

URBAN PARKS (UP) FOR ALL- BARRIER FREE (BF) AT MICRO ARCHITECTURE (MA)

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ABSTRACT: *International efforts to preserve the natural environments are mainly concerned with large bio diverse and relatively untouched [1], environmental and ecological services, urban nature provide important social benefits to human societies. The objectives of this paper were to create quality life environments with priority to people's needs and comfort, and secondly to get equal opportunity to all of population to share in its live ability, This research highlighted the importance of barrier free design on Micro Architecture units provided in Urban Parks, visitors always been caught in accessibility and safety issue. The study was qualitative in nature. Case study approach on park environments and micro architectural was adopted. Used site studies, field observations, randomly interviews with the officers in charge and professionals of planners, designers and management were conducted. Direct interviews with the people were conducted during the field observation.*

Keywords: Barrier free, Micro architecture, Urban Park

1. INTRODUCTION

In 2010, Malaysian population had reach to 27.6 million people, age expectancy for male are 72.5 year old and for female are 76.5 year old [2]. As a developing nation, even in Malaysia disability is considered one of the constraints to survive in the big city (Waraporn,2010). Department Of People with Disability (DPWD) [18] recorded 313,685 nos of people with disability (PWD) has registered with the department (Dept.W.D,2010), They are those who have long term physical, mental, intellectual or sensory impairment which various barriers may hinder their full and effective participation in the society (JKM,2011)[18], but in fact, in real life every people whose living in this world are potential to be disable, In their certain phase of life which is start from newborn until the end of life.

2. DEFINITIONS

Urban Parks (UP)

Urban Parks are defined as delineated open space areas, mostly dominated by vegetation and water, and generally reserved for public use in the urban area. Urban parks are mostly larger, but also have the shape of smaller 'pocket parks'. Urban parks are usually locally defined (by authorities) as 'parks'. Urban green structures include a wide range of different components. Apart from parks, these include woodland, street tree and square Plantings, cemeteries, private gardens, green roofs, community and allotment gardens, sports complexes, and so forth [3] Urban Park (UP) provide environmental and ecological services, urban nature provide important social benefits to human societies.

Micro Architecture (MA)

The definition of micro architecture (MA) is the small-scale building which a define characters and the finding must be specific and clear [4] In presence, from Built Environments point of view MA are related to human social life as the facilities provided in public space and as street vendors because MA is a single, individual "support unit" and act as a medium of specific activity. There are various types, design and function of each unit MA in urban and rural areas [5] micro architecture is also applied to demonstrate the function in a more specific and clear. Indirectly, the size of the building also plays an important role for human emotions.

Indirectly, it can show the human relationship with the built environment more closely and specifically. Man will be in the "comfort zone" for building functions which meet the daily needs of people, because it's small size and simple construction, humans are more easily interact with their surroundings. According to Slavid (2007), the micro-architecture can be classified small, whether the building has a single function or do something more complex in small spaces. Micro-architecture contains elements of simple, portable, lightweight, and compact.

Generally, all terms of micro architecture are referring to the same meaning such as small, simple, lightweight, portable, temporary, and etc. There is no permanent record specifically reflects the size of the MA [6],[7],[8], According to them, the term micro architecture includes terminology such as small architecture, industrial architecture, lightweight architecture, mobile architecture, portable and nomadic architecture.

MA are referring to individual built facilities provided in UP, MA is a "support unit" and act as a medium of specific activity [7] such as wakaf, gymnasium, ministadium, toilets, street lights, drinking dispenser, kiosk (food, information), food truck , surau, Direction board (signage), sculpture, public phone, dust bin (garbage), furniture (outdoor,street) and more. [7].

Barrier Free (BF)

A barrier-free environment is a space that allows free and safe movement, function and access for all, regardless of age, sex or condition, a space or a set of services that can be accessed by all, without obstacles, with dignity and with as much independence as possible. The environment means surrounding elements such as buildings, roads, parks, and other places, service, modes of transportation, products of daily use, etc. There is a popular belief that a ramp and an elevator/lift is all that is needed to make a built space barrier-free.

