KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY COLLEGE OF ART AND BUILT ENVIRONMENT DEPARTMENT OF BUILDING TECHNOLOGY

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"CHALLENGES WITH THE IMPLEMENTATION OF THE DISABILITY ACT IN THE GHANAIAN BUILT ENVIRONMENT SECTOR"

By

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A thesis submitted to the Department of Building Technology in Partial fulfillment of the requirements for the award of Master of Science Degree in Construction

Management.

NOVEMBER 2015

DECLARATION

This is to certify that this work or any part thereof has not been previously submitted in any form to the University or to any other body whether for the purpose of assessment, publication or for any other purpose. I confirm that except for any express acknowledgements and references cited in the work, the original work is the result of my own efforts towards the Award of MSc in Construction Management.

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DEDICATION

I dedicate this report to my God almighty.



ACKNOWLEDGEMENT

I give praise, honor and adorations to the Most-High God for his divine guidance and protection throughout the course and when undertaking the study.

My sincere thanks and gratitude goes to Dr. A. K. Danso a researcher, counselor and lecturer, for supervising me through this study. His guidance and constructive criticisms have made this project a success. May God continue to use him to bless the academic world and humanity.

I owe much gratitude to all the respondents who spend their precious time to provide me with the data needed for the study. God bless you all.

I also wish to thank all lectures in the Department of Building Technology, KNUST, for their hard work and commitment to the service of students. God bless them for imparting me with knowledge for the years I have been a students in the department.

Finally, I thank all my friends and loved ones who contributed in diverse ways to make this project a success.



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ABSTRACT

The Persons with Disabilities Act 2006 (715) of Ghana was passed to address the needs of PWDs which include ensuring a barrier free environment and social inclusion for all manner of people irrespective of their disability. Years after the passage of the Act very little has been done in ensuring the accessibility of Persons with Disability (PWDs) to public facilities. Some new buildings are constructed without considering the needs of disabled thus making the accessibility of PWDs to the built environment difficult. The current study was carried out to address the gap by soliciting the views of designers, the local authorities, Disability Groups and PWDs on the reason or challenges associated with the implementation of the disability Act to ensure a barrier free built environment for the disabled. It also sought to find out the extent of awareness and utilization of the Act. Using the Kumasi Metropolis as a case study, a total of 76 respondent were purposively selected from professionals of the built environment such as architects, engineers, planners etc., Disability Groups (i.e. the Department of Social Welfare and KNUST Centre for Disability and Rehabilitation Studies) and PWDs who are residents in Kumasi. The data collected was analyzed using Statistical Package for Social Scientist Software (SPSS) version 16. The results revealed that even though majority of the designers are aware about the disability Act, the level of utilization of the Act in the design of facilities in the country is low. The built environment still pose various degrees of restrictions to accessibility by PWDs. The challenges militating against the implementation of the disability Act include the following; Lack of enforcement of the Act, Weakness in the provisions of the

Act, Lack of public awareness about the Act, Complexity and High Cost of designs which incorporate the needs of the Disabled, Inadequate policies and standards, Lack of consultation and involvement of PWDs in decision making and Ineffectiveness of Disability Groups. Public Education, review of the Disability Act and active involvement of disability Groups in decision making were some of the recommendations made.



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CHAPTER ONE

GENERAL INTRODUCTION

1.1 BACKGROUND

Persons with disabilities are estimated to be 25 per cent of the world"s population out of which between 2-4% are found to face significant problems in being operational (WHO/World Bank, 2011). This is a substantial number implying that any decision concerning the design of the built environment should take into account their needs. In the year 2006 a convention was held by the United Nations to formulate policies to address the rights of the disabled. Significantly, the convention gave birth to the first human rights treaty of the 21st century. The convention among other thinks talks about how the disabled can have easy access to the built environment with much difficulties. It generally focuses on Persons with Disabilities and their right of access to public facilities. Countries that signed up to the convention were required to amend national laws and create a barrier free environment so that Persons with Disabilities would have equal right as able persons.

In Ghana, the World Health Organization (WHO/World Bank, 2011) estimates the disability rate of Ghana to be between 7 and 10 per cent, which equates approximately 1.55 – 2.2 million people in the country. In the year 2006, the Persons with Disabilities Act 2006 (715) was passed to address the needs of PWDs. Clause 6 and 7 of the act for instance states "developers, owners or people who are in charge of public facilities or services should put measures in place to make the facility or service accessible to PWDs".

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1.2 PROBLEM STATEMENT

The passage of the Disability Act in Ghana was commended by many as a step in the right direction towards ensuring a barrier free environment and social inclusion for all manner of people irrespective of their disability. Six (6) years after the passage of the Act to date series of studies Danso *et al.* (2011); Ashigbi (2011); Abdul-Rauf and Braimah (2011) and Tandoh and Mensah (2012) have shown that little has been done in ensuring the accessibility of Persons with Disability (PWDs) to public facilities. Some new designs (infrastructure) fail to incorporate the needs of PWDs. Existing public facilities are not renovated. Danso et al. (2011) for instance which looked at how some selected public facilities (buildings) in the Accra metropolis of Ghana met the requirements of accessibility by the PWDs. The buildings included the National Theatre and the Accra International Conference Centre. The findings from the research showed that most of the buildings were inaccessible to PWDs. Facilities, such as car parks, ramps, entrances, corridors and staircases presented various degrees of restrictions to PWDs access. Fittings and fixture such as seats, braille texts, accessible public telephones, directional signs and underfoot warnings were almost nonexistent in a majority of the buildings.

Abdul-Rauf and Barima (2011) also noted that, the presence of kiosk, sign boards, telephone booths, cars, omnibuses etc. parked on the sidewalks posed difficulties and danger in accessing the build environment by PWDs in Accra. Tandoh and Mensah (2012) also reported similar findings on their study on the accessibility of PWDs to the Central Business District of Kumasi. With regards to the state of accessibility of PWDs to the built environment at the tertiary institutions in Ghana, Ashigbi (2011) found the following on the University of Ghana, legon campus: Almost half i.e. 22 out of 46 (47.8%) of the car parking facilities surveyed were severely restrictive to accessibility by PWDs. As high as 22 out of the 40 (55%) access routes surveyed posed mild restriction.

60.3% of the doors that were evaluated had various degrees of restrictions to students with special needs. Moreover, only 30.3% (10 out of 33) of the stairs

(vertical circulation) had no limitations to the easy access by the disabled. All the lavatories (bathrooms and toilets) examined (i.e. 15) also posed restrictions to the movement and safety of users. The above statistics thus confirm the fact that notwithstanding the existence of a legal framework (i.e. the disability) backing the needs of PWDs, the built environment at educational institutions, city centres etc. still pose various degrees of restrictions to PWDs access. The current study therefore aims at finding out how the facilities designed do not still meet the requirements for PWDs access. In other words, the challenges architects, engineers and their clients face in the implementation of the Disability Act in the built environment.

1.3 AIM AND OBJECTIVES

1.3.1 Aim

To identify the challenges associated with the implementation of the provisions of the Disability Act of Ghana (Act 715) regarding accessibility of PWDs to the Built environment.

1.3.2 Objectives

To achieve the aim above, the following specific objectives were pursued:

- i. To determine the level of awareness and utilization of the Disability Act in the design of public facilities.
- ii. To identify the challenges associated with the implementation of the provisions of the Act regarding accessibility of PWDs to the Built environment.

1.4 Research Questions

The following questions were set from the problem statement:

- (i) What are the challenges associated with the implementation of the provisions of the Act regarding accessibility of PWDs to the built environment?
- (ii) What is the level of awareness and utilization of the Disability Act in the design of public facilities in the country?

1.5 Scope of the study

The study was restricted to the requirements of the Act on accessibility of PWDs to the built environment. The challenges associated with the successful implementation of this section of the Act will be solicited. Geographically the study was carried out in the Kumasi.

1.6 Methodology

The study commenced with an extensive review of pertinent literature on PWDs and the built environment. The Ghanaian Disability Act which is central to this study was also reviewed.

The source of this data was mainly through journals, books, previous thesis etc.

Following the review, questionnaires were designed to solicit the views of designers (i.e. Architect, Engineers, Planners etc.) on the challenges they face in implementing the provisions of the Disability Act on accessibility of PWDs to public places. The reasons for the failure of the designers to incorporate the requirements of PWDs in their designs were gathered. The study was carried out in the Kumasi Metropolis. The data collected was analyzed using SPSS software package. In line with the results of the study recommendations were consequently proffered.

1.7 Significance of the study

The population of the disabled in globally is estimated to be 25% of the world population (WHO/World Bank, 2011). This makes it a matter of necessity for policy makers to look at the needs of these people. The 1992 constitution of Ghana (Article 12 section 2) gives all citizens of Ghana (including disabled) the right to enjoy some basic human rights including access to public facilities. The societal abandonment of the disabled in the country is enough justification to recognize the extent to which people with disabilities have been discriminated in their daily activities. The current study is investigated the primary challenges associated with the implementation of the provisions of the Disability Act on accessibility of PWDs to public facilities and the built environment in the country. The challenges designers face in their design of facilities for the disabled were gathered. The findings formed the basis for the decisions made.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

During the past few decades, efforts have been advanced in the direction of strengthening the status of the disabled and incorporating disability matters into human rights laws. Various acts and codes have been developed to promote the wellbeing of PWDs. The UN Convention on the Rights of Persons with Disabilities for instance addresses a lot of issue regarding the political, civil cultural, economic and social rights of PWDs. The convention explains how nations must fulfill their responsibilities towards PWDs and also help improve their lives. Elimination of discrimination and creating equal opportunities for the disabled were also being advocated for. In line with the above, the Persons with Disability Act (Act, 715) was enacted by Ghana in the year 2006. One of the objectives of this Act is to see to it that, the built

environment within the country is reachable, useable and safe for use by all manner of people irrespective of their disability. This chapter presents reviewed literature on the disability Act. The challenges associated with the implementation of the Act will be gathered.

