

## DISABLED FACILITIES IN SHOPPING MALLS: MALAYSIAN PERSPECTIVE

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### ABSTRACT

*This paper identifies the level of satisfaction on present facilities provided in shopping malls in Klang Valley, Malaysia. Literature review, data collection on case study access audit, selected interviews and questionnaires combined with details from observations and photographs were used to explore on how to achieve friendly and accessible spaces for all. The audit examined predetermined designed criteria against existing building to measure the suitability and appropriateness of the building to people with sensory disabilities and mental disabilities. Findings revealed that weaknesses found are caused by poor design and planning, lack of enforcement on policies and limited guidelines. Recommendations for the future are highlighted with options and proposed guidelines in respect to the person with disabilities (PWDs) need. The finding has provided a benchmark for consultants, local authorities and those who have interest in local built environment.*

*Keywords: Accessibility, facilities; person with disabilities (pwds); shopping malls, Malaysia*

### INTRODUCTION

The disabled are those who have long term physical, mental, intellectual or sensory impairments. However, those impairments are not the reason why people are disabled. They may feel restricted to or inconvenienced in their use of buildings due to physical obstructions such as steps or doors which are too narrow for wheelchairs, lack of facilities such as ramps, elevators, staircase, handrails, and absence of suitable facilities. These barriers may hinder their full and effective participation in society. According to Peter Tan, a Peer Counselor of Kuala Lumpur Independent Living Centre, people are disabled because of social prejudices and environmental barriers. It is caused either purposely or inadvertently because the society fails to accommodate and include them in all processes of social and infrastructural development. Previous studies revealed that Malaysia's development policies and regulations lack the provision of user friendly built environment that include barrier-free and disabled-friendly environment although stated in building code and legislation (Tan, 2008). At the same time, there is no existing law to provide for accessibility outside buildings for disabled persons as specified in Malaysian Standard 1331: Code of Practice for Access for Disabled People Outside Buildings. Some of the reasons identified the local government, service providers and developers reluctance as they often view accessible features as burdensome and add extra costs for upgrading existing facilities for disabled convenience. This research will help to identify some of the problems on accessible issues at selected case studies in Malaysia. Through the findings, several recommendations are highlighted that could become a benchmark for a better built environment.

### PEOPLE WITH DISABILITIES

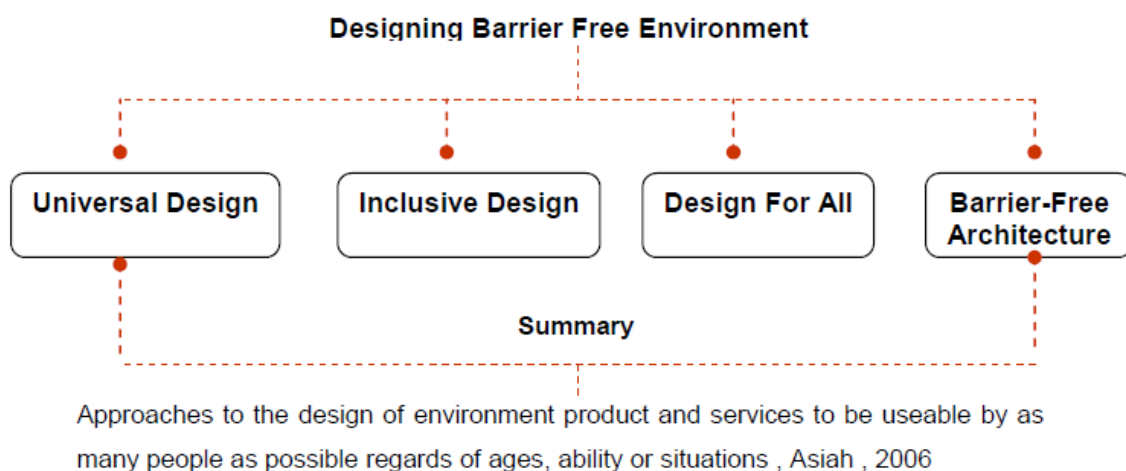
People become disabled when society fails to accommodate and include them in all processes of social and infrastructural development due to social prejudices and environmental barriers, either purposely or inadvertently (Tan, 2008). Disability affects not only the person with impairment, but also to the affected family. Several cases caused a member in the family to stop working in order to care for the disabled person. This has caused either reduced productivity or financial disability for the entire family.

