

AN EXPLORATION OF EXPERTS' VIEWS ON THE INTEGRATION OF VERTICAL GREENERY AS PUBLIC ART IN MALAYSIAN CITIES

Nur Izzah Abu Bakar^{1*}, Mazlina Mansor² and Nor Zalina Harun³

Department of Landscape Architecture, Kulliyyah of Architecture and Environmental Design, International Islamic University Malaysia, Kuala Lumpur, Malaysia^{1*}

Department of Landscape Architecture, Kulliyyah of Architecture and Environmental Design, International Islamic University Malaysia, Kuala Lumpur, Malaysia²

Department of Landscape Architecture, Kulliyyah of Architecture and Environmental Design, International Islamic University Malaysia, Kuala Lumpur³

*Corresponding authors: izzah1987@gmail.com, mmazlina@iiu.edu.my, zalina@iiu.edu.my

ABSTRACT

Vertical greenery (VG) is plants that can be grown on, up, or against internal or external walls of buildings or as freestanding structures. An urban area is in need of more greenery in its surroundings and one method is by increasing the implementation of VG in urban areas. This is due to various benefits gained by implementing VG in terms of the aesthetic, economic and environment aspect. Furthermore, to sustain its usage, VG must be explored creatively. Public art (PA) is a structure or a form that contains an artistic expression that is located in a freely accessible city's public space. Sadly, PA in Malaysia is often used merely to decorate and fill-up the public spaces. This scenario is actually contradicting with the ultimate objective of PA, which is it should serve as an artistic expression that can be used, appreciated and has benefits to the public. Hence, there is a need to improve the selection and appearance of PA in Malaysian cities. With this premise, this research sets out to explore the potentials of VG to be integrated as a PA in the city's public space. This research is a part of author's Master Degree thesis titled "Analyzing the Potentials of Vertical Greenery in Malaysian Urban Context". The aim of this paper is to discover the perspectives of experts in landscape architecture and PA field on the potentials of the integration. This is because, a majority of research in VG, especially in Malaysia focuses on environmental and technical aspects of VG, rather than looking at creative methods to approach VG. This paper presents two research objectives; (i) to identify the potentials of its integration from experts in the field of landscape architecture and PA and, (ii) to study the attributes of VG as a PA from their perspectives. Semi-structured interviews were conducted with two experts in VG and two experts in PA. Findings suggest that there are five potentials for VG as a PA: to use the

abundant Malaysian natural resources, to be a leader in VG for South East Asia (SEA) region, to support the nation's green aspiration, sustainability perspectives and to have an artistic green wall. Meanwhile, there are 17 attributes of VG as PA listed by the experts; (a) large size and scale, (b) fair percentage of greenery, (c) proper maintenance, (d) uncommon geometric patterns, (e) using unconventional materials, (f) creative implementation method, (g) direct art intervention, (h) surprise elements, (i), out of the norm design, (j) wonder about the creative works, (k) the VG needs to have some meaning behind it, (l) combine material of living and non-living things, (m) creative utilisation of plants, (n) use recycled material, (o) continuing with the surroundings, (p) interaction with public, (q) visibly seen by the public and (r) impactful. Thus, the findings imply that all experts were in agreement and believe that VG has high potential to be integrated as a PA. Finally, the findings also reveal several measures to improve the selection and appearance of PA as VG in the Malaysian cities.

Keywords: experts, integration, potentials, public art (PA), vertical greenery (VG).

1. INTRODUCTION

The implementation of vertical greenery (VG) in cities nowadays is increasing due to its ability to improve the urban life quality as well as to enhance the urban realm (Alexandri and Jones, 2008). Furthermore, by incorporating plants within the vertical surface of a building, it represents a new view in greenery-related infrastructure. While the idea itself is not new and a few countries have already conducted researches and development in this area, VG has yet to be implemented on an extensive scale (Chiang and Tan, 2009). Nonetheless, what is the significance for VG to be implemented in Malaysia, especially in the cities? How about its survivability in the long term or will it only merely be a trend that will fade away?

