serve the community's leisure needs and give impact toward social activities of residents. From overall analysis, it is shows throughout the relationship between social, functional, aesthetic and environmental values that derived from landscape design can become elements to create the sustainability of housing (Figure 6).

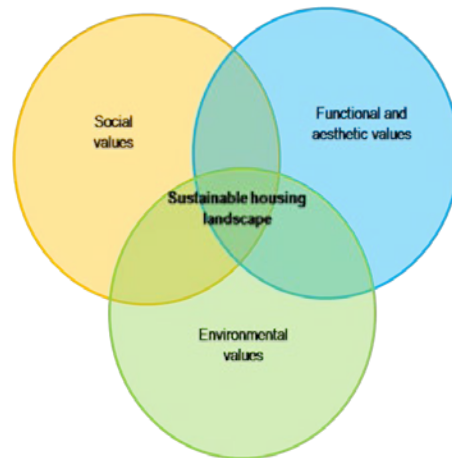


Figure 6: Sustainability of housing landscape design.

This view also supported by a study from Helfand et al., (2006) and Williams and Tilt (2006 - online) identified that landscape can value in terms of aesthetics, functionally, and environmentally for housing. The aesthetic value of landscape can be valued through an attractive landscape design and it adds beauty and gives a pleasant view to the surrounding environment. The function used of landscape design can be valued when it can cater the need of all users. Williams and Tilt (2006 - online) also view that the suitable selection of landscape elements helps in identifying the microclimate of the housing and enhance the environmental quality of living things.

5. Conclusion

The study found out that landscape design influence the positive impact toward the values of housing areas. Most of the respondents, interviewee and actual condition of the site support the importance of landscape design give impact toward social, environmental, aesthetic and functional values of housing. Landscape design can act as selling point and a new phenomenon for the housing development in Klang Valley. Thus, the exposure on landscape design and awareness on the importance of landscape design in creating a quality living environment should be introduced for all residents housing. The housing built today will not only help to shape the environment at present, but it will also be a legacy in determining the environmental quality for the future.

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Fitriynadia binti Mohd Shahli is a post-graduate student in Master of Sciences in Built Environment (MsBE) from International Islamic University Malaysia (IIUM) and specializes in landscape architectural study. She completed her Bachelor Degree in Landscape Architectural study at the Department of Landscape Architecture, IIUM. Her research interest is under residential landscape design.



Dr. Mohd Ramzi bin Mohd Hussain is an Associate Professor in the Landscape Architecture programme at International Islamic University Malaysia. He holds a Diploma in Architectural Design and Bachelor Degree in Landscape Design & Planning from Universiti Teknologi Malaysia (UTM), then further his studies in Master's Degree in Urban Design (Postgraduate Diploma in Urban Design) from Oxford Brookes University, and his PhD in Human Geography (Geography and Information Systems (GIS)) also from (UTM). His interest areas are in Landscape Design And Planning including Landscape Management, Urban Landscape Design and Residential Landscape, Management of GIS in Urban Planning, Environment Management and Sustainable Development.



Dr. Izawati binti Tukiman is an Assistant Professor in Landscape Architecture programme at International Islamic University Malaysia. She obtained Diploma in Architecture from Universiti Teknologi Malaysia (UTM), Bachelor Degree in Housing, Building & Planning and her Masters Degree in Landscape Architecture from Universiti Sains Malaysia (USM). She completed her PhD in Sustainable Urban Landscape from University of Sheffield. Her interest areas are in Design For Disableds, Cultural Landscape Landscape Design And Planning that include Landscape Technology, Sustainable Technology, Sustainable Urban Drainage System (SUDS) Cultural Landscape, Landscape Ecology, Environment Management and Sustainable Development.



Nurbazliah Binti Zaidin is a post-graduate student in Master of Sciences in Built Environment (MsBE) from International Islamic University Malaysia (IIUM) and specializes in landscape architectural study. She completed her Bachelor Degree in Landscape Architectural study at the Department of Landscape Architecture, IIUM in 2012. Her research interest is under urban landscape design.

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