The United Nations estimates that there are 650 million disabled people in the world which corresponds to 10 % of global population. 80% of these people live in developing countries, many in conditions of poverty. 80% of disabled people of employable age are jobless. Furthermore, a survey in 2004 by Economic and Social Commission for Asia and the Pacific (ESCAP) found the disability prevalence rate in the Asia-Pacific is between 0.7% to 20%.

### Definitions and Terminologies

According to Molly (2002) in Asiah (2006), Universal design, which is related to "inclusive design" and "design for all," is an approach to the design of products, services and environments to be usable by as many people as possible regardless of age, ability or situation. This links directly to a society recognised by governments, business and industry. As mentioned by Elspeth Morrison and Andrew Walker (2002) in Asiah (2006), Inclusive design is one of many terms in built environment. It includes universal design, design for all, lifespan design, and most recently, 'respect for people' and designing for diversity that could produce innovation and new product development. Inclusive design is a process where products and environments function and serve the widest possible audience, irrespective of age or ability. Thus designers, manufacturers and service providers must ensure that the products include the needs of disabled people who are currently excluded or marginalised by mainstream design practices and adopt the concept of an inclusive society. Therefore it is important to emphasise on working with specific groups of users as a route.

Figure 1: Summary on designing barrier-free environment.



According to Asiah (2006), design for all is the intervention on environments, products and services that is aimed to everybody including the future generations of all age, sex, capacities or culture of a society. It is a simple idea that is usable by everybody. It serves two purposes at the same time: meeting the needs of consumers who have difficulty using some products, and meeting the needs of companies who want to expand their potential market. Barrier-free building modification consists of changing buildings or facilities for the physically disadvantaged or disabled to use. For example, by installing a ramp for wheelchairs alongside or in place of some steps, it creates a barrier free modification to replace the original building concept that usually seeks to design things from the outset to support easy access. This latter approach usually leads to lower total cost. However, with pre-existing structures, barrier free may be the most appropriate or only valid approach.

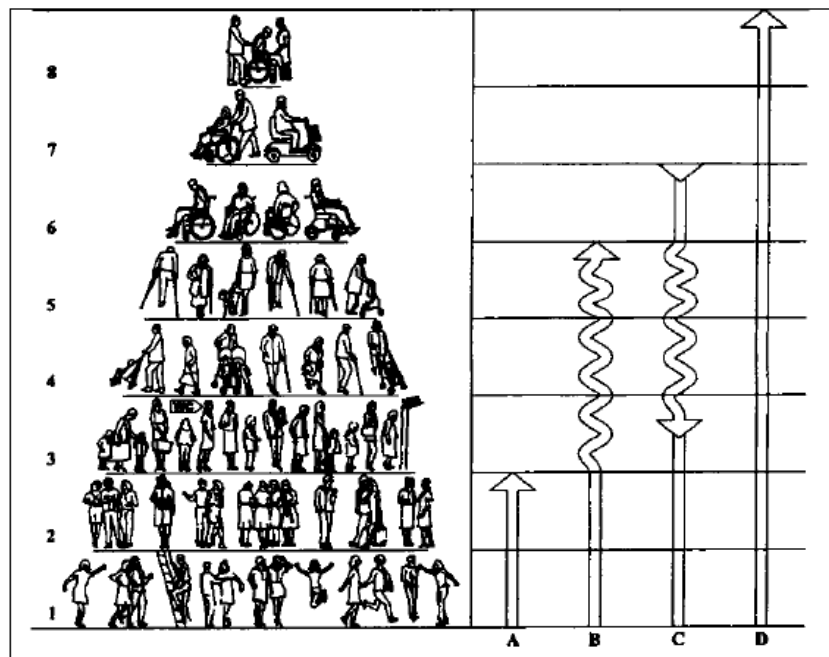


Figure 3: Classification of Disabled People (Source: George & Bruce, 1997)