The previous statements have developed the interest of the researchers to conduct a study to answer the concerns raised. Nevertheless, most research in VG especially in Malaysia, centred on environmental and technical aspects that focus on the benefits, technical issues, feasibility, acoustic impact, sustainability, system and maintenance (Kheir Al-Kodmany, 2014; City of Sydney, 2014; Greenscreen, 2013; Séguin, 2012; Cheetham, Woods and Chesterton, 2012; Chiang and Tan, 2009; Cheng, Cheung and Chu (2010). Wong, N., Tan, A., Tan, P., Sia, A., and Wong, N. 2010; Nyuk Hien Wong et al, 2010; Bonham and Smith, 2008). While VG has been listed as one of the creative landscape initiatives suggested to be employed under the “Greening Greater Kuala Lumpur/Klang Valley to Ensure Every Resident Enjoys Sufficient Green Space”, an Entry Point Projects of the Greater KL/KV for the National Economic Transformation Programme, research in exploring the potential creative methods to approach VG is seldom researched upon.

Hence this study is an initial effort to fill the gap on exploring creative methods to approach VG’s potential and ensuring its survivability in the future. VG’s application and usage could be explored in many other creative ways, and one method of realizing it is by implementing VG as a public art (PA) (Grant, 2012; Bostwick, 2008). This view is in accordance with Green Public Art (2010), who mentioned that in recent years, the popularity of VG has increased and this creates the possibility to incorporate ‘green public art’ into a building. Furthermore, Badruzaman Jaafar, Ismail Said and Mohd Hisyam Rashidi (2011) suggested that greenery has become a key element of urban transformation. Christel (2010) strongly agreed that VG is one form of PA, and by incorporating it into the planning of a town, it would benefit in many aspects. Plus, with combination of site, art and people, it produces the aura of sustainability towards the urban landscape (Mohd Fabian, H., Osman, M.T. and Mohd Nasir, 2012).

Other than that, the increase of the implementation of VG on the city walls can be seen as one method to engage PA that put concerns on the environment. Rather than using the typical granite or marble finish, designers could opt for vegetation, and this will project out a strong green statement to a development (G TOWER-Rebuilding the green concept, 2012). Plus, the idea to integrate VG as PA is not an uncommon in the field of art. At the beginning of the 20th century in Europe, green façades were found to be one of the important design elements in the art, crafts and modern style movements (Séguin, 2014). This can be seen in the ‘Jugendstil’ movement whereby the Japanese creeper (*Parthenocissus tricuspidata*), was used on the buildings to create a smooth transition between the dwelling units and the garden. The idea to integrate VG as PA was also supported in an online survey conducted by Ainul Samihah Albahori, Annur Jalilah Ramlan and Khalilah Zakariya in 2014. The result revealed that 78% of the respondents choose green wall art as the most preferred PA because of its environmental qualities. Thus, if being catered in a creative way, VG has the potential to become a PA. Hodson-Walker and Pua (Institute of Landscape Architects Malaysia, 2009), also supported this idea whereby they believed that VG will certainly become an important part of modern urban design and may be built as a work of art. What is needed is the continuing environmental pressure and better government policy as well as expanding the creativity aspect beyond the imagination.

2. THE INTEGRATION OF VERTICAL GREENERY AS PUBLIC ART: AN OVERVIEW

This section reviews the development and quality of the implementation of vertical greenery (VG) as public art (PA); internationally as well as locally.

2.1 International Level

A considerable amount of VG has been implemented as PA around the world. Among the examples are VG as integrated walls (e.g. Pixel Field; living wall; living map), VG as integrated fencing (e.g. green graffiti; green wall), VG as environmental art (e.g. public art green wall; portrait art) and VG as standalone art (e.g. green billboard; outdoor sculpture; vertical urban gardens).

One of the best examples is an outdoor installation of the VG’s project called Pixel Field by Ground, Merge Architects and MOS (Yoon and Höweler, 2009) as illustrated in Figure 1.1.



Figure 1.1: *Pixel Field*, a project by Ground, Merge Architects and MOS (Yoon and Höweler, 2009)

The project managed to transform a blank brick wall of a newly converted loft building in Boston into a green environment. The broader and distributed applications of the field as the pattern suggests that vertical greenery landscape could occupy multiple sites throughout the city. Plus, this prototype has somehow managed to illustrate how blank urban surfaces in the urban context can become opportunities for zero footprints PA that could improve the city, both visually and in performance.

Another example of VG in the form of a standalone art is the Philippine’s first plant billboard. It is composed of 3,600 recycled Coke bottles that act as the base to grow Fukien Tea Plant (Figure 1.2).

