



THE ACCESSIBILITY AND PERSONS WITH DISABILITY: A CONCEPTUAL ANALYSIS

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Abstract:

The concept of accessibility is derived from the old French word 'Accessible' and late Latin word 'Accessibilis' which stands for capability of being approached or reached, a coming nearer or an act of entry. For making products more usable, services easily available and life activities simple to perform for all regardless of any discrimination, barrier-free social environment seems to be an indispensability. In relation to disabled persons, free and equitable open access enables them to operate independently, move smoothly and with safety, live in dignified way, ensures that they could participate fully and actively, and consequently, contribute productively in every domain of life as competent human resource.

Timothy Nugent, the renowned American rehabilitation educationist at the University of Illinois has been regarded as the father of accessibility who founded the first comprehensive program of higher education for individuals with disabilities in 1948.

The present paper looks into the conceptual foundations of accessibility and attempts to fathom its vitality for persons with disabilities. Additionally, this work ponders upon different approaches to an accessible design and makes serious efforts to draw a comparative analysis between them. It also seeks to examine various studies conducted in this field of enquiry. The work has adopted a descriptive and comparative- analytical method to accomplish research objectives.

Key Words: Persons with Disabilities, Accessibility, Universal Design, Special Design, usability.



Introduction

As a plausible reality, the transition to modernity in world History has been characterised by the attempts to bring a progressive change in the lives of entire human race with the help of scientific and technological advancement. Behind every innovation, there has always been a vision of creating a better social environment by minimizing the hurdles and making daily activities easier to perform and services or products simple to use. This typifies the learning, working, accessing information and communication technology, every day traveling and other activities. To say the least, efforts for progress has always intended to ensure a smooth, conducive or an accessible life in each and every respect for all regardless of any distinction based on disability and other marginalising factors.

Barrier-free environment makes life comfortable for everyone since all of us come across barriers, may it be disabled or nondisabled. Therefore, accessibility is not simply fruitful to persons with disabilities alone, but also makes life favorable for those who undergo temporary disabling conditions and constraints namely: the old aged, pregnant women, accident victims, the severely sick and even toddlers. The terms that are often used synonymously to refer to the general state of access and accessibility are barrier-free or impediment-less environment, enabling surrounding, adaptive, user-friendly and conducive environment. Particularly in context of disability, an accessible setting is described by the terms as disabled-friendly and non-handicapping environment. Whereas with reference to elderly people, the term age-friendly environment is preferred.

The condition of accessibility is so indispensable that it does not simply promote facilitating life for all by availing equal and open opportunities. But also acts as an enabling force for disabled persons to make their living possible. Although, the rights for persons with special needs are given formal recognition by the government like the rest of the people. But, the formal provisions of these rights are not exactly translated into real enforcement or actual practice. In order to develop a favorable atmosphere for reaping the fruits of rights and liberties such as education, employment, health care, voting rights etc., creating an accessible environment is indispensable. Here it becomes obligatory on the part of state machinery to make policy interventions for building a disabled-friendly environment through reasonable accommodation. This is done by removing accessibility barriers and paving way for equal and open opportunities to all including the differently abled.

Objectives of Study

The paper intends to realize and aims to serve following purpose

- To thoroughly explain the conceptual meaning of accessibility in the light of intellectual debate surrounding the area.
- Understand the importance of accessible environment in the life of differently abled people.
- Deal comprehensively with different approaches and paradigms to the study of disability and accessibility.
- To take account of the historical evolution of the theory and practice of accessibility in academia.



Conceptual Framework

The term disability has been defined and redefined over the years from different standpoints which have given rise to several approaches namely medical, charity, welfarist, rights-based approach and more contemporary, the social model. In fact, the social model of disability views disability as social construction and according to this model, what makes a person disabled is not the physical defect or sensory impairment, but the social attitudes and cultural stereotypes which are in real sense disabling. The extent and experience of disability largely relies on how much the social environment prevents an individual from taking part in community life on an equal level with others. Thus, it is argued that, 'society disables people with impairments by failing to take into account their rights and needs, as groups or individuals' (SAHRC Report, 2002, p. 9). Perceiving disability in terms of attitudinal barriers (social indifference, discrimination, and insensitivity) posed by society, this model to the understanding of disability necessitates for a barrier-free environment to overcome any kind of social constraints. By doing so, it strengthens the case of pro-accessibility academic discourse.

