Disability Awareness for Inclusive Built Environment

A study of Hong Kong's Property Management Industry

Yung Yau and Wai Kin Lau

Abstract—**Inclusive built environment is conducive to full participation of persons with disabilities (PwDs) and their enjoyment of equal opportunities. Nonetheless, built environment that is designed and constructed as accessible is not enough because poor management may render a built facility inaccessible or non-inclusive to PwDs. Disability awareness of the property management industry is thus essential for achieving an inclusive built environment for a society. This research aims to investigate the current state of provision of disability awareness training to employees by the property management companies in Hong Kong. With the findings of a structured questionnaire survey and two in-depth interviews, the research reveals that the provision of disability awareness training remains at a low level. Besides, local property management companies are not prepared for disability inclusion in their premises. Recommendations then follow.**

Keywords—accessibility, disability awareness, disability discrimination, inclusive built environment, training

I.   Introduction

Persons with disabilities (PwDs) face different challenges in their daily lives. Among these challenges, inaccessibility to built facilities is certainly one of the most influential ones. Non-inclusive built environment hinders PwDs to participate fully in the society and enjoy equal opportunities. The *Convention on the Rights of Persons with Disabilities* adopted by the United Nations in 2006 advocates that obstacles and barriers to accessibility in buildings and other types of physical environment must be identified and eliminated [1]. In Hong Kong, the *Disability Discrimination Ordinance* (DDO; Chapter 487 of the *Laws of Hong Kong*) enacted in August 1995 prohibits discriminations against PwDs by failing to provide means of access to any premises that the public or a section of the public is entitled or allowed to enter or use, or by refusing to provide appropriate facilities. The *Design Manual: Barrier Free Access 2008* sets out the 'deemed-to-satisfy' standards of design and construction of new buildings or alterations and additions to existing buildings. However, even if a building is designed and constructed to be accessible to PwDs, poor property management could result in a non-inclusive built environment for PwDs.

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Although the DDO prohibits the managers of premises from refusing or deliberately omitting to afford access of PwDs to the premises, non-conforming cases have been reported in the press [2,3]. These cases, including unduly delayed repairs of lifts for the disabled and misuses of toilets for the disabled as store rooms, illustrate the lack of awareness among property managers about the special needs of PwDs and challenges facing them when using a particular built facility. To encourage social inclusion of PwDs, the 'manageable' environmental obstacles in our buildings should be removed. Disability awareness of property managers plays an important role in shaping our built environment. Yet, research on disability awareness in the property management industry is rare around the world. In this light, this study aims to provide a preliminary inquiry into the current state of provision of disability awareness training in the property management industry in Hong Kong and to explore possible means to improve the disability awareness within the industry.

II.   Literature Review

A.   *Inclusive Built Environment and Property Management*

In spite of the efforts paid by the states to facilitate access of PwDs to and around the built environment, inaccessibility is still a major form of discrimination persisting against PwDs [4]. Literature on the assessment of accessibility of PwDs to built facilities abounds. Some of these previous studies to evaluated disability inclusiveness or accessibility of buildings with users' experience or opinions [5–7]. Using an objective approach, other studies evaluated building accessibility by means of accessibility audit [8–10]. As generally suggested by the empirical studies, our built environment is far from being disability-inclusive. Nonetheless, inaccessibility to buildings has been taken as a design problem [11]. Nearly all previous research on building accessibility focused on the design and construction of physical structures and did not pay much attention to building management and operations [12]. In fact, both the design and management of the built environment are crucial factors in creating what might be called truly inclusive space [13,14]. While how the perceptions and practices of architects or designers affect the accessibility of built facilities has been studied before [15,16], property managers have never been the focus of the research.

B.   *Disability Awareness and Disability Awareness Training*

Apart from physical inaccessibility, another major barrier to full participation of PwDs in society stems from the negative attitudes, stereotypes and discriminatory behavior

towards them [17–19]. To remove social and environmental barriers to full social, physical and spiritual participation of PwDs in the community, enhancing disability awareness is essential [18,19]. Disability awareness is often portrayed as a positive attitude and increased empathy towards PwDs [20,21]. It is about the possession of knowledge about the concepts of disabilities, and the special needs of PwDs, and facilitates people to acquire an understanding of challenges faced by people with different disabilities [22,23]. It can help dispel negative societal attitudes and beliefs that often create an additional barrier to those with disabilities [24]. A higher level of disability awareness of the community generally leads to acceptance of PwDs by others, increase in socialization experienced by PwDs, improved standard of living of PwDs and enabling PwDs to live independently [21,22,25].