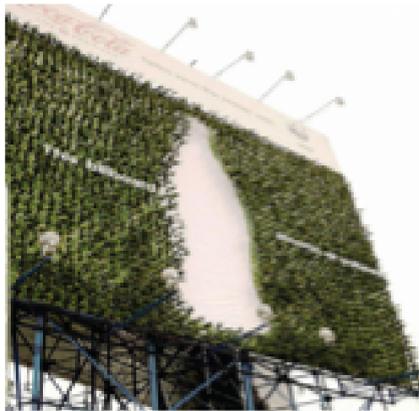


Figure 1.2: *The Coca-Cola Philippines and World Wide Fund for Nature-Philippines (WWF) green billboard with its message “This billboard absorbs air pollutants”* (Heater, 2011)

The project was a partnership of the Coca-Cola Philippines and World Wide Fund for Nature-Philippines (WWF) to create a better environment. With all the eco-friendly approach, it expressed their green stands and this innovative advertising is a good reminder for the Filipinos to participate in saving the environment (Enriquez, 2011; Heater, 2011). This project is considered a good utilization of VG as PA as it brings up the notion of PA that would not only benefit its surrounding aesthetically but also environmentally.

Meanwhile, in Florida, Public Art Green Wall titled “Mangrove Gate” was initiated by the PNC Bank in the form of an environmental art, as illustrated in Figure 1.3.



Figure 1.3: *The Public Art Green Wall titled “Mangrove Gate” by Matt Rowan and Jonathan Toner Landscape Architect (PNC Bank, Public Art Green Wall, 2013)*

Designed by Matt Rowan and Jonathan Toner Landscape Architect, the project is seen as an opportunity to add an outstanding landmark to the Boynton Beach and create something that reflects the surrounding context (PNC Bank, Public Art Green Wall, 2013). This project is seen as a good utilization of VG as PA as it provokes creative thought and a regularly changing artwork in clear public view. Not to mention, it also may be able to increase the public’s awareness of the larger environment that surrounds it.

In addition, VG was also used as a PA as green graffiti. Recently, quite a number of artists around the world have been using eco-friendly medium like moss in their artworks to make their statements. Even though the adjustment is only on the materials, the implications are revitalizing. Graffiti in nature is able to confront and transform an urban canvas. Thus, by using living organisms in the design, it is ought to transform a desolate environment into a luxuriant one.

In this sense, Southeastern Pennsylvania Transportation Authority (SEPTA) has brilliantly utilised VG as PA in the form of three-dimensional moss in their “Go Green Go” marketing campaign as illustrated in Figure 1.4.

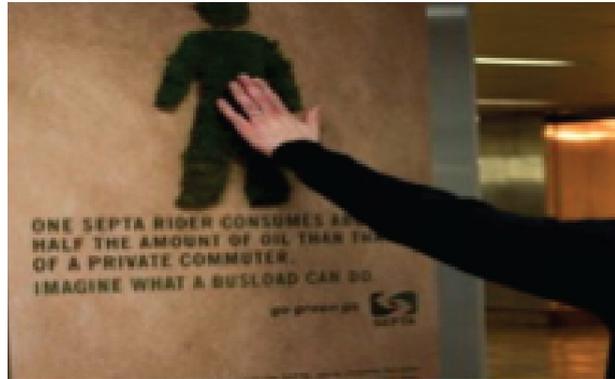


Figure 1.4: Three-dimensional moss advertising campaign by SEPTA use real moss (GreenGraffiti, 2012)

The campaign involved a series of posters and installations to educate the public on the great environmental effects of using SEPTA as a transportation mode. Studies have shown that many commuters do not realize that the decision to commute via SEPTA is a green one. Thus, SEPTA hopes that through this campaign, it will empower the public and make them feel that they are a part of the movement (GreenGraffiti, 2012).

Another great example of the implementation of VG as PA with large public participation in the initial design process can be seen in green wall project at Sandpoint, Idaho (Figure 1.5). The Idaho Transportation Department has invited Vicki Scuri, a public artist to come out with a design to camouflage a large concrete wall along the bypass at Highway 95, Idaho. Wisely, the artist has involved the public in the design process. They clearly stated that they required the concrete wall to be green. Accordingly, she designed a green wall at the site and the community were found to be pleased with the design execution (Paul, 2014).



Figure 1.5: Green wall in Sandpoint, Idaho by public artist, Vicki Scuri (Paul, 2014)

2.2 Local Level

The development of VG in Malaysia is in growing trend. Their application and design are going through a process of refinement and further development. With continuing environmental pressure and coupled with government policy, VG could be an important component of urban design in Malaysia (Bulletin Landskap, 2014).

