Encouraging A 'Barrier-free Built Environment' In A Malaysian University

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Abstract

A good pedestrian network around the campus should be accessible and friendly for all users including disabled persons. The environment should offer some activity nodes to ensure that the learning and working in campus is more pleasant. The paper will clarify the importance of collaborative development among various professionals and organisations in order to achieve a 'barrier-free built environment', focusing on the University of Malaya as a case study. It will share experience on the education of inclusive design for students who will become professionals and responsible in implementing the legislation relating to safety, accessibility and usability of the built environment. As the objective is the issue of educating relevant professionals, it will introduce methods in teaching professionals as a strategy to advocate a 'barrier-free built environment'. The paper will also illustrate the efforts done in encouraging the agenda which have been implemented around the case study.

Keywords: Barrier-Free Built Environment, Education, Professionals

Introduction

It is increasingly difficult for the disabled persons[1] to use the campus[2] facilities in Malaysia due to previous planning policies and implementations, which did not set out to provide for a 'barrier-free built environment'[3]. For example, there were no provisions for slopes with equal or less than 1:12 for the wheelchair users, lifts were provided incomplete without Braille buttons and audio signals for the vision-impaired persons. There is a lot to be done that could allow the disabled persons to participate equally like everyone else. However, disabled persons and collaborators have yet to make inclusion in planning as priority in their efforts to encourage a 'barrier-free built environment'. Survey had shown lack of awareness and knowledge on the needs of disabled persons among campus citizens. This is the main argument for pushing for disability awareness training to be one important activity where it would be integrated as the culture for a 'caring campus society'. Practice had revealed that regulation alone is not enough to achieve the desired needs of disabled persons unless all parties are involved with the awareness programme.

[1] Disabled persons means an individual who has a physical or mental impairment that substantially limits one or more of her/his major life activities (Disability-Related Terms and Definitions, http: / /www.duke.edu/web/equity/disab_terms.htm).
[2] The word "Campus" is used for explaining sites of a University. [3] 'Barrier-free Built Environment' means unhindered, without obstructions, to enable disabled persons free passage to and from and use of the facilities in the built environment. (Ministry of Housing and Local Government administrative document [1999] *Guidelines Requirements for Access into Public Buildings for Disabled Persons*, Kuala Lumpur).

When more disabled persons and their concerns are respectfully acknowledged, this will move towards an all-encompassing agenda, which would be integral to the mainstream development of planning the campus.

The principles of 'barrier-free'

Barrier-free is achievable when the following factors are considered: safety, accessibility and usability. A more encompassing concept is 'universal design', where the factors of affordability and aesthetics are considered. According to Yaakob (2000), Universal Design is the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialised design.

Safety is defined as 'freedom from danger and risks'. The built environment should be designed that all people, including disabled persons can move about without undue hazard to life and health[1]. An example is pavements that are constructed with unprotected drains (refer figure 1).

Accessibility is defined as, 'that can be readily reached or entered'. This means disabled persons can, without assistance, approach, enter, pass to and from, and make use of an area and its facilities without undue difficulties[1]. An example issue is incorrect design of gratings (refer figure 2).

Figure 1:
Uncovered openings that could harm the disabled person.

Figure 2:
Gratings should be laid with the direction across the travel of wheels for the wheelchair users and can be avoided by short bridges (refer to Figure 6).

[4] Ministry of Housing and Local Government administrative document [1999] *Guidelines Requirements for Access into Public Buildings for Disabled Persons*, Kuala Lumpur

[5] Ministry of Housing and Local Government administrative document [1999] *Guidelines Requirements for Access into Public Buildings for Disabled Persons*, Kuala Lumpur

Usability is; 'that can be used'. Use means 'bringing into service'. The built environment should be designed so that disabled persons can use and enjoy it[1]. A subsequent problem is the inability to use the public facilities such as toilets (refer to figure 3).

Figure 3:
Insufficient space for use of the toilet.

Affordability is defined as 'having means to provide'. Public transportation around the campus (refer figure 4) is one of the issues.

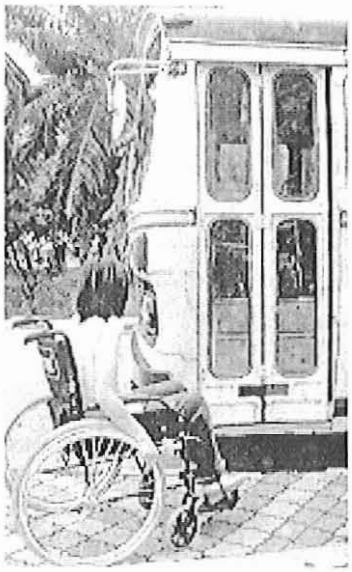

Figure 4:
Although public transportation is provided, it is not sufficient.