BF design is also call universal design, inclusive design, design for all, or life span design, its "a process that enables and empowers a diverse population by improving human performance, health and wellness, and social participation" [9]. In short, universal design makes life easier, healthier, and friendlier for all.

It must be clearly understood that barrier-free goes far beyond just a ramp and has many other necessary aspects.

These range from door and passage widths to flooring surface, from counter heights to door handles and railings, from signage and auditory signal to tactile guides. 'Built Environment' means unhindered, without obstructions, to enable disabled persons free passage to and from and used of the facilities in the built environment-Ministry of Housing and Local Government - (MHLG,1999) [6]

Professionals, researcher including physiology, psychology, sociology, human geography, urban planner and architect, designer had agreed that open spaces are important elements of urban life. Whoever involved in urban life are bombarded with physical and visual information, and need buffer zones: alternative spaces in which to take a break [10],[22].

Why is UP important

Urban Park (UP) provide environmental and ecological services, urban nature provide important social benefits to human societies, UP can offer programs that are not only fun but in education wise it's also help kids acquire assets in one or more of these domains, The assets children and youth need for healthy development fall into four major domains: physical, intellectual, emotional, and social (Walker, 2012). In addition to providing places for physical exercise and relaxation, open spaces offer urban residents psychological, social and cultural comfort and pleasure referring to Au in 1993; Aubock and Cejka, in 1996; Heckscher and Robinson, 1977; Rapuano,1994). For instance, they offer people a temporary escape from the stresses of urban living, particularly the high-pressure work environments of cities (Lynch and Carr, 1979/1990). Green space thus reduces the negative effects of pollution and improves human health [11].

Why they do need MA

Urban Parks are the most common and probably the most important, open spaces in cities, and are relatively should be easy to access. However, not all people have access to parks. (Matsumoto, 2001) In recent years, Governments, City Council, Developers have started to design and manage parks to be inclusive [10]. Some newly designed parks also provide facilities for older people to undertake light daily physical exercise (Turespana, 2012)

A good network elements between Micro architecture and environments surrounding will became ideal living for human being, should be easily accessible, safety and friendly for all users such as it can increase the level of fairness and equity in a community, When all residents have access to facilities that make life better and more pleasant, regardless of their socio-economic status, communities take a step toward greater and also Accessible in social character of gathering places that improve the community life, to increase residents' interaction with one another and create a greater sense of community that reaches across community sectors equity. MA is a "support unit" and act as a medium of specific activity [7], It also can make the community more attractive physically with well-designed parks facilities and buildings, and well-restored historic sites, especially when they're part of a comprehensive community plan, can add greatly to the pleasant atmosphere of a community, even its also help to attract new residents. People are more likely to move to

communities with well-kept parks, lively cultural institutions, good schools, and efficient public transportation.

What can BF do?

UP as open spaces for the public, barriers make an environment unsafe and cause a high level of difficulty to the user [12]. But more importantly, barriers cause space to be out of reach, denying people the opportunity of participation in various spheres of life. This ranges from education, economic, social, and cultural and may be other activities. This loss of opportunity is not only a loss for the person concerned but also society's loss, which misses out on their contribution. Simply put, a barrier causes exclusion and its removal is necessary for ensuring inclusion and participation of all in society. Barriers would enable people to participate in the social and economic activities for which the built environment is intended. As though they want to be accommodated within the built environment as efficiently, effectively, and satisfactorily as possible, regardless of their health condition, body size, strength, experiences, mobility power, or age. In the meantime, they want to expend low physical effort and have security, safety, and simplicity (The Center for Universal Design, 1997).

BF also allows each individual to perform daily activities as usual, regardless of age, size, or ability. The main aim of universal usability is to enable the widest possible range of users to benefit, access, use, and obtain product/ services from the built environment in the widest range of situations [11]

The safety aspect in urban parks, particularly on the facilities, also considering credits of BF as a part of the performance or quality of any parks in order to foster a safer environment [11]

The concept also benefits larger numbers of visitors in tourism industries, BF facilities and services would benefit larger numbers of tourists, including parents with young children and multi-generation family travelers (Bali declaration BF Tourism, 2000) [13].