In countries like Australia and the United States, disability awareness training has been provided by public and private organizations to educate their employees on the issues of disability [26]. It aims to give trainees the knowledge required to carry out a task and communicate with PwDs when working with or serving PwDs [27]. It also allows trainees to build up their confidence working with PwDs and understand how to remove barriers through their practices and attitudes. Other benefits of such training include better customer service, higher customer retention and reduced employees' stress [26]. The benefits of disability awareness training have evidenced empirically [26,28,29]. The training takes various forms and typically includes information and awareness-raising sessions. Simulation exercises in which the trainees have a chance to experience disability may also be offered [26,28].

Nevertheless, nearly all previous empirical studies on disability awareness and disability awareness training focused on teachers, librarians and health professionals. Disability awareness in other sectors, including property management, has not been studied so far. In fact, research in such an area is highly valuable for finding ways to improve disability awareness in the service industry. Introducing disability awareness to the service industry can help people change practitioners' attitudes towards PwDs, which will eventually reduce people's negative prejudice against PwDs and enhance integration of PwDs into the society [30].

III. Research Design

To investigate the current state of provision of disability awareness training to employees in the property management industry in Hong Kong, this study took both quantitative and qualitative approaches. In 2014, a questionnaire survey and two in-depth interviews were conducted.

A. Questionnaire Survey

As estimated by the Home Affairs Department, there were around 800 property management companies as at December 2010 [31]. However, about 40% of these companies managed single tenement buildings and provided basic services such as cleaning and security services only. They did not have any real power to manage and control the use of the built facilities. For the purpose of this research, these companies were disregarded

and only more established property management companies were targeted for the empirical studies. Accordingly, the 85 companies with the full membership of the Hong Kong Association of Property Management Companies were chosen. The members of the association included most of Hong Kong's leading property management companies. These companies were committed to enhancing the standard of professional property management so the sample of companies was representative enough for the research purpose.

A questionnaire set was designed to collect information about the provision of disability awareness training to their employees, and in what format and how regular the training was provided from the targeted property management companies. Besides, the perceptions of the targeted companies about their employees' abilities to cope with the special needs of PwDs in their daily management tasks were asked in the questionnaire. To avoid ambiguity, the questionnaire set was pre-tested before the survey started. The questionnaire sets for the survey were sent to the 85 targeted companies by mail and via e-mail in May 2014. In total, 26 companies (31%) returned their completed replies. The characteristics of the responding companies are summarized in Table I. Among these 26 companies, 21 (80%) were awarded the caring company logos under the Caring Company Scheme administered by the Hong Kong Council of Social Service.

TABLE I. CHARACTERISTICS OF RESPONDING COMPANIES

Characteristic	Max.	Mean	Min.
No. of staff	8,526	2,035	41
Management experience (in years)	127	36	10
No. of properties currently managed	474	116	1

B. In-depth Interviews

To offer a richer narrative account, from the perspective of employers, on the promotion of disability awareness in the local property management industry, in-depth interviews were conducted with two senior managers of two companies. In the interviews, the interviewees were asked about the challenges they faced in achieving a barrier-free environment, difficulties in cultivating disability awareness among their employees and possible means for improving disability awareness within the industry. The two in-depth interviews were conducted in November 2014.

IV. Research Findings

Five out of 26 responding companies (19%) indicated that they understand the liabilities as a management agent of a premise laid down in the DDO very clearly or clearly. Eight companies (31%) rated their understanding as 'not clearly' or 'not clearly at all'. Furthermore, only three companies (12%) stated that comprehensible policies had been formulated for conforming the liabilities as a management agent of a premise laid down in the DDO. Similarly, six companies (23%) stated that comprehensible guidelines setting out the procedures and providing suggestions on how to conform the same liabilities had been formulated. Seven companies (27%) stated that they

had reminded their employees to observe the same liabilities when performing their property management tasks. Among these seven companies, six (86%), four (57%) and three (43%) reminded their employees by means of notice, e-mail and training respectively. Two companies (8%) indicated that they had designated staff for coordinating accessibility issues in the developments or properties under their management. They both had the designated staff stationed in the head or regional office only rather than in every single development.

When being asked to rate the relative importance of factors ('1' as the highest importance whereas '6' as the lowest one) for deciding whether providing a barrier-free environment for PwDs or not, seven companies (27%) rated 'economic factors' as the most important factor. It was followed by 'physical or environmental constraints' (19%) and 'ease of management' (19%). Yet, with reference to the mean scores shown in Table II, 'legislative requirements' (mean=3.00) was accorded the highest priority in the decision-making process, followed by 'physical or environmental constraints' (mean=3.15) and 'economic factors' (mean=3.38). Conversely, 'corporate social responsibility' (mean=4.19) was accorded the lowest priority.