Perbadanan Putrajaya has successfully implemented this idea when they constructed a 343 metre long green wall during the 2013 FLORIA (Figure 1.6). The green wall was recognized by The Malaysia Book of Records as Malaysia's Longest Vertical Landscaped Wall (Bulletin Landskap ILAM, 2013). It is covered by a wide variety of tropical plants, foliage, herbs, creepers and orchids had become the special feature.



Figure 1.6: Malaysia's longest vertical landscaped wall (Poiraud, 2012)

This wall is considered as VG that has the attributes of PA as it managed to capture the meaning of PA. This wall did not only convey the environmental message to the public, but also evoked public's awareness that plants can also be transformed into an art form.

Another example of VG being implemented as a PA in Malaysia can be seen at Jalan Bangsar as illustrated in Figure 1.7. The street artist, Ernest Zacharevic creatively assimilates the existing feature on the site in his artwork. This has somehow makes the nature and art to be seen in a different perspective



Figure 1.7: Naturally-grown VG at the walls were incorporated into the street art drawing around Bangsar (Joles, 2014; Nairaland, 2005)

From the literature review, this paper intends to highlight the significance of VG as PA. It is made to understand that should VG is to be implemented creatively as a PA, it should not only benefit the society in terms of aesthetic value but also have an abundance of advantage to the environment. Thus, the information gathered from this section has demonstrated quite a number of successful VG's implementation as PA around the world and in Malaysia. From this review, the study explores the idea of implementing VG as PA in Malaysian cities from the experts' point of view.

3. METHODOLOGY

As mentioned earlier, this research paper is a part of author's Master Degree thesis titled "Analyzing the Potentials of Vertical Greenery in Malaysian Urban Context". There are three types of data collection used as a strategy of inquiries to collect the primary data of the thesis, namely; semi-structured interview, online survey and field inventory. The interview was used to get an in-depth understanding from the experts' point of view regarding the integration of vertical greenery (VG) as public art (PA). The findings garnered from the semi structured interview was supported with the findings from the

online survey with the Malaysian public (n=117) and field inventory of 15 reference study areas around Selangor as well as Kuala Lumpur. This research paper focuses the information collected from the semi-structured interview. Stone (1984) defined this method as an interview method in which there is a mix of structured and open-ended questions.

3.1 Interview Participant

In this paper, two categories of respondents were selected; two experts in vertical greenery (VG) as well as three experts in public art (PA) respectively, as detailed in Table 1.1.

Table 1.1: Detail of interview participant

Expertise	Credibility	Specialization	Code
Vertical greenery	Principal, 1 Eco Innovation	Vertical Greenery	VG 1
	Partner, 1 Eco Innovation	Vertical Greenery	VG 2
Public art	Senior Lecturer, Faculty of Art and Design, UiTM Shah Alam	<ul style="list-style-type: none"> • Sculpture • Public art • Contemporary sculpture and installation • Malaysian contemporary art • South East Asian contemporary art 	PA 1
	Lecturer, Faculty of Architecture and Built Environment, IUKL	<ul style="list-style-type: none"> • Architecture • Public Art 	PA 2
	Assistant Professor Kuliyah of Architectu- re and Environmental Design, IIUM	<ul style="list-style-type: none"> • Landscape Architecture • Tourism Planning, Tourist Experience • Space, Culture and Heritage • Marketplace, Streets, Urban Spaces, Public Art • Behavioural and Creative Mapping 	

3.2 Design of Semi-Structured Interview

The interview is divided into two sections; (i) semi-structured interview questions and, (ii) analysis using a set of photograph. The questions consist of three main questions which are; (a) Do you agree with the idea to integrate VG as PA? (b) Is there any possibilities for this idea to be implemented in Malaysian cities and, (c) What is the attributes that should be integrated if VG is to be implemented as a PA? Meanwhile, the set of photo consists of the current implementation of VG as PA, both internationally and locally. The participants were asked about their opinion on the implementation and which photo best shows the integration of VG as PA.

4. RESULTS AND DISCUSSION

The data gathered from the interview were content analysed to obtain results on the parameters defined in the questions. The interviews were recorded and transcribed into interview script. Then, the raw data was sorted into keywords that answer the parameters of the study. They were categorised into different themes and this is known as the thematic analysis. The development of the theme and codes are directed by the content of the data. The data are divided into three sections to better understand the findings.

