PROVISION OF BARRIER FREE ENVIRONMENT FOR PEOPLE WITH DISABILITIES (PWDs) IN THE COLLEGE OF AGRICULTURE EDUCATION OF THE UNIVERSITY OF EDUCATION, WINNEBA.

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ABSTRACT

This paper presents an examination of the built environment in the College of Agriculture Education of the University of Education, Winneba in respect of the extent to which the academic, residential and recreational facilities are accessible to People with Disabilities(PWDs). Findings from the study indicate that almost all the facilities on the Campus have serious deficiencies as far as accessibility to the built environment is concerned. It was also found that the New Lecture Theatre and the New Student Hostel, which obviously are the most modern facilities among the structures, have better facilities for PWDs. Most of the access routes to and around the various facilities in the College are inaccessible to PWDs. It is recommended that at least one entrance per facility should be made accessible to a wheelchair user. It is also recommended that internal ramps and other barrier free facilities, including lifts should be incorporated into the construction of the New Library Complex and the Chapel Extension Project (Lecture Halls) which are under construction.

Keywords: Disability, Accessibility, facilities, Persons with Disabilities

1.0 INTRODUCTION

Access to tertiary education for persons with disabilities is an integral part of the right to education. It boosts the chances of access to employment, creates possibilities or opportunities for social, political and economic inclusion, and helps erase some of the prejudices engulfing impairment. In spite of the passage of the Persons with Disability (PWD) Act 2006 (Act 715) by the Parliament of Ghana and the provisions made in the 1992 Constitution of the Republic of Ghana [Article 29(6)] on the rights of disabled persons, little has so far been done regarding regulatory framework in making most academic, residential and recreational facilities barrier-free for people with various forms of disabilities in most educational institutions (Danso et al, 2011).

It is observed that the environment sometimes renders people disable and not the impairment itself and that disability could be linked to the dynamic interaction between persons with impairments and the social, physical and attitudinal barriers they face, particularly in education.

It is, therefore, time for institutions of higher learning to focus on the ability or inability of every society to ensure that everyone is able to carry out his or her day-to-day activities comfortably, effectively and safely on campus without being restricted by any barrier(s) created as a result of the shortfall in design, management and maintenance of the academic, residential and recreational facilities.

Statutorily, academic, residential and recreational facilities constitute the built environment in every educational institution and that PWDs also use these facilities. It is, therefore, necessary that accessibility to these facilities should be well planned in order to prevent their exclusion. It has been noted that little has so far been done regarding regulatory framework in making the built environment barrier-free at the College of Agriculture Education of the University of Education, Winneba. The aim of this paper, therefore, is to find out the extent to which academic, residential and recreational facilities in the College are accessible to persons with disabilities (PWDs) and to draw Management's attention to the design and construction of buildings and other facilities, such as walkways, in accordance with provisions of the Persons with Disability Bill (2006) for equal access to academic, residential and recreational facilities in the College.

2.0 ACCESSIBILITY REQUIREMENTS FOR PEOPLE WITH DISABILITIES (PWDS)

Achieving full accessibility is critical to reach the objectives of equal participation and social inclusion. Accessibility is an essential precondition for people with disabilities to be able to participate in society. It is one of the general principles of the United Nations Convention on the Rights of People with Disabilities. Article 3 of the UN Convention enjoins State Parties to permit full and effective participation and inclusion of PWDs in society, and that respect for inherent dignity, individual autonomy and independence of persons should be respected. Article 9 also stipulates that State Parties shall take appropriate measures to ensure that PWDs have equal access to physical environment, to transport, to information and communications technologies and systems and to other facilities and services which are open or provided to the public, both in urban and in rural areas. These provisions include the identification and elimination of obstacles and barriers to accessibility.

Accessibility is considered to be an attribute of all those products and services that are offered to the public and are financed either through public or private funds. In particular, accessibility to the built environment, transport and information and communication technologies is a means to include people with disabilities. These various application domains are very much consistent as Information Technology progressively permeates all aspects of our lives. It is thus important, to provide accessibility to all venues, infrastructure, transport and technology as well as services to be bought, developed, maintained or refurbished.