3. OBJECTIVES

The main concern of this paper is to address the importance of urban nature for citizens' well-being and for the sustainability of the city they inhabit. Through the ages, there has been a growth in the number of elderly and disabled people [13], Furthermore, the needs and demands (accessibility) of diverse urban population members (children, pregnant mothers, adults, elderly or disabled people) vary considerably, that's became a reason, an increasing safety awareness of barrier free (BF) among designers in order to satisfy diverse user needs in many countries. That can be used without any adaptation and without stigmatizing the user. Such design emphasizes inclusivity in the design process, regardless of the age, ability, or size of the users (Ostroff, 2001; Demirbilek and Demirkan, 2004).

4. METHODOLOGY

Initial stage of the research is to review and understand the subject of the research which is the barrier free design facilities and MA. Then it is followed by formulation of the study aim and objectives. Then the next stage of study focused on the literature review. This stage also includes the

legislation and challenges in providing facilities for the people.

An observation and interviews (Part A) were conducted among random visitors of three urban parks, Taman Tasik Shah Alam (TTSA) located in Selangor, Taman Tasik Titiwangsa (TTT) located in Kuala Lumpur, Kuala Lumpur City Centre Urban Park (KLCCUP). The selection of the parks was based on the definition of urban parks given by the Planning Standards for open space and recreation (Planning Standards: Open Space and Recreation, 2002). According to this Planning Standard, an urban park requires an area between 40-100 hectares (100-250 acres) within 0.5 km or ½ hour journey from and should be located in an urban centre. In addition, urban parks should be accompanied by recreational facilities such as fields, courts, sport complex, swimming pool, golf driving range, children’s playground, picnic and camping area, water sports, amenity forest and gardens, *wakaf* or *surau*, public toilets and telephones, lodging, shops and stalls, parking for cars and busses, and bus stop (PSOSR,2002). By focusing on the Micro Architecture (MA) objects, observing how the accessibility, safety, sustainability visitors on different level used the parks was the major scope of the field visits. During the observations, photographs, videotapes and observation notes were taken. The elements observed included the visitors, act, relationships, sociocultural context and physical setting [14]. From the site observation checklist referring to Micro Architecture (MA) all the components and subcomponents of accessibilities, safety and sustainability in the three UP were analyses and summarized through the scoring level as suggested method by Sendi and Kerbler, 2009, [15], The three UP are analyzed in terms of the outcome on the scoring that shows the current level of accessibility, safety and sustainability base on the main public facilities of each park; Entrance facilities, recreational facilities, builds facilities, dining facilities, amenities facilities, are measured and evaluated using guidelines from the Malaysian Standards for accessibility; MS 1184: 2002 -Code of Practice on Access for Disabled People to Public Buildings, and MS 1331:1993 Code of Practice on Access for Disabled People Outside Buildings; and the checklists of design requirements derived from MS codes and universal design principles are completed based on researcher’s measurement and observation of those facilities. Photographic documentation is also taken for further analysis of the current facilities condition. The checklists and photographic documentations were then analyzed qualitatively and involved universal design principle.

For example, individual random visitors were asked to demonstrate how they access, (walk into) parks, facilities that they have used [16]. They were then asked to give comment

on the park entrances and the overall setting, facilities referring to MA and available information [17]. The observed behavior was generally dynamic, as [19] observed in relation to environmental behavior, during the field visits. This arrangement minimized intrusiveness [14];[20] to allow the visitors to act freely in the parks

