Removing Mobility Restriction in Nigerian Campuses: Lesson from Malaysian Built Environment

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Abstract: Built environment present one of the unresolved problems of mobility restrictions. Nigerian campuses are still lagging behind and harboring segregation and exclusion through mobility restriction in the 21st century. The purpose of the study is to investigate the degree of mobility disability in Nigeria campuses and draw lesson from the experience of Malaysian campus built environment, in order to propose way forward for Nigeria.

The study is based on a quantitative content analysis of an online depository articles search within the span of two decades (1993-2013) using Nigeria, disability and accessibility in permutation and combination with environment, inclusive or marginalization and higher-education as keywords. Physical enumeration of accessibility infrastructures using access audit checklist was conducted to triangulate the findings from the reviewed articles. A qualitative content analysis of Malaysian disability policy and how it translates into the campus built environment followed for Nigeria to emulate.

More than two third of the articles reviewed lamented on the plight of the disabled in Nigeria and emphasized their mobility restrictions by the built environment but do not propose any solution. The physical accessibility auditing revealed a poor and worsening situation in Nigerian campuses. Improvement and implementation of standard code of practice on access backed by a sound policy provision is a key to a user-friendly campus built environment for the disabled inclusive involvement in Malaysia and anywhere else from which Nigeria should take an offshoot.

Key words: Accessibility, Built-Environment, Campuses, Disability, Experience
1. INTRODUCTION

Over and against equality and fairness in treatments and educational opportunity, disabled individuals are noticeably separated (Skiba et al., 2008) and underrepresented (Ainscow, 1995) in educational environment. The disabled discrimination experiences are mainly socio-attitudinal (Fine & Asch, 1988; Tinklin & Hall, 1999) and lack of appropriate architectural design (Pivik, McComas, & Laflamme, 2002), in other words socio-spatial discrimination. Majority of people however, think that the disabled require nothing in life more than sympathy, charity, and medical relief. Disability is part and parcel of human existence that cannot be eliminated altogether (Barnes, 2001), because every abled person is a potential disabled in life. Steady indications however, abounds that disability is not “a loss course of a helpless case”. Disability may be a cause and consequence of scarcity (Barnes & Sheldon, 2010; Braithwaite & Mont, 2009) that can be reduced if not eliminated. Thus, mainstreaming disability issues should be a major concern of all (Peters, 2003), for the benefit of all (Ross & Van Willigen, 1997). It is easier and cheaper to modify the socio-attitudinal and socio-spatial environment than the combine bodies of the disabled (Holmes-Seidle, 1996).

In every decade the issue of disability is reiterated as a global issue of concern (Groce, 2004; Harry & Klingner, 2014; Seipel, 1994; Strong, 1984). From the estimated figure of more than one billion persons living with one form of disability or another; Word Health Organization (WHO) put the figure of persons experiencing difficulty in functioning at 200 million. The reason why the figure is expected to increase in the years ahead includes among others, the growing ageing population and higher risk of disability in older people (WHO, 2011). In World report on disability document (Shakespeare & Officer, 2011), (WHO) and World Bank (WB) acknowledged that Person with Disability (PWD) from poverty stricken areas are the “poorest of the poor” and the largest marginalized groups, because majority of them are relying on the society for their daily necessities. In 2004, Nigeria was classified among the “extreme poor countries” of the world (Mallaby, 2004). PWD from developing countries make up 75% of the disabled population of the world (Lang & Upah, 2008) most of which are from the poverty stricken areas.