3.0 ARCHITECTURAL DISABILITY

Danso et al (2011), intimated that, only 10% of individuals may not be architecturally disabled in one way or the other at some time in their life. As such, it is very important that the built environment is appropriately designed to be all-inclusive. Goldsmith (1997), coined the phrase 'architectural disability' to describe how the physical design, layout and construction of buildings and places can confront people with hazards and barriers which make the built-environment problematic, bumpy or precarious and may even prevent some people from using it at all. One of the greatest drawbacks for the inclusive design of the built-environment is professional mindset and assumptions, encapsulated in the peculiarity between general and special needs. While some critics attribute '*architectural disability*' to the ignorance of building designers in terms of inflexibility and unawareness, others believe that the unawareness can be cured by exposing these designers to good information and creative templates. Some other experts in the building industries also claim that architects, engineers and other construction professionals do not often appreciate the changing needs and abilities of society and, therefore, they are challenged to come out with suitable inclusive design solutions. The attitudes of these professionals have to be changed. Since we are all likely to be disabled at one time or the other in our lives, designing for the disabled will mean designing for the broader society.

In terms of cost, it could be argued that inclusive design can be financially beneficial, in that, in most cases, universal design elements can be added to a product's design for little or no cost. It must, however, be admitted that, in some situations, designing for everyone may include features that cost more than traditional designs. It also leads to decrease in modification and compensation costs since traditional designs that limit people's ability to work, live, or function independently in their environment can increase costs for students, staff, the University community and the general public by requiring special modification and accommodation (Vandebelt, 2001). An important outcome for inclusive design should, therefore, be to both ease architectural disability and realise a greater measure of social equity and

justice. However, critics of inclusive design argue that, in many cases, it is impossible to provide a '***one size fits all***' solution and that some people will always be excluded.

4.0 DISABILITY AND BARRIER-FREE ENVIRONMENT IN HIGHER EDUCATION

Disability in higher education has occasionally received policy attention through countries' initiatives to widen participation. Riddell et al (2004), emphasised the importance of widening participation for disabled students as well as those who experience social disadvantage. Also, Brinckerhoff et el (1992), mentioned that some universities and their analogous institutions have taken steps to smooth the progress of students with disabilities to pursue various forms of academic programmes. However, Riddell et al. (2004) argued that until the 1990s, most Universities were virtually inaccessible to disabled students and staff. They also shared the view that Universities and other analogous higher institutions had failed to contribute to knowledge about disability, and this occurrence is contemptuous for the future.

Currently, it is estimated that a tenth of the world population live with some form of disabilities out of which nearly 200 million experience considerable difficulties in functioning (United Nations, 2014). This implies that, at least, two million out of the estimated population of 24 million Ghanaians are disabled in one form or the other. The situation becomes more unpleasant, if one considers the fact that we are all disabled at one time or the other in our lives. There are very few people who remain able-bodied and healthy throughout their lives on earth. It is, therefore, important that the built environment, which includes educational facilities, are made barrier-free by appropriately designing, constructing and maintaining them to meet the needs of all users equally (Baris, *et al.*, 2009). The desires of the disabled are as important as the needs of the able majority. For this reason, planning and designing for the majority should take into account the requirements of PWDs (Uslu, 2008). The principles of inclusive design aim to accommodate the broadest range of bodily shapes, dimensions and movements, in the belief that designers and manufacturers should ensure that buildings, products and services address the needs of the majority of users.

The involvement of students with any form of disabilities in higher education is often discussed in respect of physical access, namely, shape and design of the buildings. However, some schools of thought hold the view that an all-inclusive setting needs to take into account, the provision of an environment that is conducive for all categories of people.