2.2 Persons with Disability - The Ghanaian Situation

The World Health Organization estimates that persons with disability worldwide exceed 600 million which represents approximately 25% of the world"s total population. The figure further reveals that less than 20% of them are found in developed countries whilst the rest are from developing countries (WHO/World Bank, 2011). In Ghana the results of the Population and Housing Census in 2010 revealed that 737, 743 persons with various forms of disability live in Ghana (Population and Housing Census, 2010). The Ministry of Health also estimates the figure to be around 7-10% of the country"s population with an expected increase in the

future.

Currently the lives of PWDs have been observed to be plagued with serious socio-economic inequalities compared to that of their colleague able-bodied persons as revealed by the following reports:

- (i) The disabled constitutes 20% of the world"s population living below the poverty line (World Bank, 2003).
- (ii) The unemployment rate for the disabled in some nations reaches 85% (ILO, 2014).

The situation is Ghana is not different. Greater percentage of PWDs do not have access to education health, and other services. They have poor literacy skills and low social status. In the social and economic realms, PWDs in the country are among the poorest. They are usually viewed as unproductive who cannot contribute to societal progress. Cultural beliefs,

superstitions, prejudices and other negative behaviors affect the disabled (Ghana Federation of the Disabled, 2008). To address the challenges above, an Act (Persons with Disability Act,) was passed to promote the welfare and rights of PWDs in Ghana.

2.3 The Persons with Disability Act (Act 715)

A variety of disability Associations and advocates have expressed displeasure at the way PWDs have been ill-treated despite the provisions in the Constitution of the Ghana which seeks to protect their rights (Ghana Federation of the Disabled, 2008). In the year 2006, Ghana promulgated the Persons with Disability Act (Act 715th Act of the republic of Ghana) after many efforts from Persons with Disabilities (PWD"s), NGO"s and other interest groups to serve as the legal guide and protect persons with disability. The Act has the following as some of its objectives:

- **♣** To disseminate information concerning disability
- ☐ To create a conducive setting for the full involvement of PWDs in national development issues

 ☐ To create a conducive setting for the full involvement of PWDs in national development issues.
- Left To ensure that roads, transport, other public infrastructures are accessible to the disabled

Even though the Act is very relevant in stimulating the interest of the disabled however, studies have shown that its implementation is very low especially when it comes to PWDs access to the built environment (Danso et al., 2011). The Ghana Federation of the Disabled (2008) noted that regardless of the provisions in the Act, the disabled have still been discriminated especially regarding their access to public infrastructures such as roads, buildings, markets, hospital etc.

in the country. They noted that structures which are being constructed after the passage of the Act have failed to acknowledge the needs of PWD (Ghana Federation of the Disabled, 2008)

2.4 Disability and the Built Environment

Disability is an inevitable human occurrence that limits equal access due to activity limitation and participation restriction in society (WHO/World Bank, 2011). The built environment according to Koplan and Flemming (2000) is defined as all buildings, spaces and products that are created or modified by people. It includes buildings, roads, parks/recreation areas, business areas, etc. Adapting the built environment to make it accessible to PWDs is one of the key campaigns of Disability Acts and Disability rights movements. The Act requires that all public buildings and infrastructure are designed to be accessible, reachable and useable by all people irrespective of their disability.

As noted by the Social model of disability, the interactions between individuals and the environment usually results in disability (Meyers *et al.*, 2002). The design of the physical environments play a key role in the independence of users. An individual encounters various conditions as they use the built environment in their life (Sampson *et al.*, 2002).

Wylde *et al.* (1994) argues that only ten percent (10%) of persons may not be disabled in the course of their lives. They noted that even old age can made a person disabled. In view of this, the design of built environment should be made all-inclusive. In the study by Goldsmith (1997) the term "architectural disability" was coined to explain potential role the design of the built environment can make one disabled. The design of the structures can pose barriers to the safety, reachability, accessibility and comfort of PWDs.

2.5 ACCESSIBILITY

Accessibility is measure of the extent to which a product, device, service, or environment is available to as many people as possible. In others words accessibility is the ability to enter or approach a place and benefit from some system or entity (BS 8300, 2001). The word often centers on persons with disabilities or special needs and their right of access to assistive technologies, the built environment, education, health, employment just to mention a few. It is significant for the disabled to have access to public buildings defined as a building, or part of it, to the public have access to or occupied and managed by a public entity. Peel and Posas (2009) advances 5 arguments which supports the fact that the built environment should be made accessible to the PWDs:

- (i) Access to the environment is a basic right of all people including the disabled;
- (ii) A more flexible, all-inclusive environment is capable of addressing the needs of the public;
- (iii)Limiting PWD access to workplace and marketplaces do not make sense from economic perspective

The current study seeks to look at the challenges associated with the implementation of the disability act regarding accessibility of PWDs to the built environment.

2.6 Theoretical Review

Creswell (2007) defines a theory "as a set of interrelated variables put together to form propositions that explains or help to predict a phenomena that occurs in the world. The current study employed Donald Van Meter and Carl Van Horn"s Implementation models to offer some theoretical basis on implementation of policies and Acts such as the Disability Act.

2.6.1 Donald Van Meter and Van Horn's Implementation model

This theory states that specific factors that may contribute to the realization or otherwise of policy goals changes from one to the other. The theory explains that six variables namely: policy standards and objects, available resources, the social, economic, and political atmosphere, disposition of implementers, features of the implementing organization and the quality of the inter-organizational relationships interrelates to produce an outcome (VanMeter and Van-Horn, 1957).

From the above model it can be said that the social, economic and political environment are important elements which affects the implementation of the Disability Act. The Ghanaian social perception of people also plays a role. The theory also takes note of the importance of resources for successful implementation. The theory so variable of "disposition of implementers" also helps to examine the commitment of implementers, especially the top management personel, and to explain how that is affecting the implementation outcome of the Disability Act. It is hypothesized by the researcher that the level of commitment given to a policy will be determined by the amount of resources allocated to the said policy, the level of urgency placed on the policy by the top officials, the supervisory role they play, as well as the effort that has been put into setting up legitimate implementation structures (Van-Meter and Van-Horn, 1957).

2.7 Review of Related/Empirical studies

Years after the passage of the Disability Act, series of studies have been carried out to find out if the provisions of the Act regarding accessibility of PWDs to the build environment have been carried out. The studies include the following:

2.7.1 Accessibility of Monumental Public Buildings in Ghana (Danso et el., 2011)

This study was carried out to assess the extent of accessibility of the disabled to some selected public buildings in Ghana, Accra to be precise. The aim was to survey the buildings to verify if they comply with international standards or building codes on accessibility and universal design. The buildings included the National Theatre and the Accra International Conference Centre. The findings from the research showed that most of the buildings were inaccessible to PWDs even after the passage of the Act. Moreover, facilities, such as car parks, ramps, entrances, corridors and staircases presented various degrees of restrictions PWDs access. Fittings such as braille texts directional signs, seats, underfoot warnings and accessible public telephones, were almost nonexistent in a majority of the buildings (Danso *et al.*, 2011). This therefore raises question on the extent of implementation of the disability

Act in the design of those facilities failed incorporate the needs of the disabled. What factors influenced the decision of the Assembly and the designers?

2.7.2. Accessibility at the Central Business Districts of Accra and Kumasi

Accra and Kumasi are two of the largest cities in Ghana. In terms of population, these two cities boost of large numbers. Workers and businessmen comprising of the abled bodied and the disabled use the Central Business Districts (CBD) of these cities for their daily activities. Thus the state of accessibility of the facilities such as car parks, walkways, building entrances, etc. is of much interest to the public. Abdul-Rauf and Barima (2011) and Tandoh and Mensah (2012) surveyed the CBDs of Accra and Kumasi respectively to find out the extent of restrictions posed by the environment to PWD access. In the work by Abdul-Rauf and Barima (2011) it was found that, the presence of kiosk, sign boards, telephone booths, cars, omnibuses

etc. parked on the sidewalks posed difficulties and danger in accessing the build environment by PWDs in Accra. Tandoh and Mensah (2012) also noted similar findings on their study on the Central Business District of Kumasi. Open drains (gutters), poorly designed walkways with steep gradients, lack of ramps at building entrances among others were also found to pose difficulties to wheelchair users in accessing the built environment.

2.7.3 Accessibility at Tertiary Educational Institutions in Ghana (Ashigbi, 2011)

With regards to the state of accessibility of PWDs to the built environment at the tertiary institutions in Ghana, Ashigbi (2011) surveyed the facilities at the University of Ghana, legon campus. The results revealed that most of the facilities on the campus i.e. lecture halls, car parks, library etc. still pose challenges to PWDs accessibility. The following were some of the findings: Almost half i.e. 22 out of 46 (47.8%) of the car parking facilities surveyed were severely restrictive to accessibility by PWDs. As high as 22 out of the 40 (55%) access routes surveyed posed mild restriction. Seventy-five percent 75% of the entrances and 60.3% of the doors that were evaluated had various degrees of restrictions to students with special needs. Moreover, only 30.3% (10 out of 33) of the stairs (vertical circulation) had no limitations to the easy access by the disabled. All the lavatories (bathrooms and toilets) examined (i.e. 15) also posed restrictions to the movement and safety of users.