The number of PWD is growing which makes them important in the society as consumers, labor force, producers, and taxpayers and to sum it all “the human resource”. Nonetheless, in most cases PWD continued to face barriers of inclusion in developmental programs, including those targeted for them. It is therefore important to focus disability issues in development policies and ensure that PWD are involve in the planning, design and implementation of programs for them and about them (Charlton, 1998). PWD involvement will not be guaranteed without first addressing barriers to their exclusion and their accessibility needs (Shakespeare & Officer, 2011). The environment should therefore provide accessibility for PWD to guarantee their participation in the society (P. J. Clarke, Ailshire, Bader, Morenoff, & House, 2008) particularly in Nigeria, where studies in one of its major cities, shows that, out of 38 public buildings, only 18.4% were wheelchair accessible (Hamzat & Dada, 2005). If majority of public building are not accessible, the reasons for their inaccessibility may vary. WHO (2011), estimated 15% to represent the population of disabled in developing countries, including Nigeria. Nigeria is the most populous African country. “The population of the country is more than the combine population of West African countries” (Eleweke, 1999), surrounding its borders. “The fact that education is in shamble and collapsing stage, attested to Omi’s (1990) assertion that less than 10% of about 20 million (italics introduced) disabled Nigerians are receiving education in Nigeria (Eleweke, 1999). UNESCO declared that Nigeria is accommodating the largest number of children not attending schools globally more than (10 million children) in 2011. How many of this out-of-school-children will get to university level? What about the poorest of the poor the disabled among them? Still, the very few disabled students that manage to get to the university level have to endure what (Goldsmith, 2007) called architectural disability. Because the design of the environment was not conceived with PWD in mind (Rob Imrie, 2003), neither was it modified to embrace them.

Owing to the societal need of reducing poverty (Devereux, 2002) and importance of educating the disabled (Schuller, Hammond, Preston, Brassett-Grundy, & Bynner, 2004), the Nigerian government promulgated a national policy on the educational needs of those disadvantaged members of the society. An unflinching right was proclaimed by the Nigerian disability decree of 1993. Additionally, Nigeria was among the first to sign and first to ratify the United Nation (UN) Convention on the Rights of Persons with Disability (CRPD) agreement (Enable, 2011). The policies spell out the responsibilities of the governments on disabled groups. The rights of the disabled to pursue education (in article 24), to access the built environment (in article 9), without discrimination (in article 5) and participate in day-to-day activities (in article 29) are enshrined in the national and international policy documents.

Provision of accessibility in the built environment is a necessary step (Baris & Uslu, 2009) to guarantee integration (Hill, 1992) and inclusive involvement (Ajuwon, 2008; Eleweke & Rodda, 2002; Garuba, 2003) of students, or else the impact of the built environment on disabled student will compound into a negative result (Rob Imrie, 2000; Riddell, Tinklin, & Wilson, 2005; Tinklin & Hall, 1999). Yet, the effect of environmental restriction on the participation of PWD has never been investigated in Nigeria to the researcher’s knowledge. There could be no better place to start the enquiry than university campus itself, because university is like a mini city (Saadatian, Sopian, & Salleh, 2013) owing to their urban character, and complexity as well as physical and population size. The effects of socio-spatial barriers on the disabled students are many but invisible. Thus, an enquiry into the life of these disenfranchised students is a worthy endeavor.

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Lack of adequate disability research was identified and documented (P. J. Clarke et al., 2011), inaccessibility of the built environment to PWD (Baris & Uslu, 2009; P. Clarke, Ailshire, Bader, Morenoff, & House, 2008) particularly in Nigeria, where studies in one of its major cities, shows that, out of 38 public buildings, only 18.4% were wheelchair accessible (Hamzat & Dada, 2005). If majority of public building are not accessible, the reasons for their inaccessibility may vary. WHO (2011), estimated 15% to represent the population of disabled in developing countries, including Nigeria. Nigeria is the most populous African country. “The population of the country is more than the combine population of West African countries” (Eleweke, 1999), surrounding its borders. “The fact that education is in shamble and collapsing stage, attested to Omi’s (1990) assertion that less than 10% of about 20 million (italics introduced) disabled Nigerians are receiving education in Nigeria (Eleweke, 1999). UNESCO declared that Nigeria is accommodating the largest number of children not attending schools globally more than (10 million children) in 2011. How many of this out-of-school-children will get to university level? What about the poorest of the poor the disabled among them? Still, the very few disabled students that manage to get to the university level have to endure what (Goldsmith, 2007) called architectural disability. Because the design of the environment was not conceived with PWD in mind (Rob Imrie, 2003), neither was it modified to embrace them.

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2. LITERATURE REVIEW

2.1 A note on key terminologies

2.1.1 Disabling environment

The disabling environment is such feature that imposes restriction on the participation of the disabled people. The effect of environment on disabled people can be numerous (P. J. Clarke et al., 2011). This study will be limited to the effect of the built environment in university campuses. For over a decade various policies and different regulations were promulgated in countries around the world on the need to make the built environment able to cater for the disabled. In order to achieve this goal various facilities needs to be modified or replaced (Goldsmith, 2007). While new design and planning need to take both abled and disabled into consideration, because it is universally agreed that some facilities design and planning measures may be obstacle for the participation of the disabled (Rob Imrie, 2003; R Imrie, 2004; Rob Imrie & Kumar, 1998; Iwarsson & Ståhl, 2003), this is what is referred to as the disabling environment.