5.0 THE BUILT ENVIRONMENT IN CAGRIC

There are many reasons that culminate in specific design, plan, and construction. Each aspect of the built environment is created to fulfil certain human purposes. As those purposes and actions are diverse, so too are the reasons to design and build. People everywhere are surrounded by profusion of components of the human-created world. It may actually be uncommon to find environments that are completely not made or arranged, maintained or controlled by people or society. This implies that no environment may seem to be untouched or totally free from human intervention and impacts. In other words, the cumulative results of the changes that people have made in their surrounding environment are far-reaching lingo of past and present cultures. It is against this background that Roof and Oleru (2008) defined the built environment as "the human-made spaces in which people live, work, and recreate on a day-to-day basis". Under the circumstance, the built environment should consist of the external physical conditions that affect and influence the growth, development, and survival of every organism contained therein.

The College of Agriculture Education of the University of Education, Winneba inherited most of its structures from the then St. Andrew's College and that the historic resources which were handed over to the present era give the Campus its unique character, create a sense of place and contribute significantly to the high quality of life that residents and visitors enjoy. Some of the notable structures that were handed over include:

1. The Old Administration Block
2. The Computer Block
3. The Saint Andrews Chapel
4. The Amaniampong Hall of Residence
5. The NASKA II Library
6. The Old Science Laboratory
7. Some Staff Bungalows

These buildings together with others were built in 1955 by the Scottish Government and they are still considered the most prominent buildings in the College. The St. Andrews Chapel provides seating at two main levels. The seating in the auditorium is arranged in a raked manner to give all members of the audience a good sight line. The paths for circulation are devoid of smooth surfaces like internal ramps. Apart from its main function as a lecture theatre, programmes such as open forum, theatre performances, film shows and other social and religious activities are held there.

The Old Administration Block served as the Main Administration during the initial years of the establishment of the University. The block has ten (10) office spaces for staff of the Faculty of Science and Environment Education, the Security Section and the Students' Housing Administration.

The former classroom block which was converted to Computer Block has other facilities such as offices for Estate Unit, Finance Annex, Internet Server Room and Internet Café. The block is mainly utilised by all year group of students due to the presence of the internet café.

It is a fact that almost all the facilities on campus have serious deficiencies as far as accessibility to their built-environment is concerned. In terms of provision of facilities for disabled people, the New Lecture Theatre and the New Student Hostel which obviously are the most modern among the structures have better facilities for PWDs than the other structures. However, facilities for PWDs in and around these two buildings, such as car parks, ramps, directional signs, and hand rails, should, however, be improved. The greatest levels of deficiency were, however, observed in and around the Computer Block, the Main Administration Block, the NASKA II Library, the Science Laboratory and the Amaniampong Hall of Residence. These buildings will need major retrofitting to make them accessible to PWDs.

6.0 COMPLIANCE OF THE BUILT ENVIRONMENT IN THE COLLEGE OF AGRICULTURE EDUCATION

6.1 Horizontal and Vertical Circulation

A critical assessment of the level of compliance of the built environment in the College with respect to horizontal circulation (building entrances, reception areas, corridors, passage ways, floor surface finishes, etc.) and vertical (ramps, staircases, lifts etc) indicated that, most of the buildings and walkways in the College were least compliant with the requirements for doors and reception area, respectively. The New Lecture Theatre and the New Student Hostel are the most compliant when all the elements under horizontal circulation were considered. The main entrances of the Administration Block, Computer Laboratory, the NASKA II Library, the Science Laboratory and the St. Andrews Chapel had steps without any ramp provisions and, therefore, were not accessible to wheelchair users.

Vertical circulation at these buildings is only possible by means of staircases. For staircases to be comfortable for use, the rise and going need to reflect stride length while keeping within dimensional limits and those excessively high risers may result in excessive strain being placed on knee and or hip joints of ambulant disabled people when ascending or descending flights of stairs. It was also observed that tread and riser dimensions were uniform in the various staircases of most of the facilities as required by British Standards Institution (2001).

Differences in floor levels at the ground floor of the New Student Hostel were bridged by ramps while floor-to-floor circulation at upper floors was by means of stairs due to the absence of a lift. There are no ramps at the Old Lecture Theatre, the St. Andrews Chapel, the Computer Block and the Blocks of the Amaniampong Hall of Residence and that access by disabled people, especially wheelchair users, to the upper floors of these facilities is, therefore, not possible. From the above assessments, it is obvious that PWDs, especially wheelchair users, could encounter serious challenges in accessing the upper floors of the said facilities. This condition is partly due to the fact that these buildings were designed and constructed long before the recent global agitation for the provision of access for the disabled in public buildings.