- i. Row 1 - fit and agile people
- ii. Row 2 - can walk wherever needs
- iii. Row 3 – women
- iv. Row 4 - elderly people
- v. Row 5 - ambulant people who have disabilities
- vi. Row 6 - independent wheelchair users
- vii. Row 7 - wheelchair users who need another person to help
- viii. Row 8 - wheelchair users who need two people to help them when they go out from the toilet.

#### **Building Code Regulation for Disable People**

Reference to MS 1184 (2002), the basic requirements for the building elements and facilities are to permit access to disable people. Moreover, a building having less than 280m<sup>2</sup> of floor area per level may not be required to provide vertical access for the disable people. Building types to which the recommendations of the code may be applied include:

- i. Offices, banks, post offices, shops, department stores, supermarkets and other administrative and commercial buildings.
- ii. Rail, road, sea and air travel buildings and associated concourse, car-parking buildings and factories.
- iii. Hospital, medical centres, clinics and other health and welfare buildings.
- iv. Restaurant, concert halls, theaters, cinemas, conference buildings, community buildings, swimming pools, sports buildings and other refreshment, entertainment and recreation buildings.
- v. Religious buildings.
- vi. Schools, colleges, universities, zoos, museum, art galleries, libraries, exhibition buildings and other educational, cultural and scientific buildings.
- vii. Hostels, hotels, and other residential buildings other than single family private dwelling houses.

(MS 1184, 2002)

These requirements are applicable to all buildings that disabled people may use as members of the general public, as visitors or for purposes of employment.

## **RESEARCH METHOD**

The focus of this research will be more to the state with high density of population. According to the population by State and Sex in Malaysia, it shows that Selangor has the highest population, around 5 million residents. There could be as high as 500,000 thousand disabled people in Selangor. Therefore, this state will be the best location to do an analysis and access audit, especially at common public building such as shopping centers. A shopping centre is a group of retail and other commercial establishments that is planned, developed, owned and managed as a single property, with on-site parking provided. The center's size and orientation are generally determined by the market characteristics of the trade area served by the center. The three main physical configurations of shopping centers are malls, open-air centers, and hybrid centers. The term shopping center has been evolving since the early 1950s. Industry nomenclature originally offered four basic terms: neighborhood, community, regional, and superregional centers. However, as the industry has matured, these four classifications are no longer adequate. To remove some of the ambiguity and accommodate new shopping center formats. The definitions, and in particular the table, are meant to be guidelines for understanding major differences between the basic types of shopping centers.

### **Disabled Aids in Shopping Centre**

Obviously it is in the interests of the shopping centre to be as accessible as possible in order to attract more and more people through its doors as well as competing with Internet shopping. Shopping centers also want to allow people with a disability, access to the entire shopping centre to enable everyone to enjoy the range of shops and services on offer. Many shopping centers have convenient parking with easy access to entrances, and automated doors to assist with getting in and out of the centre. Most large centers will have well signed dedicated disabled parking bays usually positioned as near to the centre as possible. Doors with opening controls at wheel chair height make it even easier for wheel chair users to access a building. Generally anyone who has limited mobility can get around the shopping centre by using a wheelchair and many of the larger shopping centers take part in the Shop mobility scheme by making wheelchairs available to their shoppers to aid people with limited mobility to shop and make full use of the shopping facilities. Push trolleys with baby/children's chairs are available also free to loan. It is also important to note that companies are spending a lot of money on making reasonable adjustments to their facilities including areas such as the toilets. As well as making the centre more accessible, toilets should also be conveniently located and accessible for people with mobility impairments. Ideally accessible toilet facilities for disabled people should be dedicated, unisex, allow left/right transfer for the wheelchair user and have an adjustable changing table complete with power hoist. They should also be conveniently located throughout the shopping centre and be fitted with an emergency alarm. For customers who are partially sighted the centre must provide a larger print version of the shopping guide and map from the Customer Services Information Desk. Hearing loop induction systems are also must provided for customers using hearing aids. Shopping centres in the UK have successfully promoted a more accessible built environment and improvement of facilities for disabled people by following good practice measures. This makes it both easier for disabled people to get around and as their needs are catered for it makes it easier to enjoy a day out.

