

# Teaching Inclusive Design

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## Abstract

South Africa has one of the most forward thinking Constitutions in the world. Few countries have been able to define and legislate for equality in such an all-encompassing way. It is a challenge for design educators who must be aware of the likely future implications for design students, and who need to question their own views and current practice. Designing for Disability has long been a specialism for a minority group. However, international trends are redefining it as a mainstream, user-lead concept. There is great potential for South African designers to embrace the meaning of equality for disabled people within the Constitution and use it to guide design practice.

This paper will examine:

- How we in South Africa can rethink and redefine disability, taking into account international developments, the situation in South Africa and the meaning of the Constitution.
- How we understand barriers that disabled people, and people disabled by design, encounter when trying to participate as equal citizens.
- The ways in which design educators can move from teaching ‘designing for the disabled’ as a specialist topic.

## Introduction

Disability has historically been defined in medical terms.<sup>1</sup> However over the past thirty years there has been a re-conceptualisation of it in social terms, focusing on the social impact on the disabled person and society at large.<sup>2,3</sup> South Africa is no exception.

The design world has largely kept apart from this process of change. Mainstream design continues to view designing for disability as a specialism or concentrates on the technical details, with little or no acknowledgement that their designs might actually be the cause of discrimination.<sup>4</sup>

There is a tendency to formulate ‘disability design’ as design for people in wheelchairs. The rigour with which designers need to address the functional impact of disability on design is actually far wider and needs to be applied with far greater thoroughness in the design. An access consultant summarised this, ‘to make a place accessible takes more than a ramp. Not only is a ramp not enough, at times one can be... an indication that sitting issues have not been resolved ... Designers who consider disability a factor apart from others or who think that it can be figured in subsequent to the real design process do so at their own risk.’<sup>5</sup>

In order for students to comprehend the meaning of inclusive design, it needs to permeate design education. As the architectural schools in the States found, ‘Any one architectural design course leaves much unsaid and unexplained as far as people and their needs are

concerned... Good courses and good teachers are important, but more important are good professional schools, schools whose curriculum's and policies embody a coherent set of values.'<sup>6</sup>

The international community is gradually moving towards an understanding of equality of disabled people that is rights based rather than charity or medically based, acknowledging the barriers that disabled people experience in their every day lives: attitudinal, organisational and environmental. In 1994 the United Nations adopted twenty-two rules to bring about the equalisation of opportunities for disabled people <sup>7</sup> to which South Africa is a signatory. Although not legally binding, the Standard Rules represent a moral commitment to disabled people.

'The principle of equal rights implies that the needs of each and every individual are of equal importance,...persons with disabilities are members of society and have the right to remain within their local communities. They should receive the support they need within the ordinary structures of education, health, employment and social services.'<sup>8</sup>

The Constitutions and rights-based legislation of various democratic societies around the world have acknowledged the right of equality between peoples and genders before recognising the right of equality of disabled people, the South African Constitution recognised this equality issue in congruity with race and gender equality.<sup>9</sup>

Furthermore, in the interpretation of equality is the quintessential concept of equality of outcome. Such substantive equality implies that treatment of a disabled person may be different in order to achieve the same goal.<sup>10</sup> In design terms this may mean designing suitably large print for someone with a sight impairment to be able to read the instructions on a product, or designing a safe ramp or lift in a building for people who are unable to use stairs in order to access a space.

In South African society, regardless of the Constitution, disabled people are markedly discriminated against in their day-to-day lives. A recently published but little known Act of Parliament called the Promotion of Equality and Prevention of Unfair Discrimination Act aims to change this, stating that no person, (including a designer) 'may unfairly discriminate against any person on the grounds of disability, including denying or removing..... any supporting or enabling facility....., contravening the code of practice or regulations of the South African Bureau of Standards that govern environmental accessibility, failing to eliminate obstacles that unfairly limit or restrict persons with disabilities from enjoying equal opportunities, or failing to take steps to reasonably accommodate the needs of such persons'<sup>11</sup>

However, it is apparent that this Act and the remaining legal structure that cascades down from the framework of the Constitution is not implemented comprehensively. Whilst it is interesting to debate the reasons for this, this paper will concentrate on the roles and responsibilities of design educators in the move towards substantive equality, and the understanding and attitudes of design educators of disability issues.