The above statistics from the various study no doubt confirm the fact that despite the passage of the disability act the built environment at educational institutions, city centres etc. still pose various degrees of restrictions to PWDs access. The current study therefore aims at finding out why the facilities designed do not still meet the requirements for PWDs access. In other words, the challenges architects, engineers and their clients face in the implementation of the Disability Act in the built environment.

2.7.4 Challenges with the Implementation of Disability Acts

In spite of the numerous efforts in terms of legislations and the passage of national building codes, the built environment of many nations including that of Ghana still remain inaccessible (Imrie, 2002). The following factors have been reported to be responsible for the failure to implement disability Acts:

2.7.5 Weaknesses in the provisions of the Act:

Imrie (2002), explained the national and legal provisions regulating the construction of barrier-free structures are weak or non-existent in many countries. It was observed that, in the United Kingdom for instance, the building codes which guide designers and developers in providing accessible buildings and structure for the disabled were weak and ineffective, such that developers were only required to make 'reasonable provisions' in the design of their buildings for the disabled (Imrie, 2002). Moreover, the provisions apply to only new buildings and key renovations. This weakness in the act has consequently affected the effort of the country to remove the barriers PWDs face in accessing the built environment. Thus even in developed nations such as the United Kingdom, developers and designers have not been adequately "pinned down" by the building regulations. Thus, so long as the law is not amended, the hunt for an all-inclusive built environment be an illusion.

Ojok (2012) also noted lack of a clearly defined institutional framework as one of the challenges impeding the implementing the Ugandan Disability Act.

2.7.6 Inadequate policies and standards

Similar to the issue discussed above, usually the design of national policies do sometimes neglect the needs of the disabled. Even where the policies considers the PWDs, the policies or standards are hardly enforced. For instance a study by Education for All Fast Track Initiative Partnership on educational policies showed that only 18 countries either provided very little detail of their proposed strategies did not. In the case of Ghana, the disability is there to serve as the legal backing to ensuring the accesses of PWDs to the built environment, however, the enforcement of the Act is the issue of concern.

2.7.7 Complexity and high cost of designs which incorporate the needs of PWDs

Imrie and Hall (2001) noted that the design of the built environment cannot be completely all-inclusive due to the following reasons:

- (i) Low demand from the disabled to necessitate the provision of an accessible builtenvironment for them. In other words, the percentage of the disabled who will be using a given facility compared to the abled bodied persons are sometimes some insignificant that, it become a thing of no necessity to incorporate their needs in the design of those facilities.
- (ii) It is highly expensive to provide an environment that is fully accessible. In explaining this, Imrie and Hall (2001) argue that, the extra space, additional fixtures and devices add up to the complexity of projects which fully considers the needs of the disabled.

 Moreover, the more complex the design, the more expensive it becomes.

After reading the above proposition, Vandebelt (2001), argue that the assertion by Imrie and Hall (2001) can be disproved if one considers the following: Firstly the smaller size of PWDs as users of a given facility compared to their colleague abled bodied persons is not

enough justification to prevent them from enjoying their right. So long as they are entitled to such benefits, they should not be restricted to the use of the facility through the design. Moreover, a person can become disabled at any point in time, so designers should not look at the current statistics in taking decisions.

Secondly, on the issue of cost Vandebelt (2001) admitted that in some situations designing for everybody may include facilities that cost more than traditional designs however, one can still design an all-inclusive structure which is financially advantageous, by integration the principles of universal design (Vandebelt, 2001)

2.7.8. Ignorance

In the study by Wijk (2001), architectural disability" was attributed to the ignorance, stubbornness and beliefs of the designers. Salmen (2001) also asserts that engineers, architects, planners and professionals of the built environment usually do not recognize the changing needs and abilities of society. They therefore fail to come out with inclusive design solutions. It is recommended that, the ignorance of the designers can be addressed through public educations and introducing them to creative examples. Moreover, their attitude can be changed through professional training programmes. In addition to that, the current mode of training should also be revised

2.7 9 Ineffectiveness of Disability Groups

Ojok (2012) noted that the ineffectiveness/silence of disability communities is partly responsible for the suffering of PWDs in Uganda. He explained that, Disability groups are supposed to champion the cause of the disabled. They are responsible to advocate for passage

and implementation of disability laws. Thus where this body is silent or ineffective the disabled suffer.

2.710. Negative attitudes towards PWDs

Cultural and traditional beliefs or prejudices sometimes create barriers to employment, education, health care and social participation. The bad notion some designers have about the disabled sometimes influence their decisions when it comes to considering the needs of PWDs to the built environment (Ojok, 2012)

2.7.11. Lack of budget allocation for implementation

Monies reserved for the construction of infrastructures are often found to be insufficient in terms of its ability to finance the project given that all the requirements for PWDs access are fully incorporated (Ojok, 2012). It is noted that the lack of effective financing is a major impediment to the implementation of the Disability Act in Uganda (Ojok, 2012). For instance, in advanced countries, it is estimated that between 20% to 40% of the disabled to not have their needs interims of assistance devices been met. Moreover, in most developing economies the governments cannot provide satisfactory services for the disabled.

2.7.12. Lack of consultation and involvement in decision making

Most disabled persons are found to be excluded from decision-making processes even on issues that directly affect their lives. This problem is a key issue in most countries (Ojok, 2012). Disability groups represents the mouth piece for the disabled in any country. They receive various complains such as the difficulties they may face in using a particular facility. Thus it is considered very important that, either the disability associations or the disabled themselves are

periodically invited and their opinion solicited on the challenges they face in using the built environment. This will provide a vital information to the designers and policy maker to design and an all-inclusive environment which can meet the needs of the users. On the contrary (Ojok, 2012) noted that designers usually sit at the offices, consult books and produce designs which at the end of the day are sometimes unable to meet the expectations of the users.

2.7.13. Lack of coordination between departments

TAS CW SAP

Ojok (2012) found that difficulty in the coordination of the roles of other ministries, lower government structures and private entities responsible for the implementation of the Act is one of the major challenges associated with the implementation of the Disability Act in Uganda. Hassan (2012) also noted the above as being one of the challenges in the implementation of the Disability Act of Malaysia

Summary

The chapter looked at the Ghanaian Disability Act and its implementation. The challenges associated with the implementation of Disability policies were also discussed. The current study will look at the Ghanaian context by soliciting the views of designers and other stakeholders on the challenges with the implementation of the provisions of the disability Act on Accessibility.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1. Introduction

The chapter explains methods and procedures adopted in undertaking the current study. It addresses the following areas: Research design, study population, Data collection and analysis, ethical consideration etc.

3.2 Research Design

According to Fellow and Liu (2008), a descriptive research tries to explore and explain a problem while providing additional information. It tries to describe what is happening in more detail, filling in the missing parts and expanding our understanding on a problem. In the current study, the research aimed at finding explanations to the failure of the country to implement the Disability Act on accessibility of PWDs to the built environment. Based on this, the current study was a descriptive research which employed a mixed research approach.

3.3 Type of Data and Sources

The study collected both primary and secondary data to facilitate the discussion of the results.

The secondary data was obtained mainly by reviewing literature on implementation of disability Acts in other countries and Ghana.

3.4 Population, Sample size and Sampling Technique

A sample frame or population is the complete list of all the cases one wishes to study while a sample is the group of units you select as part of your study unit (Fellow and Liu, 2008).

Sampling is the process of choosing the research units from a target population. In research sampling saves time, allows for detailed study of a subject, it is less demanding and more economical.

Fellow and Liu (2008) noted that sample size is influence by the following factors: population size, purpose of the study; allowable sampling error and the risk of selecting a bad sample

The current study sought to solicit the views of stakeholders such as the Government, local authorities, Disabilities groups and PWDs on the challenges associated with the implementation of the section of the Disability Act regarding accessibility of the disabled to the built environment. The respondents were selected from the Kumasi Metropolis. The study population therefore consisted of all the key personel working in professional associations of the built environment such as Ghana Institute of Planners (GIP), Ghana Institution of Engineers (GhIE), Ghana Institute of Architects (GIA), and Ghana Real Estate Developers Association (GREDA). Specifically, professionals at the Kumasi Metropolitan Assembly (KMA) works department, the Architecture and Engineering Services Limited (AESL) department at Adum, and other professionals working in their own private setup were selected. For the Disability group, the researcher collected data from the Department of Social Welfare at Adum, Kumasi and the Disability Center at the Kwame Nkrumah University of Science and Technology (i.e. Centre for Disability and Rehabilitation Studies, CEDRES). The distribution of the questionnaires to the various departments is shown in Table 3.1. The respondents were purposively selected.

Table 3.1: Distribution of Respondent

Department	Respondents selected	Response Rate
Local Authority/Government	50	40
Disability Groups	15	11
PWDs	25	21
Total	90	72

3.5 Data Collection method

The secondary data was obtained through the review of pertinent literature on PWDs and the built environment, Disability Act and its implementation etc. Review of literature is an important aspect of every research as it helps to identify the appropriate methodologies in underrating a study.