## **CASE STUDY / DATA ANALYSIS**

### **IOI Mall, Puchong, Selangor**

IOI Mall in Puchong is a modern 3-storey shopping and entertainment mall with a total area of approximately 650,000 square feet. This mall with a Mediterranean architecture was launched in June 1996. This perception of Person with Disabilities (PWDs) is summary from the questionnaires and interviews with each type of disabilities during access audit exercise at IOI Mall. The PWDs who participated in this research were generally very concerned with their rights to have equal opportunities on access to the built environment. They gave some suggestions on facilities/items that need to be improved base on their personal experiences participating in the access audit.

Perception of PWDs towards IOI Mall

a) Group: Wheelchair user and people with crutches

Perception: Both wheelchair and crutch users who participated in the access audit found that it was not very challenging for them to move around IOI Mall, for the reason that generally the area is considered as a barrier-free environment. Comprehensive improvements for some areas are needed to ensure equal opportunities for everyone.

b) Group: Vision impaired

Perception: Warning indicator as the name indicates, warn of either a hazard or of a destination. It must be installed at some areas in this building. Can be identified either by the cane or by foot thus warning or informing the user that they are at the top or bottom of the staircases, pedestrian crossings, wharves, escalator, lifts or station platform etc. These indicators can facilitate location of amenities such as ticketing machine, phone booths etc. Directional indicators are used to direct the user from one point to another along a safe path of travel. For example in an open pedestrian plaza or LRT stations to indicate a clear path of travel in the absence of any other cues. The directional indicators helps in :

Direction - to indicate a clear continuous accessible path of travel, or

Location - to provide assistance to locate to target such as pedestrian crossing, entrance to a public building, ticketing machine or phone booth.

c) Group: Hearing impaired

Perception: The hearing-impaired generally do not have many problems accessing most of the facilities at the IOI Mall. The only shortcoming that their felt important to be highlighted was the need to have more proper signage that would enable her to move around without the help of others.

In addition, assessment level is different between groups.

Table 1: Assessment level according to facilities provided for the disabled people in IOI Mall, Puchong, Selangor

GROUP	ASSESSMENT LEVEL(1 – 5)
Wheelchair user	4
Vision impaired	4
Hearing impaired	5
People with crutches	5

**Ampang Point Shopping Centre, Ampang, Selangor**

Ampang Point Shopping Centre was officially opened on 3rd January 1993. The building is a four-storey shopping complex, with each level of distinctive character and style. This perception of Person with Disabilities (PWDs) is summary from the questionnaires and interviews with each type of disabilities during access audit exercise at Ampang Point. The PWDs who participated in this research were generally very concerned with their rights to have equal opportunities on access to the built environment. They gave some suggestions on facilities/items that need to be improved base on their personal experiences participating in the access audit.