2.1.2 Mobility restriction

The role of the built environment in hindering and restricting movement and therefore participation in day-to-day activities is established (Aripin & Mahmud, 2004; Baris & Uslu, 2009; P. Clarke et al., 2008) in literature. Mobility restriction therefore, can be a source of distress and marginalization in participation through a number of pathways. Lack of enabling environment and accessible infrastructure for example can be a barrier to educational pursuance (Hill, 1992). Ensuring socio-academic interaction requires accessible facilities. Lack in access to public building (Hamzat & Dada, 2005) such as health care facilities, clean environment and poor sanitation is well established as a source of negative health outcome (Eide, van Rooy, & Loeb, 2003), and isolated living (Kurawa, 2010). The negative health outcomes when compounded with inaccessible environment can be a source of pain as well (Croft, Dunn, & Von Korff, 2007).

2.1.3 Participation restriction

Participation according to Shakespeare and Officer (2011) is an involvement in life given situation such as participating in academic pursuance. The right is for PWD to enjoy nothing more than equal chance and full and decent life as everyone, in a full and decent condition that promotes no segregation or exclusion, but, self-reliance and independence (WHO, 2011). Therefore, participation restriction occurs when the built environment fail to adjust to the individual requirements, thereby, living the individual with no choice but to endure a burden or limit his/her level of interaction and involvement in social and academic context. The United Nation (UN) in its Convention emphasizes the rights of disabled people (Enable, 2011). In order to ensure the implementation of these positive resolutions, evidence is needed on the degree of participation restriction imposed by the environment, if there is any, how it imposes the restriction and how to overcome the restriction.

2.1.4 Physical access

Physical access in buildings is the ability to provide free and easy movement either vertically or horizontally inside or outside the building premises. Assessing the built environment for physical access is called an access audit. The access audit is useful in facilitating the development of an action plan and reasonable adjustment of the built environment. Reasonable adjustment involves changes necessary to enable person with a given impairment to use a facility in a similar condition as non-disabled. Reasonable adjustment therefore is to do with changing the environment in order to enable the disabled to overcome such a physical barrier that may otherwise become an impediment to their use of the facility. The adjustment can, if done appropriately, be the beginning of an ongoing project improvement that will last the lifetime of the building (Holmes-Seidle, 1996).

3. METHODOLOGY

The methodology is divided into three sections; the first part deals with quantitative content analysis, second part Physical Access Audit Checklist (PAAC) and the third Qualitative content analysis.

3.1 Quantitative content analysis of Nigerian Disability issues

Content analysis is one of the few methods of scientific studies that take meanings seriously, as opposed to other natural scientific methods, that are prevented by epistemology in them to adequately address what matters the most in normal social life (Krippendorff, 2012). Several benefits in using content analysis of scientific research studies are apparent, and one of such is the ability of content analysis to show how alternative ideas and minority groups are portrayed in the society over time (Haller, 2010).

294 Online depository articles bearing Nigeria, disability and accessibility in permutation and combination with the words environment, inclusive or marginalization and higher institution that appeared (between the periods of two decades 1993 to 2013) under Google search. Only those articles related to the subject of accessibility for the disabled in Nigeria settings were selected for analysis. Though none of the article appeared to have been written by an environmental design expert, medical expert and human right activist wrote more than half of the articles. This is an indication of the general trends of affairs of living the issues of PWD in the hands of medical and welfare officers to handle (Medical and charity model of disability).