After conducting the literature review and positioned the research within its theoretical scope self-administered questionnaires and interviews were used to elicit primary data from the respondents. The use of questionnaire was chosen due to the fact that it helps the researcher to quickly and/or easily get a lot of information from people in a non-threatening way (Fellow and Liu, 2008). The questions were both opened and close- ended. Out of the 80 questionnaires sent out, 67 were successfully responded to and used for the study.

3.6 Data analysis Method

After a thorough review of literature, descriptive statistics were used in analyzing the data since the kind of data from the survey was mostly nominal and ordinal data. Statistical Package for Social Scientist (SPSS) version 16 software package was used in collating the data. The descriptive statistics included frequencies, percentages etc. Relative Importance Index (RII) was also used to find the importance of the various variables selected in the study. Then results were presented in the form of charts and Tables. The formula below was used for calculating the Relative Importance Index (RII)

$$RII = \frac{\sum W}{nN} \dots (3.1)$$

Where RII = Relative importance index

 \sum w = respondent rating of severity of the challenges

N= sample size; n =the highest attainable score (i.e. 5 in the current study)

3.7 Ethical Considerations

Prior consent/permission of the selected institutions was sought and the purpose of the study explained to them. This enabled the respondents to feel free and answer the questionnaires with all frankness without hiding any information. The privacy, anonymity and confidentiality of the responses were highly treated. Moreover any piece of document used for the work was appropriately referenced to void plagiarism.



CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

The results of the study are presented in this chapter. Discussions have been carried out on the findings of the current study compared to works in existing literature. The chapter has been organized under three (3) main sections with each dealing with the views of the various group of respondents selected for the study. The first section presents the views of designers (i.e. architects, engineer, and planners) and local authorities (who represent the government) on the challenges with the implementation of the disability act regarding accessibility of PWDs to the built environment. The next section addresses the view of some disability Groups/Associations on why the country is still battling to ensure that the disabled have full access to public places. The last section dwells on the disables themselves. Their side of the story was also gathered. The chapter ends with a summary of the key issues discussed.

4.2 Perception of Architects, Engineers and the Local Authority

As explained earlier on, the problem at hand cannot be solved without seeking the views of Architects, Engineers, Planners and the other key personel who work as government representatives at the District, Municipal and Metropolitan Assemblies. These people are the top management members who take decisions on infrastructure development at the local level on behalf of the Government. In all a total of 40 respondents from this setup participated in the study (Note: some of them worked in their own business set up). As shown in Fig 4.1, 43% Architects who formed the majority followed by Quantity Surveyors (20%), Engineers (18%), and Planners (8%).

13% held other positions in their organization. The results further revealed that a majority of them (i.e. 81%) had at least 5 years of working experience.

This put them in pole position to provide in depth information about the problem at hand. In line with the above, the credibility of the information is also assured.

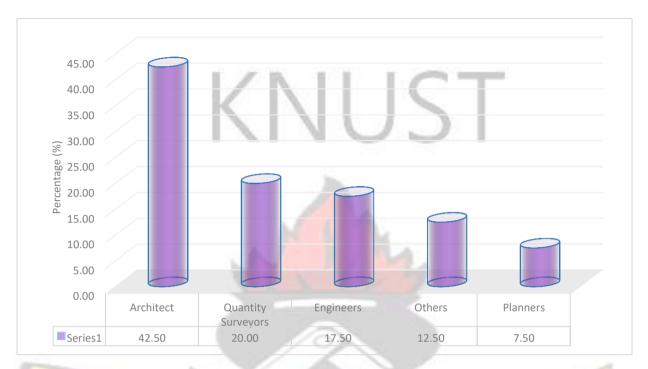


Fig 4.1: Designation of respondents

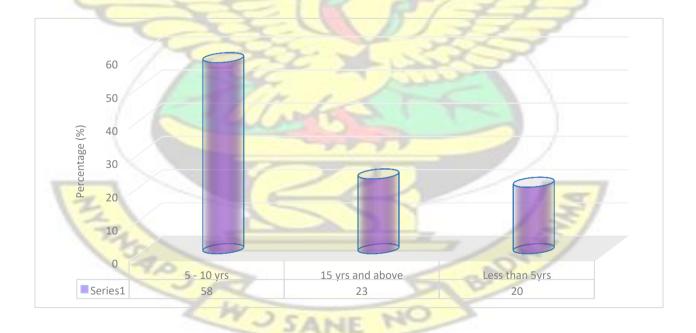


Fig 4.2: Years of working experience

4.2.1 Extent of Awareness and Utilization of the Act in the Design of public facilities

The study went on the find out the level of awareness and extent of utilization of the Act in the design of facilities. Even though 67.5% indicated that they have some level of knowledge about the Act, it was only just fair knowledge. As shown on Fig 4.4, as high as 65% of the respondents who have knowledge about the Act indicate that they have only a fair knowledge. 26% had high knowledge while the remaining 10% had very high knowledge about the disability Act. 32.5% of the respondents had no idea at all about the Act. The above findings raises an issue for great concern if the people who are responsible for taking decision on the design of our built environment have little or no knowledge about the disability Act, how will they implement it? The results shown on Fig 4.5 answers the question. Interestingly, a whopping 62.5% of the respondent indicated that they do not incorporate the needs PWD in their designs. Forty-seven percent (47%) revealed that, during the past 5 years, only 25% of the projects they have designed or supervised had the requirements of PWDs incorporated.

22% indicated that only 10% of their projects considered the needs of the disabled (Fig 4.6). The above figure go to confirm earlier reports (Danso *et al.*, 2011; Ashigbi, 2011) that those, the disability of Ghana exists as a legal framework to ensure that PWDs have equal access to the built environment as their colleague able bodied persons however, a little have been done with its implementation.

Wijk (2001) noted that architectural disability is attributed to stubbornness and ignorance of building engineers. In the current study, the above variables can be said to be responsible for the failure designers and local authorities to incorporate the needs of PWDs in the design of the built environment.

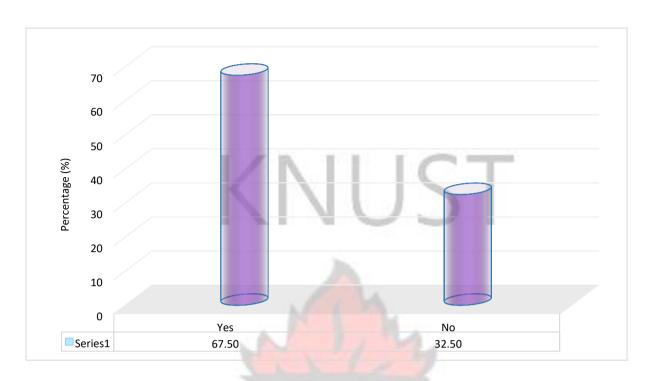


Fig 4.3: Respondents' knowledge about the Disability Act

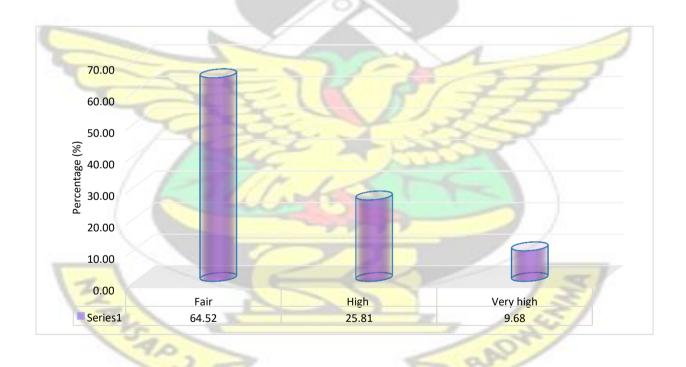


Fig 4.4: Extent of knowledge of the respondents about the Disability Act

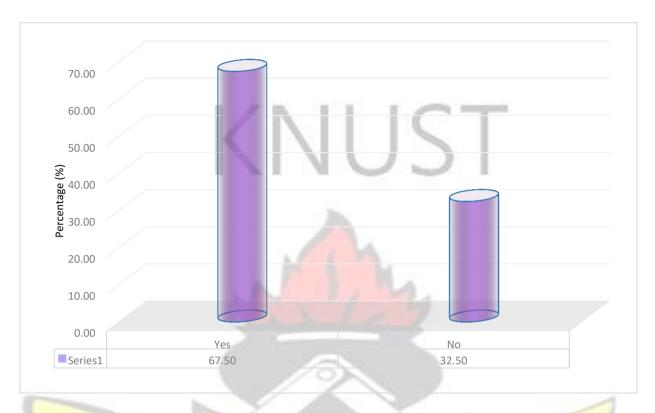


Fig 4.5: Responses on whether respondents incorporate the disability Act in the design of public facilities.