Perception of PWDs towards Ampang Point Shopping Centre

a) Group: Wheelchair user and people with crutches

Perception: Both wheelchair and crutch users who participated in the access audit found that it was not very challenging for them to move around IOI Mall, for the reason that generally the area is considered as a barrier-free environment. Comprehensive improvement of the area is needed to ensure equal opportunities for everyone.

b) Group: Vision impaired

Perception: Street furniture are not built for the vision impaired people as there are no indicators to show their location. Moreover most of the furniture are not suitably located and are not accessible for the PwDs to fully appreciate them. Layout must be logical, predictable and barrier free. This makes it easier to memorize the environment. Example stairs next to the lift or male and female toilets located next to each other. Common problems in layout are confusing corridors, obstructions in circulation routes, such as columns and fire extinguishers or hazards such as the underside of staircases which people can walk into.

c) Group: Hearing impaired

Perception: Public space such as shopping centres are required to provide specialized smoke alarms and other assistive devices to their deaf and hard-of-hearing visitors. Flashing lights are only useful if they are installed where a hearing-impaired person can see them. In any case, more than one alarm would be most beneficial. Ideally, all alarms in the Ampang Point would be interconnected so that if an alarm in one part of the house detected a fire, all alarms would activate.

There are different levels of assessment for different group of disabilities:

Table 2: Assessment level according to facilities provided for the disabled people in Ampang Point Shopping Centre, Ampang, Selangor

GROUP	ASSESSMENT LEVEL(1 – 5)
Wheelchair user	2
Vision impaired	3
Hearing impaired	5
People with crutches	4

**South City Plaza, Seri Kembangan, Selangor**

South City Plaza with total area 850,000 Sq. ft. This perception of Person with Disabilities (PWDs) is summary from the questionnaires and interviews with each type of disabilities during access audit exercise at South City Plaza. The PWDs who participated in this research were generally very concerned with their rights to have equal opportunities on access to the built environment. They gave some suggestions on facilities/items that need to be improved base on their personal experiences participating in the access audit.

PWDs Perception towards South City Plaza

a) Group: Wheelchair user and people with crutches

Perception: Both wheelchair and crutch users who participated in the access audit found that it was very challenging for them to use certain facilities in this building. Comprehensive improvement of the area is needed to ensure equal opportunities for everyone. The disabled toilet is also not accessible to the wheelchair user because of the huge drop and absence of ramp. The toilet cubicle itself, although being labeled as a toilet for the PwDs, is too small to allow for easy maneuver by the wheelchair user.

b) Group: Vision impaired

Perception: Signage is an important element in enabling people to use the building and also to give information, direction, identification and safety. Reading and understanding signs, instructions and directions are very important when using environments. Designers are now challenged to think in interdisciplinary terms keeping lighting, typography, graphics etc in mind; Signs must be simple, short and easily understood, Signs need to be suitably lit by good lighting or by use of back illumination and free of reflection, A sign should contrast with its background such as walls or doors. A border around the sign can help visibility. Braille should be used, if possible, wherever embossed characters are used.

c) Group: Hearing impaired

Perception: Architecturally, deaf people need building designs that include open spaces and rounded and sloped corners, so that we can see approaching people rather than hear them. We need windows and mirrors throughout the interior of the building, since we cannot communicate by calling out to someone else in another room we need to be able to see the other person. We also need flooring with enough "give" to enable foot-stamping that will attract our own or another Deaf person's attention.

Difference of assessment level was differentiating by group:

Table 3: Assessment level according to facilities provided for the disabled people in South City Plaza, Seri Kembangan, Selangor

GROUP	ASSESSMENT LEVEL(1 – 5)
Wheelchair user	3
Vision impaired	3
Hearing impaired	5
People with crutches	5

**SACC Mall, Shah Alam, Selangor**

Shah Alam City Centre Mall or more known as SACC Mall was officially opened on August 2005. Located at the town centre of Section 14, Shah Alam, the mall is a six-storey building covering a gross area of 500,000 sq ft and a total of 130 lots offering a lettable floor space of 200,000 sq ft. This perception of Person with Disabilities (PWDs) is summary from the questionnaires and interviews with each type of disabilities during access audit exercise at SACC Mall, Shah Alam. The PWDs who participated in this research were generally very concerned with their rights to have equal opportunities on access to the built environment. They gave some suggestions on facilities/items that need to be improved base on their personal experiences participating in the access audit.