There has been a move in other countries over the passed decade to translate the concept of equality of participation into material guidance for their societies at large. The Canadians led this move in 1982 with the inclusion of people with mental and physical disability in the Canadian Charter of Rights and Freedoms and have been developing policy since.<sup>12</sup> The United States implemented the Americans with Disabilities Act in 1991<sup>13</sup>, and the Australians with the Disability Discrimination Act in 1994<sup>14</sup>. The British began to phase in their Disability Discrimination Act in 1995.<sup>15</sup> There is movement in the rest of the Europe Union towards the recognition disability as a human rights issue.<sup>16</sup>

These policies acknowledge the various barriers experienced by disabled people, often resulting in required changes to built environments, and sometimes product design, in order for disabled people to be able to access employment and services.

The situation in South Africa is somewhat different from the countries with these legislative frameworks. South Africa has ingrained racial divisions, a frighteningly high tendency towards violence against women, and many other economic and social problems, which push disability into the background. Yet there are significant reasons, besides the mere fact that disabled people are entitled to their equality, for addressing the disability issue in South African society, and a essential role that teachers of designers have to play in the process

Historically South African cities and conurbation's were designed on racially divisive grounds, with buffer strips such as roads and railways, separating and controlling where people of different racial groups resided, aiding the process of dislocated social relationships between races.<sup>17</sup> Whilst the transformation of former townships and homelands is now underway, there is little acknowledgement of the environmental barriers that currently exist for disabled people. The inadequacy of current SABS standards and other guidance<sup>18,19,20,21</sup> results in dangerous access features and a misunderstanding that all disabled people need are a ramp and a toilet. Worse still, there is a misunderstanding of the complexity of disability and its functional demands on the environment; consequently new barriers are put up which enforce the division between disabled and non-disabled, or insidiously abet the dependence of the disabled on the non-disabled.

Architectural apartheid is an acknowledgement that environmental barriers are a discriminatory and unnecessary means of separating disabled people from non disabled people.<sup>22</sup> It can be dramatically illustrated in the model of the garden city<sup>23</sup>, developed by Ebenezer Howard in 1898 and on which many of the modern cities in the world today were built. The garden city places the institutions that house 'waifs, the insane, inebriates' and 'social misfits' on the outskirts of the city, set apart from the main social hub. As with the South African version of apartheid these institutions are segregated by buffer strips, railways, roads and canals. Although unlike traditional apartheid, this model was developed to give disabled people and those on the margins of society access to fresh air and nature, the affect was to reinforce society's already negative and prejudiced attitude towards disability.<sup>24</sup> Going to an institution became a life sentence for people who had committed the crime of being 'different'. Thus this act of charity had unforeseen

implications for disabled people of today. Traditional African societies do not support this type of institution. However, equally as important in the South African context, disability was shunned and commonly disabled people were kept out of sight in the home.<sup>25</sup>

The translation of architectural apartheid can be seen in the design of products and the built environment. A security system may exclude people who find it difficult to grasp or manipulate poorly designed levers and buttons, a flight of steps which with its lack of contrasting nosings and handrails on both sides, provides an environmental hazard to some one with a sight impairment. Shopping centres are designed with appalling acoustics, making it impossible for a person with a hearing impairment to ask for directions or simply to have a conversation with a friend. Wheelchair users can't get out because the only available transport is completely inaccessible to them and the surfaces on which they are expected to move are non-negotiable.

One of the predominant theories for their inability to address the modern apartheid issue is that designers are not adequately equipped in their teaching. Imrie draws on the image of Le Corbusier's modular man as the person in the eye of the designer.<sup>26</sup> A designer may not even be aware that he is accountable for his environmental discrimination. Alternatively charity prevails, the designer feeling that he must 'be aware of his responsibilities towards the handicapped'.

An illusion that designers often hold is that they are designing for a small number of disabled people. Whilst this may be statistically true, the comparison of access needs across generations and genders advances a different argument. Whilst the results of the South African census for 2000 show that only one in ten people, have some form of disability, four out of ten people have an access need, if age and the significance of a high percentage of HIV positive people are brought into the equation.<sup>27</sup> The reconsideration of the functional aspect of design has a growing movement on the world stage<sup>28</sup>. In the UK it is acknowledged by the business community that one in four people have a disability *or is close to someone who has*.<sup>29</sup> Disabled people are likely to be using services with their friends and relatives. Therefore businesses have an interest in opening themselves up to this sizeable market of 10+ million people.