Literature reviewed shows that discrimination and segregation in form of exclusion may have a lasting effect not only on the individuals concern but also their family and the society at large (Kurawa, 2010). This brings us to the most intractable question “whither Nigerian disabled?” what are their experiences, the future prospects, hope, and aspirations? Does Nigeria have any policy to cater for the needs of her vulnerable group in the world of inequities? If it has or has had, how important and practical is it? To address this multiple questions a quantitative survey of online depository articles becomes pertinent. In order to make inference through objective and systematic identification of specific characters in the messages Quantitative content analysis is employed (Holsti, 1969). The result of the diversity of scholarly works is intended to triangulate with enumerated physical infrastructure from some selected Institutions of Higher learning.
3.2 Physical Access Audit Checklist (PAAC)

An access audit checklist was used to examine the extent to which some selected building facilities and disabled students can use infrastructure independently (i.e. the visually and walking impaired). The use of matrix with a predetermined criteria was employed and weightage assigned as 1, 2, 3, and 4 to measure never, sometimes, often and always cases respectively. The ten selected buildings are the senate/administrative building, University main library, University Hospital, theatres and a lecture hall, sport facilities, recreational and student living quarters, and bank located within the main campus environment only. The accessibility infrastructures measured are entrance ramps, automatic doors, lift/elevators in storey buildings, curving, washrooms, designated seating areas, and parking space for disabled users. The one time physical enumeration of infrastructures using Physical Access Audit Checklist (PAAC) is intended to triangulate the findings from the reviewed literature. Photographs were taken to strengthen the results from two selected universities (ABU Zaria and KUST Wudil). Ahmadu Bello University Zaria herein abbreviated ABU is a federal University with largest space coverage in West Africa and second largest in Africa. A University with an impressive carrying capacity located within northern Nigeria (where the percentage of out-of-school and the number of disabled is greater). Kano University of Science and Technology Wudil herein called KUST is a state owned University established only recently in 2001 (after promulgation of disability policies).

3.3 Qualitative Content Analysis of Malaysian Disability Policy

The way to move forward is to take a look at a sister developing country, about what they have, and how they use it. Malaysia is selected owing to the fact that the two countries started together almost concurrently, sharing the same British mother. Today Malaysia has although not perfect but impressive record to showcase to the world as contained in the United Nation (UN) and World Bank (WB) world report on disability. It is stated that between 1990 and the year 2003, National Disability Act was issued and revised to address the problem associated with PWD accessibility. In 2008, a new disability law was promulgated in line with United Nation (UN) Convention on the Right of Persons with Disability (CRPD). Standard Code of practice was introduced and revised to address the problem of accessibility and mobility for PWD as contained in the world report (p. 176) in (Shakespear 2011). Thus a qualitative content analysis of the national disability policy in the light of infrastructures provided in a typical campus built environment will serve as a lesson from which Nigeria can take an offshoot. University of Malaya is taken as case study area for the fact that it is the oldest and therefore needs environmental modification.

4. RESULTS AND ANALYSIS

4.1 Findings from an online report

From the worldwide perspective, in the last two decades a far-reaching development is recorded in the field of disability (Mets, 2000). The situation report of the disabled in Nigeria however is worrisome (Oluborode, 2008), yet it is not receiving the adequate attention it deserves. Efforts in field of disability studies in Nigeria are rare and far in between, in comparison to other countries (Amusat, 2009). A look at the issue of disability is equated with charity, donation, and welfare entitlements approach in Nigeria (Lang, 2009). Substantial number of articles proclaimed that the lack of disability discrimination legislations (Eleweke, 1999), coupled with poverty (Amusat, 2009) and lack of education are the bedrock of segregation and discrimination of the disabled in Nigeria. There have been a number of reproaches about the government lackadaisical and I don’t care attitude on the plight of this vulnerable group of individuals, constituting the largest minority group of the country’s population.

Amusat (2009), conquered that disability and poverty are intertwined such that poverty heightened disability and disability deepens poverty. This is particularly correct, given that disability affects the individual concern, the family and the whole society (Kurawa, 2010). Again, it is easy to assume some injury and pain sometimes in life but not many individual expect that they may become disabled temporarily or permanently in their life. Disability is not only a function of inability on the part of individual, but a socially creation which resulted from disabling attitude and disabling environment on individual, family and the society at large (Kurawa, 2010). The experience of disability discriminations are two namely; Social attitude (that favour privilege appearance and discriminate impairment as otherness) and inadequate accessibility infrastructures in buildings (which make it difficult for the disable to access and participate in socioeconomic life). However, (Oliver, 1996) maintain that the demands of the disabled people worldwide go beyond improving services and correcting attitude but also gaining control over what concerns their life.