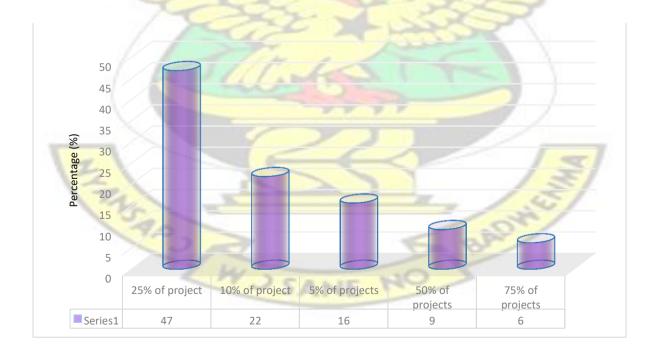


Fig 4.6: Extent of utilization of the Act in the design of public facilities 4.2.2 Accessibility of the Disabled to the Built environment

The study went on to solicit the views of the respondents on how they see the extent of accessibility of PWDs to the built environment at public buildings. A majority of them (77.5%) conceded to the fact that the built environment needs more improvement to make them accessible to the disabled. The remaining 22.5% see it to be normal (Fig 4.7). On this same issue, 40% of the respondents ranked the level of restrictions pose by the built environment at public places to PWDs access as mild while 35% rank it as high restriction. The remaining 25% rank the restriction as being moderate. Thus, the respondents agree that the current built environment at public places such as buildings, roads, parks, recreation areas, business areas etc. pose various degree of restrictions to PWD access. The results above confirms the findings by Danso *et al.*, (2011) who noted that the built environment at public buildings poses restrictions to access by the disabled.

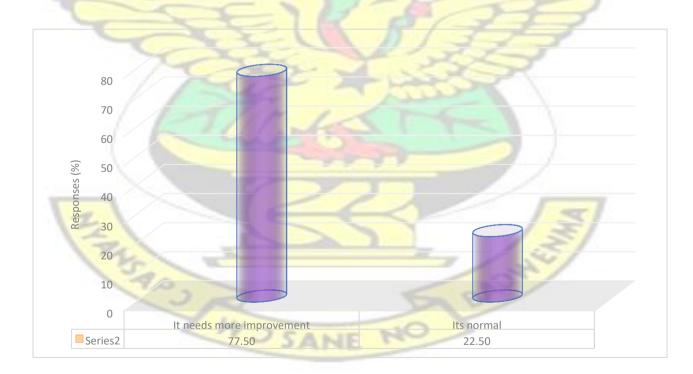


Fig 4.7: Respondents' opinion on the extent of accessibility of PWDs to the built environment at public buildings



Fig 4.8: Ranking of the level of restrictions pose by the built environment at public places to PWDs access

4.2.3 Challenges with the implementation of the Disability Act (Views of designers and the local Authority)

Finally, the study sought to draw information from the respondents on why the country is still failing to incorporate the need of PWDs in the design of public facilities despite the provision been made in the Act. From literature some of the challenges other countries face with the implementation of the Disability Acts were gathered and given to the respondent to indicate how significant each of the factors contribute to the failure to implement our disability Act. Table 4.1 shows the results of the analysis of the responses. The results revealed that all the factors identified from literature contribute in some way to explain the problem the country is facing. A breakdown of the challenges is as follows:

(i) Lack of enforcement of the Act to compel designers

The topmost factor the respondents unanimously voted as the key challenge impeding the implementation of the disability Act is the lack of enforcement. It must be noted that the passage of a law and its enforcement (implementation) are two different things all together. Some of the respondents explained that, they feel not obliged or compelled under any circumstance to incorporate the requirements of the Act in their designs. Quoting one of the respondents "the provisions of the Act are just pieces of advice, you decide to take it or leave it". The above findings are not different the study by Ojok (2012) on the implementation of the Disability Act in Uganda where lack of enforcement was found to be one of the key implementation challenges. Thus, the findings of the current study highlight a gap/weakness in the provisions of the Ghanaian Disability Act. The act has failed to include a clause which will compel all designs/drawings being sent for permit/approval to be scrutinized and checked to ensure that all the necessary requirements regarding accessibility of PWDs are incorporated before the permit is granted.

(ii) Lack of public awareness about the Act

As revealed at the earlier stage of the study, some of the designers and top management members who are responsible for decision making are ignorant about the Act. Moreover, those who claim to have knowledge about it are reluctant to implement it. It was therefore not surprising that as high as 85% of the respondents conceded to the fact that during the past 5 years not more than 25% of all the project they have designed or supervised considered the needs of the disabled. The report by Wijk (2001) is therefore being confirmed by the current study. Salmen (2001), advised that public education and training programs can be used to change the attitude of these professionals. This will help them recognize the changing needs of society and consequently come out with measures to address them.

(iii) Weakness in the provisions of the Act

From the literature, Imrie (2002), explained the national and legal provisions regulating the construction of barrier-free structures are weak or non-existent in many countries. He observed that, in the United Kingdom for instance, the building codes, which guides designers and developers in providing accessible buildings and structure for the disabled, is weak and ineffective, such that developers are only required to make 'reasonable provisions' in the design of their buildings for the disabled. Moreover, the provisions apply to only new buildings and key renovations. This weakness in the act has consequently affected the effort of the country to remove the barriers PWDs face in accessing the built environment. Thus, developers and designers the built environment have not been adequately "pinned down" by the building regulations. In the current study, the respondents ranked this factor as the 3rd most significant challenge.

(iv) Complexity and High Cost of designs which incorporate the needs of the Disabled

Imrie and Hall (2001) argued that there are four reasons that prevent the built environment from being all-inclusive. One of them is the high cost that comes with designing fully accessible built environment. The respondents seems to agree with Imrie and Hall (2011). They unanimously agreed that designs which incorporate the needs of PWDs are comparatively complex and expensive. One of them explained" Take it for instance the situation where you have to provide ramps at building entrances together with steps. The construction of the ramp brings another cost. Moreover, spaces in washrooms should be wide enough to ensure that wheelchair users can use them. Fittings and fixtures in buildings are specially designed to ensure that the disabled can use them. All these things add up to the cost of construction". Thus, the fear of the increase cost of construction put some of the designers and clients off especially when there are few disabled people who will use the facility.

(v) Inadequate policies and standards

In some cities like London, Toronto, Brantford etc. there is a specially designed standard/code on accessibility of PWDs to the built environment. The codes provide guidelines on how the built environment should be design to make them barrier free. However, in this country there are no such standard. The Disability Act does not have any design guidelines. Thus only few people who are abreast with foreign design standards are able to use them in their designs. The above report once again highlight another deficiency on the part of the country in our effect to ensure a barrier free all-inclusive built environment. The factor was ranked 6th with RII value of 0.822.

(vi) Lack of coordination between departments/Lack of consultation and involvement of PWDs in decision making

Another problem identified by the respondents is the lack of efficient coordination between the Disability groups, PWDs and the local authorities who design the built environment. The disabled or their associations are hardly consulted or involved in any decision making process. In fact most of the respondents confess that there have not been a single occasion where they invited the disabled or their association at their board meetings even though the issues which were being discussed concerned the PWDs. Some of them justified their decision to exclude the disabled in their meetings on the grounds that they feel the disabled or the associations usually lack the knowledge when it comes to the design of the built environment hence it was not relevant to invite them. This reason sound logic in some way, however, I believe the views of the PWDs and their Associations cannot be left out. The local authorities can better address the challenges of the disable when they invited them in their decision making.

(vii) Few number of disabled in the country

One of the four assumptions which were put forward by Imrie and Hall (2011) as a key challenge which will not make it possible for the built-environment to be designed to eliminate architectural disability is the smaller size of the disabled users of a given facility. They argue

that in some cases if you compare the number of disabled persons who are likely to use a facility to that of the abled bodied person, you will notice that the difference is astronomical. Consequently, the designer does not see the need to put in so much resource in the design and construction of a facility only to satisfy the need of just few disabled persons.

This problem is worsen by the fact that sometimes the money available for the construction of such facilities are limited. In the current study, the respondents share the same view with Imrie and Hall (2011).

(viii) Ineffectiveness of Disability Groups

W J SAN

According to Ojok (2012) the ineffectiveness/silence of disability communities is partly responsible for the suffering of PWDs in Uganda. He explained that, Disability groups are supposed to champion the cause of the disabled. They are responsible to advocate for the passage and implementation of disability laws. Where this body is silent or ineffective the disables suffer. In the current study, the respondents expressed similar concern that the disabled societies are partly responsible for failure to implement disability laws. If the associations are vibrant, the rights of the disabled to have equal access in the use of the built environment will not be infringed upon.

Table 4.1: Challenges with the implementation of the Disability Act on accessibility of the Disabled to the Built environment (Views of designers and planners)

]	RATING								
	Challenges		2	3	4	5	Total	\sum W	Mean	RII	Rank
1	Lack of enforcement of the Act to compel designers	0	0	2	13	25	40	183	4.5750	0.9150	1st
2	Lack of public awareness about the Act	0	0	3	15	22	40	179	4.4750	0.8950	2nd
3	Weakness in the provisions of the Act	0	1	5	14	20	40	173	4.3250	0.8650	3rd
4	High Cost of designs which incorporate the needs of PWDs	1	2	4	16	17	40	166	4.1500	0.8300	4th
5	Complexity of designs which incorporate the requirements of PWDs.	1	1	3	20	15	40	167	4.1750	0.8350	5th
6	Inadequate policies and standards	0	3	4	19	14	40	164	4.1000	0.8200	6th
7	Lack of coordination between departments	1	4	5	18	12	40	156	3.9000	0.7800	7th
8	Lack of consultation and involvement of PWDs in decision making	3	3	9	15	10	40	146	3.6500	0.7300	8th
9	Ineffectiveness of Disability Groups	4	5	7	18	6	40	137	3.4250	0.6850	9th
10	Few number of disabled persons in the country	4	8	11	9	8	40	129	3.2250	0.6450	10th
11	Lack of budget allocation for implementation	5	7	12	7	9	40	128	3.2000	0.6400	11th
12	Negative attitudes towards the disabled	15	8	10	6	1	40	90	2.2500	0.4500	12th

To conclude the discussions on designers and the local authorities, the respondents were asked who is to be blamed for the failure of the country to implement the Disability Act to ensure access of PWDs to the built environment. 60% of them put the blame on all the stakeholders (i.e. the government, designers, building clients, and Disability groups). They argue that all the above mentioned people have a role to play to ensure the successful implementation of the Disability Act. 13% and 10% single out building clients and designers respectively as the major causative agent of the problem. One of the respondents who happen to be an architect explained that, sometimes building clients blatantly refuse to accept the ideal of considering PWDs in their designs. They do not see the need to do that. On the other hand some of the respondents

blame the designers because they think the designers are supposed to advice and educate clients on what should be done. They added that some of the designers are themselves ignorant about the act and for that matter fails to implement it.