Case Study: University of Malaya, Kuala Lumpur

The University of Malaya is a 750-acre campus situated in the southwest of Kuala Lumpur, the capital city of Malaysia. This first university of the country was established on 8th October 1949 with the motto 'Knowledge is the Key to Success', which reflects the philosophy of the University in its constant endeavour to seek knowledge in all fields to produce successful graduates and a successful nation[1]. University Malaysia's Vice Chancellor, Professor Dato' Dr. Hashim Yaacob, mentioned in the New Straits Times, written by Nagu (2003:8) that the next step is to outline a strategy to improve teaching and learning quality in the University of Malaya. He also feels the time has come for the institution to associate itself with premier universities such as Yale and Oxford. Optimistically, being the most prestigious university in Malaysia, the University of Malaya will be more concerned with creating a sustainable environment as well as the academic aims. University of Malaya should be barrier-free to disabled persons in order for them to be an equal participant in the activities that the University has to offer. The following are objectives that should be met in order to achieve the agenda of encouraging a 'barrier-free built environment'.

a. Educating relevant professionals;
b. Employing suitable methods in teaching professionals.

[6] Ministry of Housing and Local Government administrative document [1999] *Guidelines Requirements for Access into Public Buildings for Disabled Persons*, Kuala Lumpur

We shall divide the efforts done based on five ways as follows:

1. Consultancy for new and existing building and landscaping projects.
   Academics and researchers who are being approached by the University often find themselves engaged in advising current projects on the campus. This is because the University does not have an in-house architect and campus planning office, but rely on the maintenance and management department to help maintain the campus facilities and infrastructure.

   Inputs are certainly needed from the professionals concerned to integrate facilities for the disabled persons into mainstream development. Recently, a few academic staff from the Faculty of the Built Environment working as part-time consultants on 'barrier-free built environment' came into the renovation of the Tunku Chancellor Hall, an important landmark in the campus, which is the historical multi-purpose hall and exhibition complex. There were discussions on providing access features such as ramps and accessible toilets along with landscape beautification around the hall. Upon their discussion, a few problems were identified and solutions were made. No proper admittance for the disabled persons was one of the problems (refer figure 5a and 5b).

2. Advisory in committees and task forces.
   One of the University's task forces formed consists of the academic staff from the Faculty of the Built Environment working in collaboration with an outside working group called the Access Initiative Group (AIG). AIG is an informal group of people working

Figure 5a:
Before construction of the ramp.

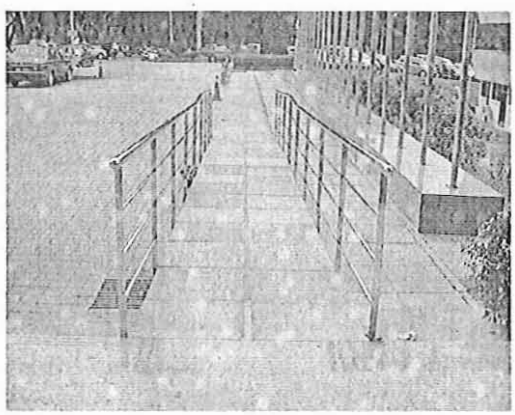

Figure 5b:
Steel handrail installation.

on the promotion of 'barrier-free built environment' in Malaysia. The group had been involved in the core work done and they are sufficiently skilled to conduct disability awareness training course modules, including simulation exercises and access surveys. AIG's main aim is to enable disabled persons to be trained as promoters on encouraging 'barrier-free built environment' and to be sufficiently skilled as resource persons. This is to create the groundwork for awareness and thus changes of attitude for the public, administrative personnel in government

[7] History Universiti Malaya, http://www.um.edu.my/um/history.htm

and professional bodies, concerning disability issues.

Another core task force is the Accessibility and Safety Research Centre (ACCESS) in the Faculty of the Built Environment, University of Malaya. The main objective of this unit is to engage in research and provide resources for the University in accessibility and safety. Students taking landscape, architecture, planning and urban design disciplines may benefit from inter-disciplinary collaboration on a variety of research topics. The unit will sustain a network on sharing of information with other institutions of higher learning and research centres at both the local and international levels. Future collaborations are encouraged to obtain research grants and funding in the research areas.

3. Disability awareness training and seminars

Disability awareness training is a fairly new phenomenon, which had only been introduced in Malaysia by a few disabled persons as resource persons and trainers trained under the United Nation's Economic and Social Commission for Asia and the Pacific (ESCAP). The concept has been very much applauded and such programmes were enthused by sections of the government sector. According to Harrison and Parker (2001: 21-22), disability awareness is not achievable unless the people have undergone a simulated experience, long and impact enough for the realisation that issues are connected to disability. The module of simulation exercise is an important component in achieving the objective of sensitisation. Although just temporary, the participants in the training will find out exactly the problems that disabled persons encounter, when they have done the simulators of being in blindness, using a wheelchair, crutches or walking frames (refer figure 6).

Figure 6:
Stimulation exercises – sharing experience and understanding barriers.