5. RESULTS AND DISCUSSIONS



Figure 3: MA units at TTT, TTSA, KLCCUP

For part A –in this research, Site observation are conducted among the three urban parks (UP), results shows Kuala Lumpur City Urban Park (KLCCUP) provide 68 points over 95, which is 71.5% better accessibility, safety, sustainability to public, followed by Taman Tasik Titiwangsa (TTT)- 59 over 95, it’s 62% and lastly Taman Tasik Shah Alam (TTSA)- (54 over 95) which is 57% of their Micro Architecture (MA) that fulfil all the requirements. The red indicators are the best in score, shows all the facilities had meets all the requirements with 5 in points, while the orange colour indicated the worst which is all the requirement had not meet. From the results, it’s also shown KLCCUP is 71.5% improve. Anyway For those three UP, outdoor dining furniture, information board (signage),

	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	Score	%
Taman Tasik Shah Alam (TTSA)	3	2	4	1	2	3	3	3	3	2	5	3	4	3	4	3	2	1	3	54/95	57%
Taman Tasik Titiwangsa (TTT)	4	3	4	2	3	3	2	3	3	3	4	3	3	3	4	3	2	4	3	59/95	62%
Kuala Lumpur Urban Park (KLCC UP)	4	4	5	4	4	3	4	3	3	4	5	3	4	3	2	3	4	1	5	68/95	71.50%
	-Entrance/arc	-Bus stop	-Play ground	-Outdoor gym	-Bridges	-Outdoor dining furniture	-Street furniture	-Information board	-Trash bin	-Street light	-Bicycle Rack	-Surau	-Signage (fs)	-Rest room	-Wakaf	-Guard Hse	-Drinking fountain	-Kiosk / Food stall	-Planters box		

5	All requirement meet BF
4	Most of the requirement meet
3	Equal porportion of requirement meet and not meet
2	Most of the requirement are not meet
1	All the requirement are not meet

Figure 4: site observation checklists, the accessible facilities referring to Micro Architecture (MA) provided in three urban parks (UP) was evaluated and summarized

Thrash bin, surau, guard house and restroom are below average of equal proportion of requirements, meet and not meet. From the observation, these items are still similar in function, almost the same design The MA unit design can be improve to some extent by introduction of green technologies and green materials to make the units become sustainable from time to time [5], From the result also shown that poorest accessibility is recorded for food stall or kiosk. Even though KLCCUP get 71.5 %, MA object such as entrance, bus stop, bridges, outdoor gym, street furniture, street light, signage and drinking fountain in blue level which are most of the requirements meets but still not fully meet the requirements, In general, based on overall findings major flaws in terms of the accessibility found from this study are more than half of the main MA units provided in medium condition requirements from MS and BF principles, modification should be done to the overall accessibility, safety of the visitors, however with a small modification can contribute to the large improvements to the UP. For example the signboard is clearly display throughout the parks, but for certain impairments such as visual impairment, it's important for them to touch and feel it (MHLG: *Guidelines Requirements for Access into Public Buildings for Disabled Persons*, Administrative document, 1999), a clear system of sign should be use throughout the park with similar height and format at each change of directions

The existence of MA unit kiosk and booth is very important in the development of street culture, especially in urban areas. MA is a "support unit" and act as a medium of specific activity [7].The existence of MA units or less will affect street landscape patterns, the character of each unit provides its own definition, specific function, aesthetic and accessibility

4. CONCLUSION

Although there is a positive development at UP in Malaysia but without proper facilities, regular maintenance, efficient managements and careful planning will affect the importance of urban nature for citizens' well-being and for the sustainability of the city they inhabit. MA units are always important as the needs and demands (accessibility) of diverse urban population members in the public spaces, to satisfy the safety of diverse user needs and as many people as possible. In a way, if these BF practices are totally applied in situation, green spaces will offer advantages not only to the disabled persons but for all users. The ideal design explores the various issues and is uniquely developed to provide maximum comfort. Furthermore, these would accommodate and serve Malaysian urban users to be more open minded and having the right attitude when using the public facilities. No concept is valid unless it can be put into practice. This is certainly true for the notion of 'Barrier Free'. Changing our surroundings and rendering them accessible to everyone is a challenge faced by anyone who aims to promote equality between citizens in modern society.

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