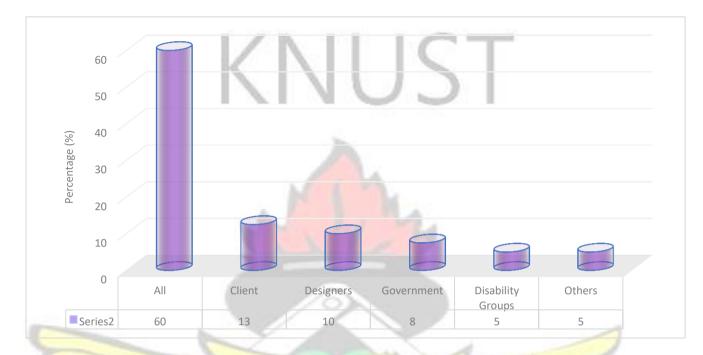


Fig 4.9: Agent responsible for the failure to incorporate the requirements of PWDs in the designs of public buildings

4.3 Disability Group/Department of Social Welfare

Another group of stakeholders who were not left out of the study was the Disability Group/Department of Social Welfare. The selected respondents worked in various capacities as leaders (55%), Directors (36%) and others such as Technical Officers or Instructors in their organization as shown in Fig 4.10. More than half of them (72%) were found to have working experience of 6 years and above while the rest had between 1-5 years of experience. Moreover, almost all of them have high knowledge about the disability Act. The above characteristics are good justification to support the credibility of the respondents.

As advocates for human rights, the Social Welfare Department play leadership role in promoting and protecting the rights and welfare of PWDs and redirecting them into the main stream of development. From the study it was realized that the Social Welfare Department at Adum Kumasi and the Disability centre at KNUST (i.e. Centre for Disability and Rehabilitation Studies, CEDRES) oversee PWDs with various forms of impairment such as Physical, Hearing, Speech, Visual etc. The departments oversee PWDs in excess of 300. They further reported that the department work with other ministries, NGOs and organizations such as the Ministry of Gender Relations and Social Protection, Action Aid, etc., in their activities.



Fig 4.10: Designation of respondents (Disability Group)

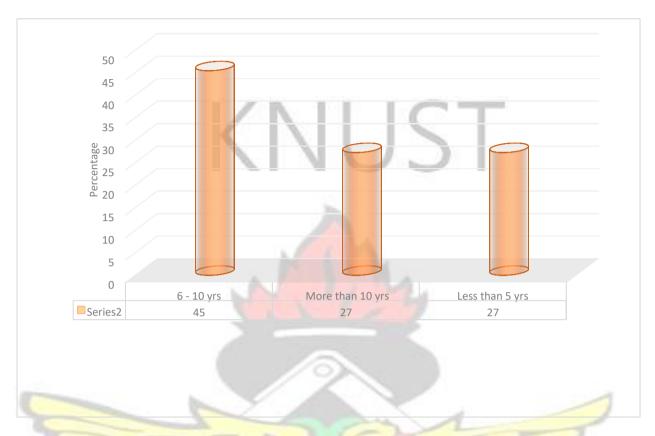
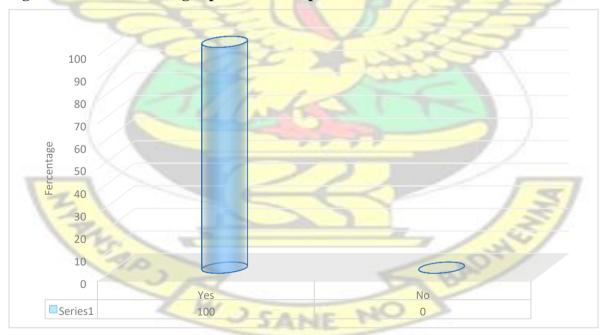


Fig 4.11: Years of working experience of respondents



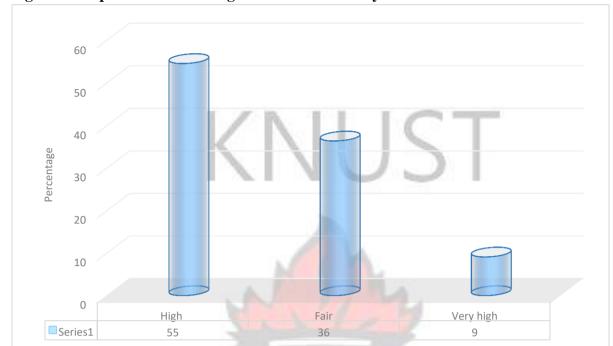


Fig 4.12: Respondents Knowledge about the Disability Act

Fig 4.13: Extent of Knowledge of respondents about the Disability Act

4.3.1 PWDs and the built environment

The respondents unanimously indicated that the Act is helping the course of the Disabled, however, a lot has to be done to ensure that the aim of the act is fully realized. When asked about the extent of accessibility of PWDs to the built environment at public buildings, 73% indicated that it needs more improvement while only 27% said it is normal (Fig 4.14). Thus, the disability group agree with the designers and the local authority that the built environment needs more improvement to ensure that they are accessible to the disabled.

In addition to the above, the respondents expressed the views on the level of restriction the built environment at public places currently poses to PWDs access. 45% said the restriction is mild whereas 36% believe that there is high restriction to PWDs access. The remaining 18% were of the opinion that there is only moderate restriction. Whatever the case is, the key, issue here is that PWDs face restrictions in accessing the built environment which needs to be looked at.

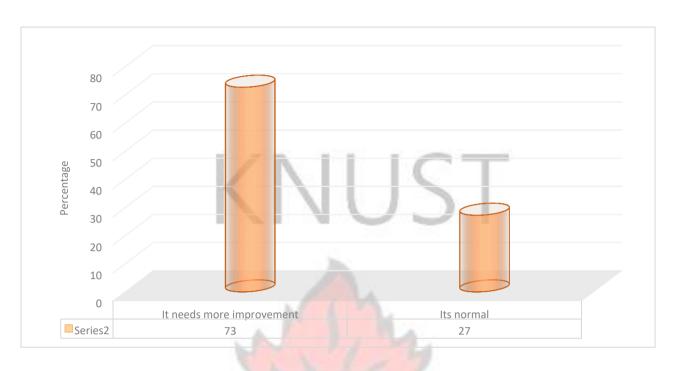


Fig 4.14 Respondents' opinion on the extent of accessibility of PWDs to the built environment at public buildings

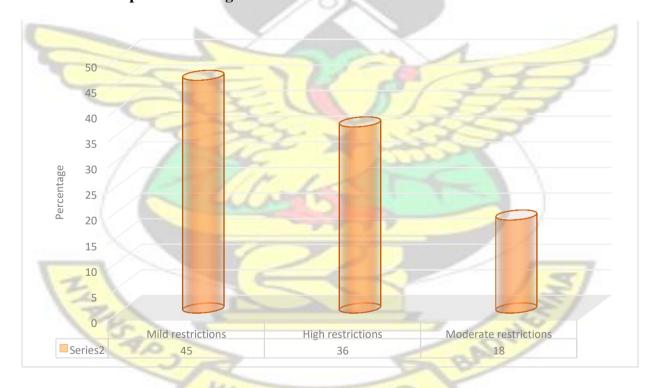


Fig 4.15: Ranking of the level of restrictions pose by the built environment at public places to PWDs access

4.3.3: Challenges with the implementation of the Disability Act (Views of the Disability Group)

The views of these respondents were also solicited and compared with either that of the designers and the local authorities on the implementation of the Disability Act. From the results in Table 4.2, the Disability Groups share similar views with the designers. They indicated that almost all the factors listed in Table 4.2 contribute to the failure of the country to implement the provisions of the disability Act on accessibility. That notwithstanding, the order of significance placed on the various challenges varies slightly.

In the first place they agreed with the designers that, "Lack of enforcement" is the topmost challenge affecting the implementation of the disability Act. The RII value assigned by them (i.e. 0.9455) was however higher than the value (0.915) i.e. placed on the factor by the designers. This means that the disability group places much significance on the lack of enforcement of the Act than the local authorities.

Secondly, it was found that "Lack of consultation and involvement of PWDs in decision making and Lack of coordination between departments" was viewed as the 2nd and 3rd most significant challenges affecting the implementation of the Act respectively. These factors were ranked 8th and 7th respectively by the designers indicating the low level of priority assigned to this factor by the designers compared with the Disability Group. The respondents expressed resentment about rate at which they are neglected in decision making concerning the design of the built environment. Moreover, even when they lodge complain about the retrofitting of existing facilities to make them disabled friendly, their requests are hardly granted. These according to them is their major worry.