Accessibility refers to the extent of availability of devices, services, and environment to as many people as possible without any restraint. It is a broad and flexible term and can often be perceived as complex. It may take diversified forms: For instance, access to transport, built environment and infrastructure, educational services, employment opportunities, information and communication accessibility, web-accessibility and even access to electoral process and voting. Accessibility is not simply to be viewed as multifarious but also as something having varied meanings in different contexts. It is understood as an issue in some cases and at the same time becomes a requirement to remedy problems of social exclusion and discrimination in other cases. It is a condition without barriers, sometimes a concept or an idea promoting social adaptation, a right for disabled to avail facilities of the state and even conceived as a process of facilitating them to live life smoothly and with ease.

In the wake of its dynamic meaning, Gould (1969) has described accessibility as a 'slippery' concept' (Halden, Jones & Wixey, June 2005, p. 4). Dereck Heldon Consultancy (DHC, Edinburgh, USA, 2000) has conceptualized accessibility or barrier-free environment in terms of three questions: "who" or "where", "what" and "how". The question of who/ where considers accessibility as an attribute of people or places, what signifies the opportunities being reached that satisfy public needs(the land uses, activity supply points or resources including people) and How points to the factors that separate the people and places from the supply points (distance, time, cost, information and other factors or access restraints (Opp. Cit., P. 2). Social Exclusion Unit (SEU, London, 2003) Report defines it as the "ability of people being able to get to key services at reasonable cost, in reasonable time and with reasonable ease" (Opp. Cit. p. 5). Likewise, Litman, (2003), with a wider spectrum, rightly points out that 'Accessibility refers to the ability to reach desired goods, services, activities and destinations (together called opportunities)' (ibid).



Historical Overview

Although, the history of accessible environment and universal design as an established phenomenon is not very old and its emergence is rooted in the needs of 2nd world war American veterans with disabilities that required the development of rehabilitation engineering and assistive technologies. However, long before then, many environmental design features were introduced at residential schools and rehabilitation agencies for persons with visual impairments. Some of these features dating back to the early 1900s included outdoor bells and wind chimes, railings or ropes between destinations, corrugated edges of sidewalks, braille-type markings on sidewalks, and ruts in cement to guide the cane tip in the direction of travel. Another early example of public interest in accessibility occurred in Peoria, Illinois, in 1930 when the Lions Club succeeded in obtaining passage of the first white cane ordinance, giving blind pedestrians the right-of-way in crossing streets. (Blasch & Stuckey, 1995).

Beginning in the 1950s, the proponents of the barrier-free movement advocated for the removal of physical barriers in the environment. The year 1959 has been traditionally cited as the beginning of the accessibility movement in that it was the time of the initial efforts by the American National Standards Institute (ANSI) and by individuals to make the environment accessible to people with disabilities.

By the 1960s, designers, architects, educators and activists were examining the right of all persons to use public spaces. In *Design for the Real World* (1971), the design activist Victor Papanek called for designs with a social conscience, believing that design had so far excluded major segments of the population. In one of the early treatments of accessibility, Bednar (1977) discussed both physical barriers (access to and use of buildings and mobility in the environment) and social barriers (restrictions imposed by the built environment to full participation in society). The study of accessibility, according to Steinfeld, Duncan, and Cardell (1977) has focused on barriers to movement and to the use of buildings, equipment, and landscape.

In the United States, designers such as Patricia A. Moore and James Pirkel, in 1980s, advocated for the design of products compatible with aging people's physical and sensory impairments. Eventually, the United States passed federal legislation to remove physical barriers in the environment such as the Americans with Disabilities Act of 1990 which prohibited discrimination against people with disabilities in employment, transportation, public accommodation, communications and governmental activities. The Centre for Universal Design, North Carolina State University, at the end of 20th century, came up with 7 principles of universal design namely equitable use, flexibility in use, simple and intuitive, perceptible information, tolerance for error, low physical effort and size and space for approach and use (Cummings, 1999, p. 416).



Special Design vs. Universal Design

There are two approaches to the understanding of accessibility and ways to fulfill access requirements in academic discourse. These include universal design (UD) that accommodates users of all abilities and the specialized design or accessible design which is only devised for a specific group of such people as the disabled users. Barrier-free access to goods, services and built environments for wider possible number of people can only be realized provided these are usable by everyone regardless of age, sex, size, economic status and disabilities. In other words, this vision is materialized in the system of Universal Design (UD) which “aims to provide all individuals with or without disabilities in a region with the right to access and use the same public systems at the same level of service” (Joines, 2009, p. 156).