In order for designers to properly understand the design needs of disabled people, they themselves have to undergo a process of transforming their understanding of disability and their attitudes towards disabled people. They have to shift from mentally conceiving disabled people as 'those different people out there' (on the edge of the city) to 'myself and the people I know, or want to know' (in ones local community).

Lifchez has widely been acknowledged in the United States for originating the process that designers must go through to really appreciate functional design. He started the exercise of reintegrating design students in the United States of America in the 1980s at Berkley College, California.<sup>30</sup> As Lifchez found, 'It was difficult for these well-trained, intelligent, highly skilled professionals to access the idea that...disabled lay-people might have something to tell them.'<sup>31</sup> His groundbreaking work of involving disabled

consultants to work with students in the design studio, enabling the design students to reconsider their approach to design led to a programme of teaching 'universal design' in schools of architecture in the 1990's throughout the States.<sup>32</sup>

Hennie Reynders, Head of the Programme of Interior Architecture at the University of Pretoria initiated the idea of redefining the interface between design and human function as it relates to design teaching in a context relevant to South African society today. This is combined with my expertise as an access consultant, which focus on defining user-need in relation to the built environment, within a theoretical background.

The first year students are undergoing a series of lectures that help them to bridge the gap between the perceived extremes of disability and non-disability. This will involve discussing issues with people with disabilities as well as learning how to evaluate their own designs.

An important part of this process will be to realise the functional impact on design for people with physical disability, namely people with ambulatory impairments, wheelchair users and people with dexterity or reach impairments. But equally important, the functional impact of visual and hearing impairment, other sensory impairments, learning disability and mental health impairments must also be appreciated. It will encompass research findings throughout the world, and recent developments in access consultancy.

Students will explore the concept of inclusive design. This acknowledges that designing inclusively may sometimes mean designing features that are only used by disabled people, in addition to those universal features that are used by disabled and non-disabled people alike. Secondly, it allows for the designing in of barriers since the concept of exclusivity need not be associated with excluding disabled people per se.

The second year students have a steeper learning curve given the originality of our project, which we began in July 2001. As well as covering the same topics as the first year students, they are maintaining the focus around a design project initiated by the local community. Their focal point is a beadwork centre that a group of women in Mmolta, Wintervelt near Pretoria, have already established. The women set themselves up in 1994, with money from Eskom and the Department Consumer Science at the University of Pretoria They make and sell their beadwork for conferences and tourists, and have been invited to Europe to sell. Their centre is a building initially built as a laundry. It is cold, dark and completely inadequate for the work that they do.

In addition, some of the women are elderly, some have young children, and some have non-age-related disabilities. Given that the building does not serve their functional needs, this has been built into the project brief. As the international disability movement has found, it is not enough that designer design for disability, they must design in such a way that allows disabled people to be included in an environment, without undue attention being drawn towards them.

Following the model that Lifchez propounded, the students have met and discussed the functional aspects of the design. Importantly for South Africa, they have also been to the site and discussed the cultural aspects of the women's life, which affects where they sit, how they sit and how they like to work. The cultural aspect of the women's heritage is one of their brief requirements, since it forms part of the appeal to encourage tourists to visit the centre and purchase their work.

The beaders remain the clients of the project, and will be part of the design process. This should allow a process of learning to take place where the women teach the students about their needs and the students teach the women about design. The students must explain their designs to the women in ways that they will be able to understand. Again, along the Lifchez model, the beaders will come to the design studio to assist the students with their designs. The final design will be used in a proposal for funding to complete the project.

### **Summary**

The University of Pretoria is exploring a model for design teaching that will hopefully produce designers that are sensitive to expressing the requirements of disabled people in their designs, and that will start a trend in South Africa towards user-friendly buildings and product design. The aim is to give recognisable meaning to the demands of the Constitution and to interpret the definition of the additional Acts of Parliament in design terms. It aims to generate designers whose products become a benchmark by which South African inclusive design is judged on the world stage.

It is an ambitious and very new plan. The designs produced must be rigorously examined to evaluate their effectiveness in meeting the goal, and the awareness of the students. The clients will be part of this evaluation process. Importantly for those of us involved in the teaching process, the teaching methodology must also be meticulously examined to ensure that our techniques are getting the information across in the most effective way.

### **Authors note**

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