Given that University of Malaya relies on the technical personnel from Building Management and Maintenance of Property Development Office for implementation of design, they should be 'introduced a scheme to experience simulation exercises with the guidance of disabled persons as resource persons...'[8]. This will further emphasise on the recommendations among which disability awareness training should be conducted to rectify problems when implementing. For example, during the Ekspo Konvokesyen University Malaya (EKSKUM) 2001, disabled persons had organised a seminar where a few speakers who specialised in accessibility were invited to discuss issues that happened around the campus. Senior academics and staff were also invited, as they are important key decision-makers in the University structures. As a result, we see more people are aware of the issues and there are discussions to suggest in creating a 'One-stop Service Centre' via the Office of Students Affairs, at least with a higher ranking officer

[8] United Nations Economic and Social Commission for Asia and the Pacific [ESCAP] report [1999] *Asian and Pacific Decade of Disabled Persons: mid-point – regional perspectives on multisectoral collaboration and national coordination*, New York

looking into the affairs of the disabled students.

4. Educational Approach.
   One of the elective courses offered by the Faculty of the Built Environment is the 'Barrier-Free Built Environment', with its main objective to train future professionals to become trainers and encourage the Barrier-Free concept. In order for it to appeal not only to landscape architects and architects, the teaching of design is lessened, so that it is also suitable to building surveyors, who are also the professionals being employed as building inspectors in the local authorities. Others that would take interest are the facilities managers and quantity surveyors, who often act as project managers, mostly employed in developers firm. Students are exposed to issues concerning the problems of disabled persons in Malaysia, in the context of current developments. They study the building regulations, legislation, standards and guidelines that are in existence in Malaysia and in countries such as United Kingdom, United States and Japan at a superficial level. Demonstrations and exercises are methods employed to provide understanding of barriers and simulation exercise. Input on how to do access surveys and audits[9] will be given so that students will be trained and knowledgeable, hopefully with empathy, after which they are actually involved in facilitating a workshop on 'Barrier-Free Built Environment'. It was conducted for participants from the University which include the management, academic, technical and support staff. This imparts a certain objective of 'teamwork' and impact of learning, by having the exposure to lead. Students also conducted access surveys and audits on buildings (internal and external) identified in the University (refer figure 7).

5. Training the future professionals.
   Professionals such as architects, landscape architects, building surveyors, building survey, quantity surveyors and planners are responsible for how the built environment had come to what it is. With the help of professional bodies such as Institute of Landscape Architects Malaysia (ILAM), Pertubuhan Arkitek Malaysia (PAM), Institute of Engineers Malaysia (IEM), Institution of Surveyor Malaysia (ISM) and Malaysian Institute of Planning (MIP), such efforts would be escalated even more if the training of future professionals includes awareness training, teaching design modules in the professional training and generally promoting 'barrier-free built environment'.

[9] Access survey is a tool to gauge a building's performance on accessibility for the disabled persons. The method is structured in a format that consists of a set of questions and guided by the particular country's legislative codes, standards and guidelines. The tool enables one to record dimensions and existing specification of a building element, hence provides for an evaluative method. One goes through and checks whether the specification is according to the standards and guidelines. One or many persons must create a realistic route, often starting from the drop-off point and go around the premises and records the information that will be processed later. The analytical tool also guides to the correct specification, which can contribute to the formation of an access audit. This in turn could enable the quantity surveyor or contractor to put a cost to the specifications and help to quicken the process of implementation. The building owner could easily see if the costs could be met the budget that they have and could plan when to install the specifications. Access surveys objective is to find out as much detailed information from a building as to whether it is accessible for the disabled. This evaluation came about because the disabled persons need to communicate technically and effectively concerning the lack of access features in a building (Yaacob, N.M. [2000] *Access Survey as a Tool for Empowerment*)

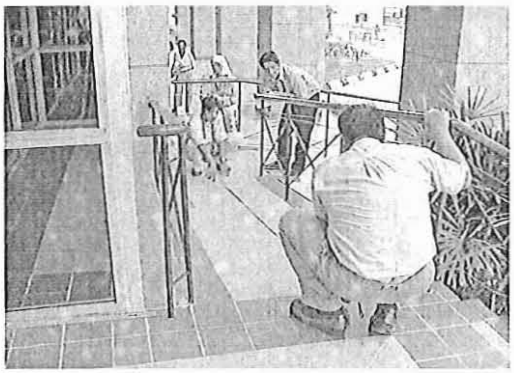

Figure 7:
Access survey done in one of the faculties in the campus.

Conclusion

Awareness and understanding of the basic needs of disabled persons must be propagated and one of the best methods to propagate awareness is through educating both the staff and students of University Malaya.Throughout our experiences in promoting 'barrier-free built environment', the most important part of the entire process is the involvement of all possible participants, i.e. the university executives, academics, researchers, administrative, support staff, technical, the management and maintenance. Having a disability compliance unit at the Student Affairs also helped the disabled persons to organise events that could promote Non-Handicapping Environment. Different local conditions would need the sensitivity of academics to discern problematic areas that could help efforts in 'barrier-free built environment' promotion kick-start as students could provide for help to do access surveys and run training courses. With the leadership and mentoring, academics, other professionals concerned, disabled persons as resource persons and local government contacts could put their heads together to solve problems in the local context. It is hoped that with careful planning and sensitive approaches, all campuses will be more accessible, friendly and safe for all users in order that the university's objective of a 'caring campus society' be achieved.

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