The concept of ‘Universal Design’ is also known by several synonymous terms around the world as inclusive design, design for all, lifespan design or barrier free design (Op. Cit., p. 157). It was pioneered and firstly coined by American architect and educator, Ronald Lawrence Mace in 1960s. In the words of Ron Mace, the founder of the Centre for Universal Design at North Carolina State University, universal design implies “the design of products and environments to be usable by all people, to the greater extent possible, without the need for adaptation or specialized design” (Catanese, 2012, p. 206). However, some other American designers like Thomas Lamb, Marc Harrison and Richard Hollerith also worked on accessibility issues to accommodate users of all abilities and their research papers declare them as precursors of the movement for universal design (Salmen, 2011, p. 16).

These models of design focus on the idea that disabilities happen at the intersection where people and their environments interact with each other. While special design approach emphasize on outcome or end result attributes of a design project. UD conversely, is a process-based methodology for how to approach and create a design? On one hand former looks at typically disabled users. This approach might probably leave large chunk of societal population who do not have a defined, legally recognized disability. On the other hand, later asserts that there are no typical users and recognizes that solutions which work for people with a disability are likely to also work well for people in diverse circumstances. Special design model gives more weightage to specific physical, sensory or cognitive disabilities. Whereas, UD takes into consideration the possibility of exclusion due to any reason with or without disability. In this way, special design aims to create products usable by people with disabilities. On the contrary, inclusive design rather intends to make product user-friendly for everyone.

Unlike the differences, there are a lot of similarities as well. Both are tools that empower designers to create digital products used by the largest group of people, regardless of their current circumstances. Both the designs work hand in hand to lower barriers that exclude people from using products and services effectively and make them usable by all. Since both recognize that disability occurs at the point of interaction between people and their environment, therefore can learn from the way people adapt to environment depending on their abilities in a given context (Toptal Blog by Cameron Chapman).



Concluding Remarks

There is a co-relation found between social model of disability and the rise of demands of disabled stakeholders for building accessible environment. The model which interprets disability as a social construction reinforces struggles for reducing barriers and create more disabled-conducive social atmosphere by promoting accessibility standards. Disabled people come across accessibility barriers: attitudinal, systemic, information or communication, and architectural/physical respectively, that hinder them to act independently and participate fully or effectively in all spheres of socio-economic, political and cultural life. So, it is immensely imperative that we have to get rid of these barriers. Attitudinal problem has always been the greatest barrier to accessibility and mobility for persons who are disabled. Until the 20th century, the use of any mobility aid was considered to indicate that people who were blind or physically challenged were different and often treated helpless.

Attitudinal barriers are behaviours, perceptions, and assumptions that discriminate against persons with disabilities and often emerge from a lack of awareness, misjudgments, or having misconceptions about a person with a disability. Examples include: Assuming a person with a disability as inferior and incompetent. Above all, it is of at most importance to overcome negative attitudes which is the road to a disabled-friendly social environment and would further neutralize or minimize the adversities of rest of the access restraints. There is an urgent need to avoid making assumptions about a person's disability or capabilities. many persons with disabilities talk about being frustrated with people assuming what they cannot do rather than highlighting what they are good enough of doing. One should Insist on professional and civil conduct between and among members of society to respect people's differences and create an inclusive environment accordingly.

There are differences as well as similarities observed between universal and specialized designs to accessibility discourse. One way that both designs can improve is to learn from the ways human beings adapt to technological barriers in a given context. By studying the ways to adapt situations, designers can propose and invent new and better solutions. A proposal of merging special design under the broader framework of universal design principles could possibly be a more fruitful and feasible alternative.

An accessible environment has its vision of inclusive, sustainable and equitable development for all. It advocates the values of equality, freedom and dignity for disabled users and visualizes a mission where their special needs are adequately met and accommodated into the mainstream of life. For its materialization, vision and mission must go along together. one way to address environmental accessibility as a mainstream development issue is to recognize that it is a global public good, which provides universal benefits, covers multiple diversified groups prevalent in social order and all populations, the world over (UN DESA Report, 2013). In Sum, accessible and usable environments are non-excludable and accessibility benefits all irrespective of any disability wherein services, products and spaces used by one does not prevent its use by another on egalitarian basis.



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