6.2 Car Parks and Access Routes to and around Buildings

One of the most important activities of a journey is where and how a vehicle to be used for the said journey is parked at the commencement and termination points. It is required that, at least, one space or 5% of the total parking spaces, whichever is greater, should be earmarked for disabled motorists [BS8300 (2001)]. The inability of the University to satisfy this technical requirement at all the car parks in the College means that a disabled motorist or passenger cannot use any of the car parks on campus. Many people, whether staff, students or the general university community, use these facilities daily to transact various forms of business and the present state of the car parks is likely to heighten the sense of aggravation and social exclusion faced by PWDs among them.

The British Standards Institution (BS 8300, 2001) requires that access routes should not contain features which constitute a barrier to disabled people unless a suitable means for bypassing the obstruction has been provided close by and is always available for use. The uneven surfaces or surfaces with loose materials (e.g., gravel) and large gaps between paving materials at the frontage of the Science Laboratory Block could cause problems for wheelchair users, people with impaired vision and people who are generally unsteady on their feet. However, it was observed that most of

the access routes to and around the various facilities in the College were inaccessible to PWDs. They were also seen to be sufficiently wide, strewn with earth and loose gravel and not adequately lit. Their widths could not allow wheelchair manoeuvring and could not be safely utilised by persons with impaired vision.

6.3 Sanitary Accommodation

The importance of providing inclusive toilet facilities in public buildings cannot be overemphasised. Goldsmith (1976) observes that to the disabled persons, public lavatories are the most important of all public buildings in the built-environment since their absence could bring about disaster. Also, space requirements for suitable lavatory accommodation are generally important for all manner of users. However, none of the facilities in the College had satisfactory restrooms for disabled persons. All restrooms had the normal-level water closets, without vertical and horizontal grab rails and hand washbasins. Also, there are no ample room for manoeuvring by wheelchair users.

7.0 CONCLUSIONS

The need for making the built environment barrier-free is so important that Peel, *et al*. (2009), advance some opinions for its operation. In their view, *a* moral argument that access to the environment is a basic human right and that there is a moral obligation for academic institutions to tackle the barriers and obstacles to create and sustain an inclusive environment. They also proposed *a* sustainability argument that adaptable and flexible buildings and environments are better able to accommodate the changing needs of society and individuals as well as *a* professional argument to operate within an equal opportunities framework as required in professional codes of conduct.

Despite the efforts of the Management of the University to establish a conducive environment for participation of persons with disabilities in all spheres of life on campus, PWDs still face worries in terms of accessing the physical infrastructure. Most buildings on campus do not have facilities such as ramps, lifts, and so on. Some of the existing accessibility facilities are not designed according to the required Standards and that persons with disabilities continue to face difficulties in accessing them. The responsibility lies on us as students, staff and the general university community to help build a better environment for all.

8.0 RECOMMENDATIONS

The following recommendations are made to ensure that adequate accessibility of the facilities in the College of Agriculture Education of the University of Education, Winneba are provided for easy movement of PWDs on Campus:

1. Designated car parks that are appropriately designed, constructed and signed should be provided for PWDs at all academic, residential and recreational facilities on campus.
2. It is also recommended that, at least, one entrance per facility should be accessible to a wheelchair user.
3. The corridors of the Old Administration Block should be cleared of all obstructions to facilitate movement and prevent injury to PWDs.
4. The staircase at the Main Administration Block should be fitted with additional handrails to facilitate easy movement and proper support for the disabled users.
5. Internal ramps and other barrier free facilities, including lifts should be incorporated into the construction of the New Library Complex and the Chapel Extension Project (Lecture Halls) which are under construction.
6. All-inclusive sanitary accommodations should be provided at all facilities on Campus.

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