Thus, a university is the most appropriate place to entrenched social justice because the concept of equity and egalitarianism first gain prominence there (Felix Kayode Olakulehin, 2013). The lopsided beliefs heightened inequities in access and hinder participation of disabled (whom are known to have been) traditionally underrepresented in Nigeria schools. Gray, Gould, & Bickenbach (2003) summarizes the report of the disabled student experience as a feelings of discrimination, low self-esteem, and physical environmental constraints, financial lack and inflexible registration and examination processes as well as post-graduation job anxiety. A call was made upon the higher education leaders, academics, and policy makers to be aware of PWD experiences (Felix Kayode Olakulehin, 2013). In Nigeria PWD have to endure a long standing segregation in special schools and their integration into the mainstream settings is an alternative without the necessary facility support. In the words of one student with (visual) disability (SWD):

...all my life I have wanted to study political science but, I found myself transferred into the special class, what should I do? Special education of course...

Segregation and exclusion is often celebrated in Nigeria, e.g. as in a study of local endeavor (in Katsina special school for the disabled) in Nigeria in an article covering a period of three decades. It was said that in 1976, the number of disabled students in the special school reached 20, then the number continued to fluctuate between 8-15 annually, in 1993, the number reached a staggering record of 108 (98 boys 10 girls). Two decades after this revelation Katsina special school still exists as a segregated setting for PWD. Inadequate funding is cited as the greatest challenge confronting PWD’s education (Saulawa, 1997). Other challenges mentioned are High cost of material, lack of adequate specialist, poor and ineffective policy implementation and that architectural
design of most institution that did not take PWD into consideration. In the Authors word

"...only the Oyo federal collage of Education (FCE)(special) takes note of this architectural consideration".

The author recommended the establishment of more special schools like FCE Oyo (special) to cater for the educational needs of the disabled and suggested that the Oyo FCE (special) be upgraded into a degree awarding institution. This is in a nutshell is a promotion of segregation and exclusion. Majority of PWD in Nigeria are absent in academic pursuance because there is an absence of legislative mandate to support their implementation (C.Jonah Eleweke, 1999). Concern and needs of the marginalized remain unaddressed. It requires more than a piece of legislation or endorsement of international convention to realize the rights of PWD in Nigeria. National building code should also be enriched to address the issue of PWD access to public buildings as contained in the national disability decree (Oluborode, 2008).

Nigerian government has failed to provide necessary facility support for inclusive education even though in 1993 there was a decree for inclusive education. In order to provide least restrictive environment the author suggested that multidisciplinary team be involve including psychologist, educational diagnosticians, teachers, administrators of special education, physicians, students and their parents (Eskay & Oboegbulem, 2013). Such a long list of specialist excludes the environmental designers.

Disabled have the right to be educated in a nonthreatening environment and without segregation according to the United Nation Convention on the Right of Persons with Disability (UN CRPD) which was endorsed by Nigeria (in 2007) and even ratified since 2010. They have right to be educated because they are in the word of Otolagbe (1995) innocent people, who are members of human society, having no other world to live in, than the one we jointly own in (Oladejo & Oladejo, 2011). Statement like “Government will provide adequate facilities to ensure effective integration of PWD” is common in the national policy on special education e.g. (article 55, 1981). Yet, Integration into the society by PWD requires accessible pathways especially into public buildings when only 18.4% of the public buildings studied are wheelchair accessible in the largest city (Ibadan) in Nigeria. PWML can gain access to less than 20% of the basic health, recreation, social, financial, employment and their educational needs (Hamzat & Dada, 2005) because those buildings were not planned with them in cognizance neither modified to suit their needs.

In the global circle, a comprehensive development has been attained in the field of disability both in printed document and in practical observable world of the built environment. It is agreed that accessibility or lack of it in the built environment impacted on participation of the disabled in a day-to-day activities such as educational pursuance (WHO, 2001). Inclusive education is an attitude of valuing human dignity of whatever physical appearance in both policy and practice. The term has been in use for almost two decades now, but the struggle for inclusive education has been in existence for almost five decades (Polat & Kisanji, 2009). PWD are noticeably absent in Nigerian politics contrary to “nothing about us without us” and equal opportunity platform for all. UN Accessibility for the disabled was endorsed, thus a design manual for a barrier free environment is required.