PWDs Perception towards SACC Mall

a) Group: Wheelchair user and people with crutches

Perception: Users who participated in the access audit found that it was not very challenging for them to move around SACC Mall, for the reason that generally the area is considered as a barrier-free environment. Comprehensive improvements for some areas are needed to ensure equal opportunities for everyone.

b) Group: Vision impaired

Perception: Consistent and optimum lighting is consistent and need to be glare free. It is useful and important that users can control lighting levels, including natural daylight, to avoid being dazzled or to increase lighting to perform a task. Fluorescent lamps and incandescent lamps also affect the how the colors are differentiated. Interior design and decorative finish add warmth and character to a building.

Used well in can also highlight features and shapes aiding blind and partially sighted people to orientate and navigate within it and help them to develop mind maps. An example may be highlighting a column so that it does not blend into the background or is not decorated with mirrors. Reflective finishes such as marbled or tiled floors can produce glare and disorient users. Complex patterns may also have same effect.

c) Group: Hearing impaired

Perception: Other examples of universal design features that are truly universal for deaf people are; easily-reachable buttons to turn on lights, shake-awake alarms, two-way light-switches in room entrances or bathrooms, flashing door-knockers and phone-ringers, clear visual signage and indicators, visual communication devices inside elevators and other enclosed spaces, and so on.

Table 4: Assessment level according to facilities provided for the disabled people in SACC Mall, Shah Alam, Selangor

GROUP	ASSESSMENT LEVEL(1 - 5)
Wheelchair user	3
Vision impaired	4
Hearing impaired	4
People with crutches	5

**FINDINGS AND RECOMMENDATIONS**

As a general conclusion, it can be said that the level of accessibility of those shopping centres are quite good since all the shopping centers were built between 1990s to 2000s where perhaps there was much awareness on the needs to provide accessible linkages for the PWDs at that time. However, the condition/situation can still be improved. It is also hoped that the social barriers and physical barriers identified throughout the research could be minimized if not totally omitted. From the access audit, questionnaires and interviews to selected PWD respondents, it is evident that general condition of the built environment in this country is quite satisfying from the view of accessibility. Inaccessibility found in some case studies are due to bad design or poor thought out solution, poor planning in accommodating accessible design as part of the budget and lack of enforcement on policies and guidelines. Typically, inaccessible features in the built environment result from poor designs, wrong materials and bad planning. This study has given some insight on the basic needs for the accessibility of the PWDs within shopping centers. They faced several difficulties at certain areas and among others it involved safety issues on top of the accessibility issues studied. Some of the facilities provided may not be appropriate for them. The location of the facilities also seemed to be quite far for them to access and reach.

This study has provided some benchmark for planners, local authority and those concerned in the built environment profession in planning and designing for a public buildings which is inclusive for everyone. Looking at the components existed in a public building developments, it seems that an integrated effort is highly required among government agencies as well as the private sectors concerned. Implementation of the Malaysian Standards in providing access for the PwDs and enforcement by the local authority is deemed crucial. It is hoped that this research will be the indication for the whole community that efforts are being done in order to ensure the welfare and development of the disabled are being taken care of, by all means. Through providing such facility that is dedicated to them and their utmost capability, the disabled will no longer feel isolated from the able-bodied and the continuous development that is becoming more challenging. Although much has been achieved in the last decade, there is still much more that needs to be done.



Due consideration must be given to facilitate meaningful participation and equal opportunities for the disabled persons in contributing towards the nation building process and the development of the economy with a human face. It is hoped that the National Welfare Policy and the Malaysia's Vision of establishing a "Caring and Sharing Society" through the coordinated efforts involving government agencies, voluntary organizations and the society at large would enable the disabled community to enjoy the same rights and privileges as any normal citizen of the country.

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