TABLE II.   IMPORTANCE OF DECISION FACTORS

Factor	Mean Score	Priority
Legislative requirements	3.00	1
Physical or environmental constraints	3.15	2
Economic factors	3.38	3
Ease of management	3.58	4
Reputation of the company	3.69	5
Corporate social responsibility	4.19	6

Table III shows that about 15% of the surveyed companies indicated that they had front-line property management staff conversant with dactylology or sign language in some of the shopping centers or arcades they managed. The percentages dropped to 12% and 8% for the residential properties and office buildings respectively. None of the companies reported that they had front-line property management staff conversant with dactylology or sign language in the industrial buildings, schools, recreational and sports facilities and car-parks in their management portfolios. For the 25 companies with shopping centers or arcades in their management portfolio, all (100%) replied that they welcomed guide dogs for the blind to enter the shopping centers or arcades managed by them. On the other hand, only one company (4%) indicated that it invited PwDs for trying out facilities after taking over a new property for management or completing a renovation project on an irregular basis. Eight companies (31%) stated that they had provided training to the employees to enhance their awareness and knowledge of the disabilities so as to achieve a barrier-free environment more effectively for the PwDs. As shown in Table IV, since April 2011, five companies (19%) provided training on usage of aids and equipment. Five (19%) and three (12%) offered seminars and workshops respectively. Four companies (15%) provided various training courses to their employees. However, each of these types of employee training had not been organized for more than two times on average

since April 2011. If all training types are counted, each of these eight companies had organized training for 3.4 times on average since April 2011.

TABLE III.   FRONT-LINE STAFF CONVERSANT WITH SIGN LANGUAGE

Property Type	No. of Responses (Percentage)			
	All or Most	Some	No	N/A
Shopping centers or arcades	0 (0%)	4 (15%)	21 (81%)	1 (4%)
Residential properties (including club houses)	0 (0%)	3 (12%)	23 (89%)	0 (0%)
Office buildings	0 (0%)	2 (8%)	23 (89%)	1 (4%)
Industrial buildings	0 (0%)	0 (0%)	22 (85%)	4 (15%)
Schools	0 (0%)	0 (0%)	3 (12%)	23 (89%)
Recreational and sports facilities	0 (0%)	0 (0%)	2 (8%)	24 (92%)
Car-parks	0 (0%)	0 (0%)	20 (77%)	6 (23%)

TABLE IV.   DISABILITY-RELATED TRAINING OFFERED SINCE APRIL 2011

Training Type	No. of Responses (Percentage)		Average No. of Times
	Yes	No	
Training on aid and equipment usage	5 (19%)	21 (81%)	2.0
Seminar	5 (19%)	21 (81%)	1.6
Workshop	3 (12%)	23 (89%)	1.3
Training course	4 (15%)	22 (85%)	1.2

As shown in Table V, ten of the 26 responding companies (39%) stated their employees had sufficient or very sufficient level of awareness, knowledge and abilities to deal with the needs of physically handicapped persons in their property management tasks. Meanwhile, a majority of companies indicated their employees had insufficient or very insufficient awareness, knowledge and abilities to deal with the needs of mentally handicapped persons (77%), intellectually disabled persons (69%), persons with attention deficit or hyperactivity disorder (65%) and persons with autism (58%). If some bodies like the Equal Opportunities Commission (EOC) launched a charter programme for promoting a more barrier-free environment for PwDs, 23 out of 26 companies (89%) stated their willingness to subscribe the charter.

The two interviewees in the in-depth interviews shared the view that the major challenge facing property managers in achieving a barrier-free environment was the diverse interests of the stakeholders of the built environment. For example, the visually impaired would like to have tactile guide paths in most of the areas in a property. Nonetheless, tactile tiles unavoidably render the floor uneven. Some abled persons, particularly those wearing high-heels, often complain as they trip over the tactile tiles. Similarly, the admission of guide dogs into a property is often provocative. Negative attitudes towards the guide dogs may be driven by people's fears, worries or misunderstandings. Therefore, it is a thorny task for property managers to balance the stakeholders' interests.

TABLE V.   EVALUATION OF EMPLOYEES' CAPACITY TO DEAL WITH THE NEEDS OF PwDs

Type of PwD	No. of Responses (Percentage)		
	Very Sufficient or Sufficient	*Average*	*Insufficient or Very Insufficient*
Physically handicapped persons	10 (39%)	14 (54%)	2 (8%)
Hearing impaired persons	3 (12%)	15 (58%)	8 (31%)
Visually impaired persons	5 (19%)	12 (46%)	9 (35%)
Speech and language impaired persons	3 (12%)	14 (54%)	9 (35%)
Intellectually disabled persons	1 (4%)	7 (27%)	18 (69%)
Persons with autism	1 (4%)	10 (39%)	15 (58%)
Mentally handicapped persons	1 (4%)	5 (19%)	20 (77%)
Persons with HIV/AIDS	3 (12%)	14 (54 %)	9 (35%)
Persons with attention deficit or hyperactivity disorder	2 (8%)	6 (24%)	17 (65%)