The most noteworthy barrier was attitudinal and architectural which slowed my movement and limited the places and spaces I could visit during my campaign for political office election. (Cosmos Okoli) in (World Pulse 2013)

Nigeria has a population of 169 million out of which 25 million based on WHO (2011) report are having one form of disability or the other. PWD have little if any support from government but families and charity support thus PWD have to endure the stigma attached to their fate (of neglect and isolation). (Sango*, 2013) identified lack of financial support as the greatest barrier to effective social work in the country and then government protection policy such as free medical care, education, transportation, and subsidized housing. Also, Example National commission for PWD is yet to take off contrary to section 9. “Free transportation” and “free education” is not free. Establishment bill was passed but no law appears to have been passed (Sango*, 2013). The author however is silent about the environmental physical barriers.

The 1991 national census in Nigeria recorded a crude unrealistic figure of 0.48% disability rate when the WHO estimation is pointing 20%. Many Nigerian cities offer no promise to PWD sustainable livelihood because of inaccessible facilities particularly transportation services. According to Mac Farlane (1985) Quality of Life (QOL) is a function of the discrepancy achievements and unmet needs and desires (Odufuwa, 2007), thus the larger the gap between needs and have, the lower the QOL. Guerra (2003) in (Odufuwa, 2007). Only 272 special schools, special homes, centers and integrated school catering for the multitude number of disabled (educational) needs in the country were identified. Only five out of 47 universities are offering special education and few colleges of education. (Aromolaran, 2005). Advancement in education pursuance was linked with tolerance for negative behavior, availability of educational personnel, material, and friendly built environment (Ajuwon, 2008). Decades of educational neglect left around the world left 774 million adults deprived of reading or writing skills two-thirds of them are women. The UNESCO institution of Statistics acknowledged that Nigeria is having a share of over one in six of the world-out-of-school including the disabled. According to the (Rose, 2013) it would be unfair to say that the Nigerian government has no care for her disabled citizens, rather Disability issue in Nigeria is not a priority but afterthought, thus about 19 million disabled are enduring the consequences of disablement (Nurudeen, 2013).

4.2 Findings from Accessibility Infrastructures (PAAC)

Table 1: Accessibility Matrix

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Table 2: Legend of the accessibility Matrix

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<tr>
<th>S/No.</th>
<th>Meaning</th>
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<tbody>
<tr>
<td>A, I</td>
<td>Building Entrance Ramps</td>
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<td>B, J</td>
<td>Automatic doors</td>
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<td>C, K</td>
<td>Elevator: Storey Buildings</td>
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<td>D, L</td>
<td>Curvings</td>
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<td>E, M</td>
<td>Modified Washrooms</td>
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<td>F, N</td>
<td>Seating for the disabled</td>
</tr>
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<td>G, O</td>
<td>Designated Parking</td>
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<tr>
<td>H, P</td>
<td>Signs/Door Markings</td>
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Table 3: A glimpse at the study area

<table>
<thead>
<tr>
<th>Facilities/Building</th>
<th>ABU Zaria</th>
<th>KUST Wudil</th>
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<tbody>
<tr>
<td>a, k</td>
<td>Senate Building/Chancellery</td>
<td></td>
</tr>
<tr>
<td>b, l</td>
<td>University Main Library</td>
<td></td>
</tr>
<tr>
<td>c, m</td>
<td>University Hospital</td>
<td></td>
</tr>
<tr>
<td>d, n</td>
<td>500 Seated Theatre</td>
<td></td>
</tr>
<tr>
<td>e, o</td>
<td>300 Seated Theatre</td>
<td></td>
</tr>
<tr>
<td>f, p</td>
<td>Lecture Room</td>
<td></td>
</tr>
<tr>
<td>g, q</td>
<td>Sport Centre</td>
<td></td>
</tr>
<tr>
<td>h, r</td>
<td>Student Hostel</td>
<td></td>
</tr>
<tr>
<td>i, s</td>
<td>Recreation Centre</td>
<td></td>
</tr>
<tr>
<td>j, t</td>
<td>Bank</td>
<td></td>
</tr>
</tbody>
</table>

The physical enumeration was conducted in order to triangulate the findings above. The illustration photographs are meant to reinforce the findings in the study areas.
4.3 Findings from Malaysian Disability Policy

