

The Trail to Universal Accessibility

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My recent encounter of a person with visual impairment was in Bangladesh when I was asked on the spot to assist a blind speaker with his presentation in the UIA HKIA workshop on "The People Orientated Approach". My job was to put the slides on the overhead projector while the speaker delivered his talk. The speaker was an architect before he went blind and he continued to work as a property manager. Since I only had a few minutes to go through the order of the slides with him before the presentation, I was amazed at how he remembered the sequence and he always waited for me to change the slides. His hearing ability was really good.

Then I had the chance to tour around the Parliament Building, a magnificent building by Louis Khan, with this speaker in a tour group. I had another crash course on how to lead a blind person to tour the building and open space as a part time guide. It worked like this: he walked next to me with his hand resting lightly on my forearm or shoulder and I had to give directions and pre-warn him if there was a step in front and also when we came to the last step before the landing. I also described the building and scenery in front of us and he liked to touch the materials as they were described to him. As I muddled through each step of a long staircase, I was very tense in talking and walking at the same time. He nearly twisted his ankle and missed the last step as my timing of warning message was far from perfect. It was a long walk and I had wished for two things: a ramp and a handrail with Braille message!

At the airport in Bangladesh, in the mist of luggages, a number of elderly travellers struggled to push forward to find their way to the check in counters. There were some travellers in wheelchairs and they had to wait patiently for assistance. Inadequate directions and physical barriers limited the freedom of movement. People with different capabilities tried their very best to overcome the hurdles in their environments but sometimes their efforts were in vain due to insurmountable barriers.

It reminded me when I was in the state of temporary disablement after playing a game of badminton. I stretched myself for a low ball only to end with a nerve breaking strained shoulder. My muscles and nerves suddenly mingled together breaking out into numerous disordered signals. It was very painful and rushing to the doctor did not do the magic trick. I had to use my right hand to hold my left arm and walk slowly to balance myself so as not to trigger any signals to my brain. I could not manage to hold my handbag and steps were a torture. I learned to adapt to this state and became sensitive to requirements for access. (See Fig 1).



Fig 1. Avoid unexpected steps and levels.

Another incident of my temporary reduction of ability was related to a hearing problem after a swimming session. As people could not detect that I had difficulty in hearing just from my appearance, I would deliberately stand or sit with my good ear next to the person. I wished I could turn on the antenna just like the radio receiver! Prior to recovery, I was more aware of message display panels and appreciated the importance of multi media systems.

In Hong Kong, it is apparent that there are more and more elderly people in the community. They may be in the wheelchair pushed by their carer or helper, walking independently on their own, or walking with a walking stick in hand. Parents and domestic helpers pushing prams in parks, shopping malls and underground stations are also commonly seen. Even with daily grocery shopping, mobile carts are used to carry food and consumables home. People's life style has changed. People are more concerned with safety and health, together with better affordability; mobile devices are employed to assist daily roles and tasks. (See Figs 2 and 3).

Gone are the days where the average user is taken as a fit and able adult, and the elderly and people with disabilities are home bound and only catered by special design. With advancement in technology and medical care, people with less capability can still take an active role in the society. They develop other senses to compensate the reduced abilities and make use of mobile equipment and assistive devices to go around places. They work and enjoy going to restaurants, cinemas and libraries with their families and friends. Of course, they also depend on barrier free access to take part in such activities.

Fig 4. Provide continuous accessible system to connect pathways.



Fig 2. Enable disabled or elderly users to access facilities independently.



Fig 3. Provide accessible systems and reliable information for access.



Fig 5. Provide ramp with continuous handrails on both sides. The addition of a low level handrail would facilitate access by younger children and wheelchair users.

How do we respond to the changing scenes? Planning and design of the environment, product and information should address the higher public expectation and facilitate as many people as possible to actively participate and contribute to the community. Physical design to cater for people with different abilities and disabilities, as well as a system that makes the design work all the time are equally important. The following key components should be taken into consideration for universal accessibility. (See Figs 4, 5 and 6).



Fig 6. Provide accessible way finding information to different users. The addition of a tactile map or audible system facilitates access by people with visual impairment.

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- Design an environment with maximum choices that takes into account the **ANTHROPOMETRICS** of people and facilitate their access regardless of age, sex or abilities. People vary in physical abilities and reach, and come in different shapes and sizes. Therefore, flexibility in settings and devices should be carefully considered.
- Design a **CONTINUOUS** accessible and pleasing environment and **CONNECT** people from point to point linking work, play and rest. Accessibility must be maintained during the whole path of travel and accessible way finding information should be included in key nodes of travel to provide optimum condition. (See Fig 7).
- Design an **EQUITABLE** environment that facilitates people to access facilities and services in a comfortable manner. The facilities and services should be available to people with different abilities. Devices and information should be accessible to all users as far as possible and easy to use.
- Design a **SAFE** environment that is user friendly, risk free and facilitate people to access as well as escape. Elderly people, young children and people with disabilities are less capable to deal with accidents on their own. Devices such as audible and visual signals that alert people of an emergency situation and in case of fire, together with an accessible routing to a safe place must be included.
- Design a **SUSTAINABLE** environment that has a long life cycle. Develop an access strategy and keep facilities and information accessible and hazardous free for use by the widest spectrum of people and for the next generation. A system of maintenance and management with continuous training and update of accessible information should be included. (See Fig 8).

With inclusive design approach and development of innovative examples in Hong Kong, let us move forward and use universal accessibility as the norm for planning, building and maintaining environments. This principle has been developed and used in many other countries. Many good examples had demonstrated that universal design is marketable and profitable and such designs had also won best design awards. Universal accessibility is a **GREEN** concept that is enduring and sustainable. It provides a safe, comfortable and aesthetically pleasing environment for access by everyone.



Fig 7. Provide clear signage and tactile path.



Fig 8. Provide baby seat inside toilet cubicle. The addition of signage would enhance access.

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