4.1 Experts' Perspectives on the Integration of Vertical Greenery as Public Art

Findings from the experts suggest that they were in agreement of the idea and believe that VG has high potential to be approached as a PA. There are five main reasons that can be referred; abundance of Malaysian natural resources, to be the leader in VG for SEA region, nation green aspiration, sustainability and to have an artistic green wall.

VG 1 elaborated on Malaysian green aspiration whereby he indicated that there will always be room for a development. Should the government is serious about creating a greener Malaysia and to be the leader of this field, they should carry the aspiration. However, the public must not only depend on the government to take the initiatives to make this concept into a reality. Thus, the experts in the field should collaborate with the government to realize the nation's green aspiration. Furthermore, with the current research and development as well as the latest technologies, Malaysia has come to the stage where the problem being minimized and things are getting more sustainable. Thus, it would be a great opportunity to approach the government to apply this idea.

His view was also supported by VG 2 when he gave distinctive insights regarding this matter. He explained that Malaysia has a large potential to develop VG as Malaysia are blessed with 2,500 plant species that does not require soil. Furthermore, large scale PA needs to be impressive and the government together with the private sector must be bold enough to invest in this field. For example, an initiative carried out by the government to apply VG as PA under the KL Heritage Trail project can be seen at the Dataran Merdeka, Kuala Lumpur.

Similarly, PA 1 also shared the same opinion whereby she reiterated that VG is already a good green initiative. Nevertheless, there is the possibility to explore VG further to add the artistic value. It can be done by exploring some specific numbers of plant species that would represent specific patterns as well as adding relief in and out element to create interest so that later. Then, the VG would not only be a typical green wall, instead an artistic green wall. This view was also second by PA 2. She reminded that the basic idea of the PA must be understood. It must invite public participation, evoke public responses by making the users a part of the art process.

4.2 Preferable Attributes

Meanwhile, for VG to be considered as a PA, it needs to have specific attributes. Based on the interview, it can be summarized that there are 17 main preferable attributes and the summary is tabulated in Table 1.2. The findings were based on the expert's own opinion and their analysis of the set of photo mentioned in the methodology section.

Table 1.2: Attributes of vertical greenery as public art

Experts	Attributes by Experts
VG 1	Large size and scale
VG 2	Large size and scale
	Fair percentage of greenery
	Proper maintenance
PA 1	Grand scale
	Uncommon geometric patterns
	Using unconventional materials
	Creative implementation method
PA 2	Direct art intervention
	Surprise elements
	Out of the norm design
PA 3	Using unconventional materials
	Surprise elements
	Wonder about the creative works
	VG needs to have some meaning
	Combine material of living and non-living things
	Creative utilisation of plants
	Use recycled material
	Impactful
	Interaction with public
Visibly seen by the public	

Referring to Table 1.2, VG 1 recommended that the size and scale of the VG should be large so that it would be beneficial for the public in terms of aesthetic as well as to soften up the area and enhance the structure. VG2 supported the idea and he added the percentage of the greenery and maintenance issue. It depends on the needs of the client and the percentage of the VG that would cover the building. For example, for a 1000m² facade to be effective, it must be at least about 16 % of the overall building facade. Their view was also shared by PA 1 whereby she mentioned about the grand scale of the VG to be considered as a PA.

“...Image No. 2. It covers the whole building. (Muse Quai) and in terms of scale, it really affects the whole area and in fact it’s become dominant in that area. It has made a drastic change to the area itself and makes a strong green statement on how a building can be addressed in a different way...”



Figure 1.8: Grand scale of vertical greenery at Muse Quai, Paris

Moreover, VG needs good maintenance that consists of continuously running water, good root’s development and the plant are trimmed on a daily basis. Plus, it would become a good art piece if the design utilized various colours and the right system. Concurrently, PA 2 and PA 3 suggested that VG can be considered as PA if it has the surprise elements, out of the norm design as well as using unconventional materials. For example, PA 3 mentioned that Image No. 9 (Figure 1.9) has strong attributes of PA because of its surprise elements and out of the norm design.



Figure 1.9: Guerrilla gardening has the strong attributes of PA in the VG because of its surprise elements and out of the norm design

Meanwhile, P1 felt that VG in Image No. 4 (Figure 1.10) could also be considered as a PA. This is because it is such an ambitious gateway and not only the grand scale that stood out, but also have the uncommon geometric patterns form of an arch. According to her, the design is very unique the archway was intentionally made unfinished, as if it wants to interlock with the environment and site.