Table 4: Reading from the Malaysian disability policy

<table>
<thead>
<tr>
<th>Content</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meaning of Universal Design (UD) is stated</td>
<td>The assumption is that everyone can be or become disabled sooner or later temporarily or permanently. Thus UD concept is appropriate. Implementation of UD is best carried out with the bottom-up approach rather than the general top-down approach. The bottom-up approach assumes that the client and or the user of the facility are having a multiple disability.</td>
</tr>
<tr>
<td>Building with ramp</td>
<td></td>
</tr>
<tr>
<td>Steep staircase in the theatre</td>
<td></td>
</tr>
<tr>
<td>Busy Classroom not for wheelchair</td>
<td></td>
</tr>
<tr>
<td>Access for PWD to public transport facilities</td>
<td>New buildings are being conceived and equipped with accessibility infrastructures old ones modified. The infrastructures include ramps, carvings, automatic doors, walkways, seating for the disabled in recreational and sporting facilities as well as lecture halls and theatre.</td>
</tr>
<tr>
<td>Doorways less than 900mm</td>
<td></td>
</tr>
<tr>
<td>Riser is steep 200mm</td>
<td></td>
</tr>
<tr>
<td>Trees on the middle of walkways</td>
<td></td>
</tr>
</tbody>
</table>

Sources: Authors Surveys and university’s website

5. DISCUSSION AND IMPLICATION OF RESEARCH

5.1 Discussion on the online articles

From the foregoing it can be noted that the extent to which the concept of disablement was described in the online depository articles bearing the words Nigeria and disability in permutation and combination with accessibility, environment, institutions, education, inclusive and marginalization written within the period of two decades (1993 to 2013) is not much. Only 294 articles scale through the selection process. Half the numbers of the study text were newspaper article that lack academic rigour for substantiation of claims. The most frequently appeared words are lack of government funding and finance, followed by legislation and policy implementation. More than half of the articles that touch on accessibility into the built environment were mentioned briefly alongside a long list of problems associated with disablement. In the recommendation list only one mention the importance of building guidelines and architectural modification. Every third article can be characterized as a fight for social justice. Facilities and infrastructures required by the disabled to access the built environment have a very low frequency.

5.2 Discussion on Accessibility infrastructures

Accessibility in ABU (the largest university in the country) is poor but the situation is becoming worse in a newly established state owned University. Does this means the architects and other environmental planners are oblivious of the knowledge of accessibility requirement of the disabled students? Or are they waiting for the government legislation and implementation order? What is the content of the National building code on accessibility for the disable? Other than:

“...all public buildings should be made accessible and usable to PWD”

Right to free and accessible health care facility is not attained contrary to section 4. How and when are buildings going to be made accessible in practice not on paper as contained in section 8? How are the PWD expected to participate in educational pursuance proclaimed in section 5 and 6? Why is begging seen as a drawback in the society and when the disabled are made to have no second option as promised without discrimination in section 6? If ever the disabled are employed, how are they expected to move in the vicinity of campuses or are they not entitled for employment? The article on discrimination is clear section
6. The table below summarizes the right proclaimed by the government of Nigeria way back two decades ago.

Table 5: content analysis of Nigerian Disability Decree 1993

<table>
<thead>
<tr>
<th>Section: Title</th>
<th>From content analysis of printed documents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section 1: General Principles</td>
<td></td>
</tr>
<tr>
<td>Standards for enforcement</td>
<td></td>
</tr>
<tr>
<td>Section 2: General Principles</td>
<td></td>
</tr>
<tr>
<td>On Equal treatment</td>
<td></td>
</tr>
<tr>
<td>Section 3: Interpretation</td>
<td></td>
</tr>
<tr>
<td>Meaning of disability in national context</td>
<td></td>
</tr>
<tr>
<td>Section 4: Rights and privileges</td>
<td></td>
</tr>
<tr>
<td>Equal access to health services etc.</td>
<td></td>
</tr>
<tr>
<td>Section 5: Education</td>
<td></td>
</tr>
<tr>
<td>5.1 free education at all levels</td>
<td>Underrepresentation of the disabled</td>
</tr>
<tr>
<td>5.3.2-structural adaptation of all educational institutions</td>
<td>Situation is poor and is becoming worse</td>
</tr>
<tr>
<td>5.4.2.1- provision of special needs of the disabled</td>
<td>No implementation</td>
</tr>
<tr>
<td>5.4.2.5 improve university education facilities to ensure maximum benefit for the disabled</td>
<td></td>
</tr>
<tr>
<td>“Government shall ensure that no less than 10% of all educational expenditures are committed to the educational needs of the disabled at all levels”</td>
<td>Lack of funding</td>
</tr>
<tr>
<td>Section 6: Employment and vocation</td>
<td></td>
</tr>
<tr>
<td>Without discrimination</td>
<td></td>
</tr>
<tr>
<td>Access and accessibility: Housing</td>
<td>Not implemented</td>
</tr>
<tr>
<td>Section 8: Accessibility</td>
<td></td>
</tr>
<tr>
<td>8.1- “accessibility to public institutions and facilities are hereby guaranteed to the disabled”</td>
<td>At policy level</td>
</tr>
<tr>
<td>8.2- government shall provide (a) adequate mobility within its facilities (b) suitable exits for the disabled</td>
<td>Not provided</td>
</tr>
<tr>
<td>Access and accessibility to the facilities, services and infrastructures</td>
<td>Is not free</td>
</tr>
</tbody>
</table>