The above findings concurs with the study by Ojok (2012) where he found that difficulty in the coordination of the roles of other ministries, lower government structures and private entities responsible for the implementation of the Act is one of the major challenges associated with the implementation of the Disability Act in Uganda. Hassan (2012) also noted the above as being one of the challenges in the implementation of the Disability Act of Malaysia

The respondents recommended that the Disability Act should be reviewed to incorporate new provisions which will compel local authorities/designers to invited PWDs and disability groups in decision making concerning the design of the built environment. This way, they will be able to contribute effectively.

Last but not the least, the disability groups argued that, the negative attitudes some people have towards the disabled compel them to discriminate against PWDs. Ojok (2012) noted cultural beliefs and prejudices sometimes constitute barriers to education, employment, health care, and social participation of PWDs. He explained that the attitudes of administrators, policy makers and employers and even family members affect the inclusion of persons with disabilities. Misconceptions by employers that people with disabilities are less productive than their non-disabled counterparts, and ignorance about available adjustments to work arrangements limits employment opportunities for PWDs. Hansen (2012) cited in Danso *et al.*, (2011), also reported that one of the greatest setbacks for the designing an all-inclusive built-environment is mindset and assumptions of professions regarding the difference between general and special needs.

Finally, the designers/local authorities" argued that the few number of disabled persons in a given locality influence them to neglect their needs in the design of the built environment due to the complexity and high cost of construction. On the part of the Disabled Associations, they agree that designs which incorporate the needs of the disabled are comparatively complex and expensive and moreover, their number cannot be compared to the abled bodied persons but that

should not be the grounds to deny their right of access to the built environment. Moreover, as human beings no one knows the future, even old age can make someone disabled and consequently find it difficult to access the built environment. Thus, the earlier the nation realizes this, and put measures in place, the better is if for the nation.



Table 4.2: Challenges with the implementation of the Disability Act on accessibility of the Disabled to the Built environment (Views of Disability Groups)

	Challenges	R	AT	INC	j						
		1	2	3	4	5	Total	\sum W	Mean	RII	Rank
1	Lack of enforcement of the Act to compel designers	0	0	1	1	9	11	52	4.7273	0.9455	1st
2	Lack of consultation and involvement of PWDs in decision making	0	0	1	2	8	11	51	4.6364	0.9273	2nd
3	Lack of coordination between departments	0	1	1	2	7	11	48	4.3636	0.8727	3rd
4	Lack of public awareness about the Act		1	1	3	6	11	47	4.2727	0.8545	4th
5	Weakness in the provisions of the Act	0	1	2	2	6	11	46	4.1818	0.8364	5th
6	Inadequate policies and standards	0	1	2	2	6	11	46	4.1818	0.8364	6th
7	Negative attitudes towards the disabled	1	1	1	3	5	11	43	3.9091	0.7818	7th
8	High Cost of designs which incorporate the needs of PWDs	1	1	1	4	4	11	42	3.8182	0.7636	8th
9	Complexity of designs which incorporate the requirements of PWDs.	1	2	0	5	3	11	40	3.6364	0.7273	9th
10	Ineffectiveness of Disability Groups	3	1	2	4	1	11	32	2.9091	0.5818	10th
11	Lack of budget allocation for implementation	4	2	2	3	0	11	26	2.3636	0.4727	11th
12	Few number of disabled persons in the country	4	4	3	0	0	11	21	1.9091	0.3818	12th

On who should be blamed for the failure to incorporate the needs of PWDs in the design of the built environment, a majority (55%) of them indicated that, all the parties are to be blamed.

18% single out designers while 9% each single out the government, building client and Disability Groups (Fig 4.16).

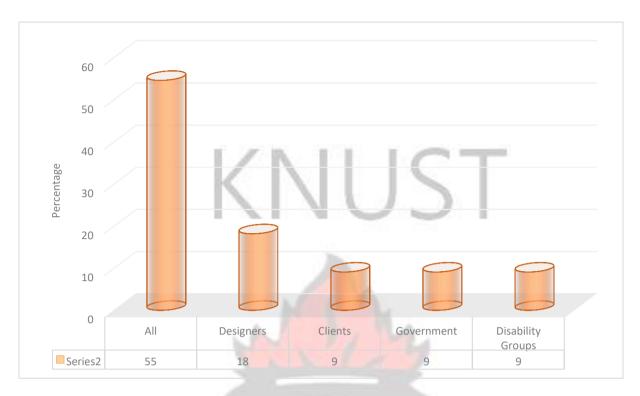


Fig 4.16: Agent responsible for the failure to incorporate the requirements of PWDs in the designs of public buildings

4.4 Persons with Disability (PWDs)

The study cannot be complete without the inclusion of the persons with Disability who are at the centre of the problem at hand. The study purposively selected 21 persons with various forms of impairment in the study area and their views solicited. From Fig 4.17, 60% of them were male while the remaining 40% were female. Thus there is no significant gender discrimination in the selection of the respondents. 47% were physically challenged followed by 20% who had problems with speech. Those with visual, hearing and metal impairment were 13%, 7% and 7% respectively. Those with multiple impairment were only 7% (Fig 4.18).

67% of the respondent explained that they acquired their impairment later in life due to accidents, ailment etc. whereas the remaining 37% had their as been congenital (i.e. it was present at birth).

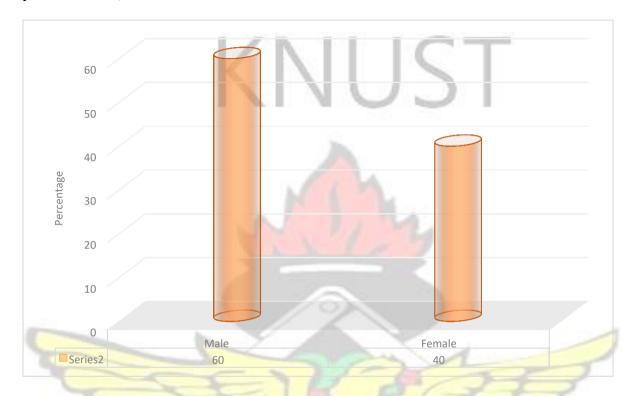


Fig 4.17: Gender of respondents

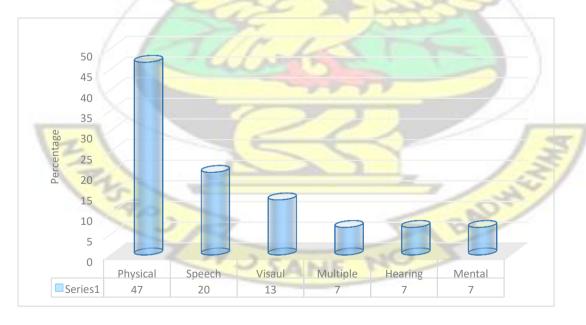


Fig 4.18: Nature of impairment



Fig 4.19: Source of Impairment

4.4.1 Accessibility to the built environment

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The study went on to asked if the respondents need any help to access or move around the built environment they live. The result (Fig 4.20) revealed that 26.67% said they needed some help; 20% said they needed considerable amount of help and 6.67% said they needed continuous help. This shows that as high as 53.33% of the study respondents need varying degrees of help in order to use the built environment they live in. This high number raises an issue of concern about the inaccessibility of the built environment in the country as earlier on reported by Danso *et al.*, (2011).

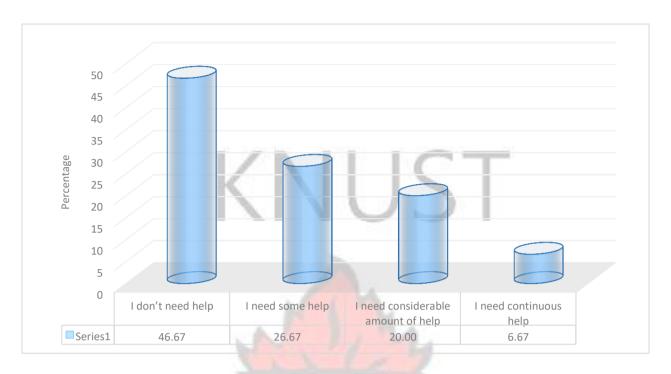


Fig 4. 20: Degree of help respondents need to access the built environment

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The respondent indicated that, though the Disability Act is helping to champion the course of the disables in having equal access to the built environment however, much as to be done. Government, consultants and designers must step up their effort in ensuring that the needs of the disabled are incorporated in new designs. From Fig 4.21, a greater percentage of the respondents indicated that, the current built environment needs more improvement. When they were asked to rank the level of restriction the current built environment pose to accessibility by the disabled, a majority of them (53.3%) said the restriction is high while

33.33% and 13.33% indicated mild and moderate restrictions respectively (Fig 4.22).