Figure 1.10: Vertical urban gardens in Mexico City have the strong attributes of PA in the VG because of its grand scale

Besides, according to PA1, Image No. 8 (Figure 1.11) could also be considered as a PA. This is because instead of using conventional paint to convey the message, the designers have used moss.



Figure 1.11: Moss graffiti integrated moss in their design to convey its message

According to PA1 and PA 2, another example of the integration of VG as PA is in image No. 7, as exemplified in Figure 1.12. The image shows a mobile green sculpture that shows a creative way of using VG as a display material. It shows a creative usage of plants and suits the situation of the site.



Figure 1.12: Mobile green sculpture displayed at Seattle Public Art showed a creative way of using VG as a display material

PA1 also added that VG could also be regarded as PA if it has direct art intervention like translating directly any artists' artworks as VG and interesting patterns as portrayed in image No. 3 (Figure 1.13). Plus, the PA value is high since it is a painting by a renowned artist like Van Gogh. In relation to Malaysian context, local artists' artworks like Latiff Muhidin can be interpreted into the green mural. But that study needs a lot of consideration for instance the colour, texture and form.



Figure 1.13: Environmental graffiti has direct art intervention by translating directly Vincent Van Gogh's painting into living art.

On the other hand, direct artistic intervention as it clearly indicated in Image No. 1 by the shape of the coca cola bottle (Figure 1.14).

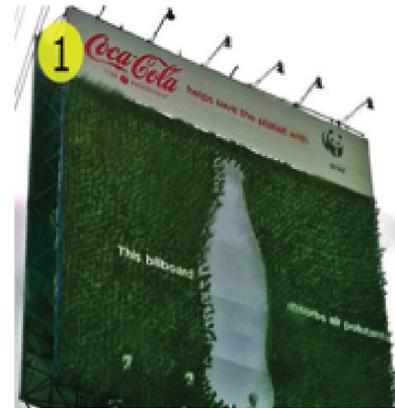


Figure 1.14: Green billboard at the Philippines using direct artistic intervention to convey its environmental message.

Same goes to Image No. 14, as exemplified in Figure 1.15. It can be considered as PA because it transforms the pixel of a picture and make it in such a way and fix it directly to the wall. Besides that, the VG is also considered as a good integration of VG as PA because it somehow manages to transform a blank brick wall in Boston into a lush, green environment.

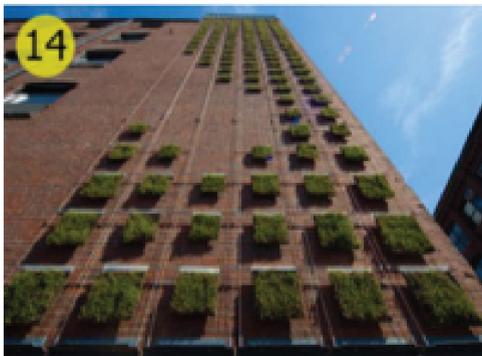


Figure 1.15: Pixel Field by Ground, Merge Architects and MOS project

PA 1 and 2 also added, like the attribute of a good PA, for VG to be considered as a PA, it should be easily associated with the public as it is a common icon to everyone. Besides, it should also display special meaning to be understood by the public. For instance, Image No. 16 (Figure 1.16) can be considered as PA because it has the direct translation of pattern from a carpet. It is easily associated with motifs. Besides that, this VG was also being creatively used as a marketing tool for the company. In image No. 22 as shown in Figure 6.8, the interesting pattern and lines of the VG's design is clearly defined.



Figure 1.16: PNC Bank's living wall shows direct art translation is used as a marketing tool for the company

Besides that, PA 2 also mentioned eleven other attributes of VG that are worth to be mentioned as a PA. Among them is that the VG is designed in such a way that it is not really straight forward, art forms that symbolize something significant to the site, have interaction with public, evoke the sense of inquiry; wonder about the creative works, visibly seen by the public, use recycled material with meaning behind it, pattern design that symbolizes something significant to the history or company, impactful and combining the living and nonliving material.

She also asserted that that particular VG should have continuity with the surrounding. For example, in the Setia Eco Garden image (Figure 1.17), the VG connects with the context of the surrounding area and the placement at public is also suitable.