Both interviewees affirmed the need to promote disability awareness among the employees of their companies. Yet, they pointed out some difficulties in the promotion of disability awareness. Firstly, the breadth and depth of the disability awareness training are always trade-offs. There are so many different forms of disability, ranging from physical handicap and visual and hearing impairments to mental disorder and learning difficulty. Persons with a specific form of disability may have their special needs which are not shared by those with other forms of disability. On this account, it is difficult, or sometimes too demanding, for the employers to provide comprehensive training to enhance disability awareness for all of their employees. Secondly, unlike knowledge about building management legislation which can be frequently applied in the daily job of a property management practitioner, knowledge to deal with the needs of PwDs is less frequently applied, so refresher courses are needed to maintain the employees' competencies to deal with the needs of PwDs. This iterative nature of disability-related training necessitates continual resource commitments from the employers, which could result in heavy financial burdens. The high turnover rate of employees in the property management industry in Hong Kong makes the situation even worse.

V.   **Analyses and Discussion**

Various statistical tests (e.g. Pearson's correlation test, chi-square test and one-tail *t*-test) were conducted to explore how company characteristics affected the responses from the 26 companies in the survey. The analyses showed that larger companies, in terms of employing larger number of staff, tended to understand the liabilities as a management agent of a premise laid down in the DDO more clearly (significant at the 5% level). Besides, it was more likely that larger companies have formulated comprehensible policy for conforming the liabilities as a management agent of a premise laid down in the

DDO (significant at the 10% level) and invited PwDs for trying out facilities after taking over a new property for management or completing a renovation project (significant at the 10% level). Larger companies were also more willing to subscribe to a charter programme for promoting barrier-free environment (significant at the 10% level). On the other hand, companies with more years of management experience were more likely to have formulated comprehensible guidelines which set out the procedures and providing suggestions on how to conform the liabilities as a management agent of a premise laid down in the DDO (significant at the 5% level). At the same time, more experienced companies tended to remind the employees to observe the liabilities as management agent of a premise laid down in the DDO when performing their property management tasks (significant at the 5% level).

Although the number of properties currently managed was found to have no significant effect on the responses, the afore-mentioned analysis results indicated that more established property management companies tended to be better-prepared for conforming the liabilities laid down in the DDO. As shown in Table II, the survey findings showed that a heavy loading was placed on economic factors when a company determined whether a barrier-free environment is provided for the PwDs. All these findings may imply that less resourceful or less established companies did not have the capacity to ensure their employees to observe the interests of PwDs in their property management tasks. Meanwhile, companies awarded with a caring company logo were more willing to be the charter subscriber (significant at the 5% level). Besides, these caring companies tended to evaluate the sufficiency of awareness, knowledge and ability of their employees to deal with the needs of PwDs in their routine management tasks more positively than those without a logo (significant at the 10% level). These findings suggested that property management companies striving to observe corporate social responsibility were more willing to observe the interests of the PwDs and had strong self-perceived efficacies in handling the disability issues in their businesses. Yet, corporate social responsibility was found to be the least important decision-making factor for a company to decide whether a barrier-free environment was provided for the PwDs, as shown in Table II.

Drawing on the research findings, some recommendations are made to improve the disability awareness of the property management industry. First, resources and financial assistance should be offered by the government to develop guidebooks or codes of practice for inclusive property management and organize disability awareness training. Second, bodies like the government, EOC or other bodies can consider launching a charter programme in the local property management industry. Subscribers to the 2 July charter should strive to ensure that PwDs can enjoy equal opportunities in using the built facilities. For example, they should get all frontline staff trained in disability awareness and provide information on activities in large print and audio tape versions for the visually impaired).

VI.   **Concluding Remarks**

Disability is no longer about sympathy or charity. It is now about rights and equal opportunities. Design and construction

just mean the start of the process of creating a truly inclusive built environment No matter how inclusive a building is designed as, it will soon become inaccessible to PwDs if not managed properly. Therefore, property managers play a vital role in determining the inclusiveness of a built facility. Nonetheless, simply knowing that discrimination is unlawful or where the toilet for the disabled is located is far from being enough. Property managers must be aware of the broader needs of a range of people with different disabilities, and the appropriate attitudes towards PwDs. To sharpen the disability awareness of property managers, different stakeholders like the employers, professional institutes, educational institutions and government should offer enough training to practitioners. With this background, this research investigated the level of provision of disability awareness training by the employers in the property management industry in Hong Kong based on a structured questionnaire survey and two in-depth interviews.

This research found that disability awareness training has not been regarded as a norm to the employers in the industry. Moreover, property management companies were not well prepared for full inclusion of PwDs by formulating related policies, developing practical guidelines and assigning enough qualified personnel. The findings of this research provide a baseline reference for longitudinal tracking of the provision of disability awareness training in the local property management industry in the future.

Acknowledgments

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