Source: Author’s Compilations

5.3 Lesson from Malaysian Commitments

Malaysia Disability Act is comprehensive disability legislation and an offshoot of UN CRPD that Malaysia ratified in 2010 after endorsing in 2007 (Enable, 2011) in her effort towards achieving developed nation status by the year 2020. The Act was tailored towards improving Quality of Life of the citizens (Ahmed et al., 2014) rather than charity approach (of free education, free transportation, free medical care and free this and that, proclaimed (but never realized) by Nigerian disability decree 1993). The Malaysian PWD (Act 658) sees disability not in the light of charity hand-out but a result and consequence of social and environmental barriers imposed upon the disabled persons because of their physical impairment (Husseein & Yacoob, 2012), and as such the barrier can be corrected and overcome.

The first step taken by the Malaysian government is to aggressively incorporate the concept of Universal Design (UD) in the opening section of her national disability policy and then follow it up with promulgation of national code of practice for her disabled population. The Malaysian standard MS 1184 (2002) developed through the consensus of committee comprising of balanced representation of stakeholders and environmental designers as against the Nigerian approach of delegating medical personals and welfare officers to handle all issues related to PWD. The Malaysian standard (MS 1184:2002) was pivoted upon five major pillars which were made mandatory for building owners to provide and they are as follows:

1. Obstructions should be avoided for the benefit of all and the sightless
2. Street furniture should be placed so as not to obstruct the free passage of all and the wheelchair bounds taking into consideration the dimension of the wheelchairs.
3. Curb ramps are meant to overcome any change in level that may be encountered when moving from pavement to a road surface or vice versa.
4. Pathways are intended to have had a clear contrasting and levelled surfaces wide enough to provide convenience to all users including PWML
5. Parking space should be as close as possible as to the entry point of the public building.

Malaysian codes of practice spells out the basic requirements for the PWD to public buildings and facilities and are titled as per below:

a) Code of practice for access for disabled to public buildings (MS1184)

b) Code of Practice for Disabled to outside building (MS 1331)

c) Code of Practice for Means of Escape for Disabled (MS 1183).

Second lesson can be from the implementation of “barrier free” architecture, right from the drawing board as was carried out in the International Islamic University in Malaysia according to Ayres I, Braithwaite J. in (Shakespeare and officer, 2011).

6. CONCLUSIONS

Several countries among the developed and developing countries are paying special attention to the issues of their citizen including disabled members in terms of education and provision of accessible environment. This study shows that the degree of mobility restriction imposed by campus built environment in Nigeria is poor and is worsening. Lack of accessible infrastructure is attributed to government commitment towards providing enabling environment for PWD through fund allocation, sound policy provision, and a willing heart to emulate the effort of others. Malaysian campuses on the other hand, are undergoing massive transformation towards inclusive living with UD concept in mind. From which Nigeria can benefit.

In conclusion, the objective of investigating the degree of mobility disability in Nigerian campuses was achieved through physical enumeration of accessibility infrastructures, using Physical Access
Audit Checklist (PAAC). Lessons were drawn from Malaysian campus built environment through a survey and photographs as well as qualitative content analysis of Malaysian disability policy. Malaysian development however, is not without policy, legislation and above all building regulation and implementation zeal. Nigeria is called upon to emulate with a willing heart.

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