Figure 1.17: The suitable placement of VG at the Setia Eco Garden's sales gallery makes it visible to the public

Other than that, a VG needs to have some meaning behind it. Referring to the VG image at the Dataran Merdeka (Figure 1.18), it has the potential to be PA because the patterns resemble some sort of meaning behind it.



Figure 1.18: The patterns of VG at the Dataran Merdeka resembles interesting patterns

Table 1.3: Future design improvement

The information gathered from this research would help the designer to draw a thin line between an ordinary VG with VG that have the touch of artworks. These findings would also help designers and contractors to convince their client to apply this concept in developments. In conclusion, it can be inferred that the experts had suggested 17 main attributes for VG to be considered as a PA; large in size and scale, have a fair percentage of greenery, to be properly maintained, the design should be uncommon geometric patterns, using unconventional materials, have creative implementation method, design with direct art intervention, surprise elements and out of the norm design. Besides that, it should be able to make the public to wonder about the creative works, project meaningful message, the design should combine living and non-living material, creative utilisation of plants, and use recycled material, to have continuity with the surrounding environment and public, visibly seen to the public and to be impactful.

4.3 Design Improvement

Even though there were already VG projects being implemented as a PA in Malaysia, there is still room for improvement. This section presents the future design improvement of VG as public art (PA) suggested by the experts. Among the most mentioned aspects by the experts were; the selections of material and plants, arrangements of plants, the initial design process, proper selection of contractors, the planting medium and process, in-depth knowledge of plant character and early planting process, good cooperation with the designer, the overall design can be enjoyed, create the knowledge and awareness, improvement of the system used, more artistic touch on the VG, better knowledge of irrigation system with new technology, organic quality, public participation, more cooperation among public and private sector and supporting elements. Details of the potential improvement approaches are tabulated in Table 1.3.

Potential Improvement Approach	Detail Approach
Selections of material	There should be a certain moisture limit for the material chosen as the VG structure
Selection of plants	Using native plants or ferns for easy maintenance
Arrangements of plants	The thickness of the plants should be appropriate for VG to be effective
The initial design process	The contractors need to be informed of the design in the early stage for them to pre-propagate the plants to ensure that VG to have a good effect
Proper selection of contractors	Developers and designers have to be selective in terms of the selection of contractors
The planting medium and process	i. Improving the planting medium and process ii. Using soilless media or substrate
Knowledge of plant character and early planting process	To be well-versed in the plant characters, different plant categories, and planting systems
Good cooperation with the designer	Contractor and designer need to work hand-in-hand in producing successful VG
The overall design can be enjoyed	The design should be constructed at the public's eye level and area
To create the knowledge and awareness	<ul style="list-style-type: none"> • Public art awareness should start from the school • The public should be educated to self maintain their artworks • Educating the public of the idea; strong promotion through mass media, expo, bring back nature campaign, no vandalism awareness • The contractors should expose themselves with new technology

VG system	<ul style="list-style-type: none"> The planting system should be finalized in the early design process
More artistic touch on the VG	<ul style="list-style-type: none"> Introducing some images or text with the VG. The designer could explore some patterns, relief in and out to create interest
Better knowledge of irrigation system with new technology	<ol style="list-style-type: none"> Using a substrate called the PU foam to retain 60 percent the water. Hydroponic system
Organic quality	Public artist should be aware that they have put their artworks in the public area and public will be interacting with the artworks
Public participation	Public need to be involved from the initial design process
More cooperation among the public and private sector	<ul style="list-style-type: none"> The contractor or designer could propose the idea to implement VG as PA to the government Collaborative artworks of VG at Malaysian universities with the collaboration of the community at the site National level competition (government and private partnership)
Supporting elements	Supporting activities of infrastructures that is strong enough to get people to be interested to that particular VG

These insights from the experts regarding the future design improvement is very important to the designers and contractors as it will help them to garner different view of VG that could be further developed as a PA in the future. Besides enriching the information gathered in the literature review, findings above have again proven that VG has high potential to be approached as PA, especially in the urban context.

4. CONCLUSION

In ensuring the survivability of VG in Malaysia, its usage must be explored creatively. Thus, this study suggests to approach VG as PA. From this paper,

it can be concluded that the experts have come to one positive conclusion; VG has great potential to be implemented as a PA in the Malaysian urban context. These results suggested that the experts in the field are very keen to see more implementation of VG as PA in Malaysia. Thus, it would not be a hindrance for the concept to be implemented in Malaysia at larger scale.

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