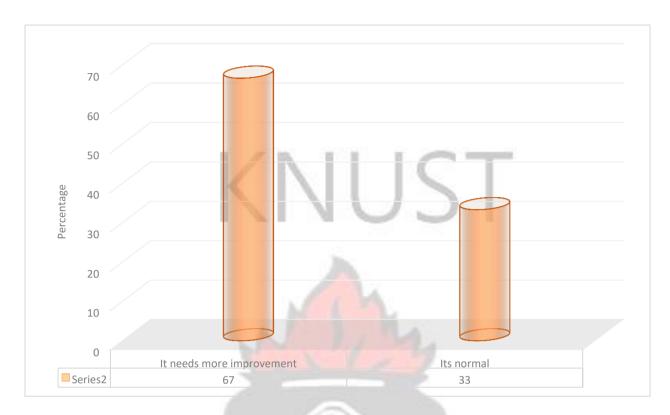


Fig 4.21: View of the disabled on the extent of accessibility of PWDs to the built

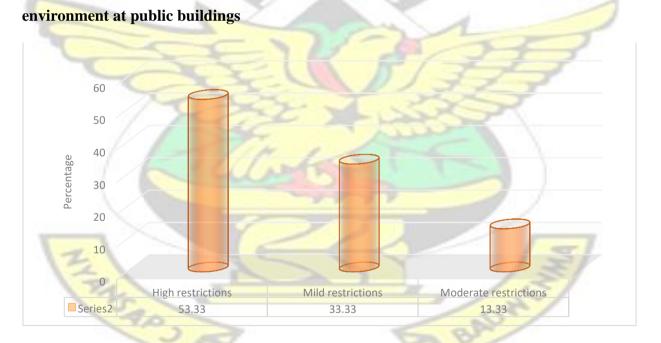
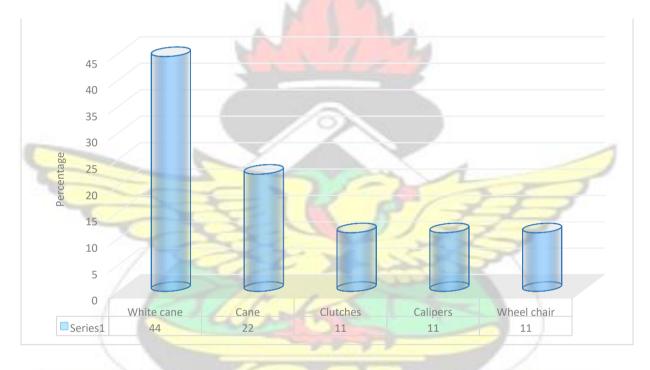


Fig 4.22: Ranking of the level of restriction passed by the built environment to accessibility by the disabled.

The respondents also revealed that, due to the nature of their impairment and the environment, they have to use assistive devices to be able to access the built environment. As noted by The

Office of Technology Assessment (1982) cited in Wisniewski and Sedlak (1992), assistive-device technologies such as wheel chairs, calipers, crouches etc. improve the daily life of PWDs. They rehabilitate/restore the cause of the impairment; they facilitate normalcy and augment the skill of PWDs by providing a higher level of functioning. In the current study, 13 of the respondents representing 61.9% said they use assistive devices. Out of this number, 66% use cane, while the remaining 34% uses either clutches, wheel chair or calipers (Fig 4.23). Further analysis of the results revealed that 67% of them purchased their device while 20% had it as donation from NGOs. The remaining 13% made their own device.



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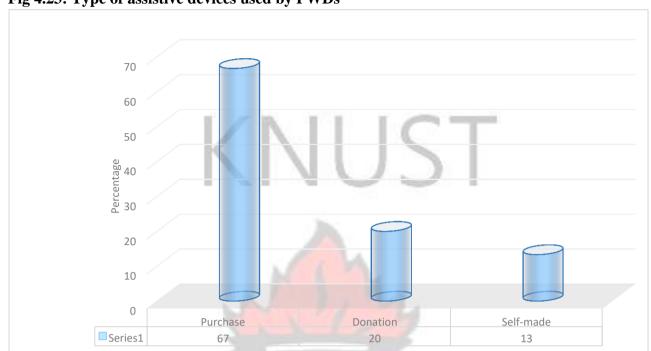


Fig 4.23: Type of assistive devices used by PWDs

Fig 4.24: Mode of acquisition of assistive devices

4.4.2 Challenges with the implementation of the Disability Act

Finally, data was also gathered from the disabled on their side of the story regarding why the country is still struggling to implement the section of the Disability Act on the accessibility of the Disabled to the built environment. Analysis of their responses revealed that, the disabled share the same view as the Disability Groups and designers on the issue under consideration. Their ranking of the challenges is shown in Table 4.3



Table 4.3: Challenges with the implementation of the Disability Act on accessibility of

the Disabled to the Built environment (Views the Disabled)

	CI II	RATING									
	Challenges		2	3	4	5	Total	\sum W	Mean	RII	Rank
1	Lack of enforcement of the Act to compel designers	0	0	1	4	16	21	99	4.7143	0.9429	1st
2	Lack of consultation and involvement of PWDs in decision making	0	2	2	3	15	22	97	4.4091	0.9238	2nd
3	Lack of public awareness about the Act	0	1	1	6	13	21	94	4.4762	0.8952	3rd
4	Lack of coordination between departments	0	2	1	8	10	21	89	4.2381	0.8476	4th
5	Negative attitudes towards the disabled	0	1	4	8	8	21	86	4.0952	0.8190	5th
6	Inadequate policies and standards	1	1	5	4	10	21	84	4.0000	0.8000	6th
7	Weakness in the provisions of the Act	2	1	2	7	9	21	83	3.9524	0.7905	7th
8	High Cost of designs which incorporate the needs of PWDs	1	4	0	8	8	21	81	3.8571	0.7714	8th
9	Few number of disabled persons in the country	2	2	0	13	4	21	78	3.7143	0.7429	9th
10	Ineffectiveness of Disability Groups	0	3	2	15	1	21	77	3.6667	0.7333	10th
11	Complexity of designs which incorporate the requirements of PWDs.	4	0	12	5	0	21	60	2.8571	0.5714	11th
12	Lack of budget allocation for implementation	3	1	16	0	1	21	58	2.7619	0.5524	12th

Finally, like the other respondents, the PWDs refused to single out one person as being responsible for the failure to implement the disability Act. 60% put the blame on all the stakeholders while 20% felt that, the designers are more responsible for the problem as shown on Fig 4.25.

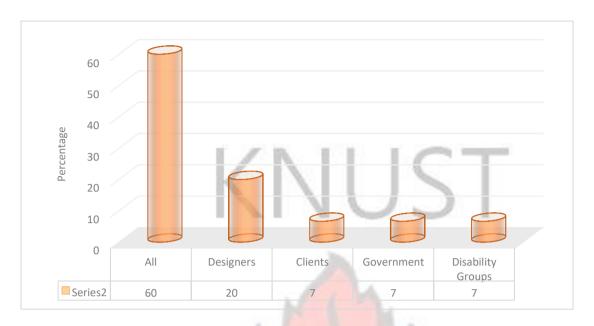


Fig 4.25: Agent responsible for the failure to incorporate the requirements of PWDs in the designs of public buildings

4.5 Summary

The chapter discussed the views of three main stakeholders namely, the government (i.e. designers, the local authority), Disability Group and the Disabled themselves on the challenges with the implementation of the Disability Act. The extent of awareness and utilization of the act in the design of facilities were also document. The findings in this chapter lead us to the conclusion and recommendations being drawn in the next chapter.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

5.1 Introduction

The current study was carried out to identify the challenges associated with the implementation of the Persons with Disability Act, 2006 (Act 715) regarding the accessibility of the disabled to the built environment at public places. From the questionnaire survey carried out about the three key stakeholders selected for the study, this chapter present a summary of the key finding

and conclusion. Recommendations have also been made on measures required to address the challenges.

5.2 Conclusions

The conclusions of the study are grouped under the objectives as follows:

Objective 1: To determine the level of awareness and utilization of the Disability Act in the design of public facilities.

The results revealed that

- (i) Majority of the designers are aware of the Disability Act, however, their level of knowledge about it is low
- (ii) For the disabled, most of them (especially the illiterate ones) are ignorant about the existence of the Disability Act
- (iii) The rate of utilization of the Act in the design of public facilities in the country is low. As high as 85% of the respondents revealed that, during the past 5 years the number of project they have designed or supervised which considered the needs of the PWDs does not exceed 25% of the total. Thus, the low level of utilization of the Act.

Objective 2: To identify the challenges associated with the implementation of the provisions of the Act regarding accessibility of PWDs to the Built environment.

The results revealed that

- (i) There are still various forms of restrictions PWDs face in their bid to access the built environment
- (ii) Most of the respondents conceded the fact that, the current built environment needs improvement to upgrade them to the level which will make them disable friendly.

- (iii) Various factors were identifies as being the challenges militating against the implementation of the disability Act to ensure accessibility of the disable to the built environment. The key one include the following:
- ♣ Lack of enforcement of the Act: It was found that act does not include a clause which will compel designers to comply. Hence they face no sanctions if the fail to implement the act.
- Weakness in the provisions of the Act. In line with the first challenge, it was explained by the respondents that the national and legal provisions regulating the construction of barrier-free environments in the country are weak or non-existent. Thus developers and designers of the built environment have not been adequately "pinned down" by the building regulations.
- Lack of public awareness about the Act: It was revealed that some of the designers and top management members who are responsible for decision making concerning the design of the built environment are ignorance about the Act. Even the disables themselves are ignorant about the act how can they advocate for its implementation
- ♣ Inadequate policies and standards
 - ♣ Lack of coordination between departments/lack of consultation and involvement of PWDs in decision making
- ♣ Few number of disabled in the country
- ♣ Negative attitude towards the disabled
- (iv) Finally, the respondent agreed that all the various stakeholders namely the government, designers, building clients, Disability Groups are all partly responsible for the failure to incorporate the need of the disabled in the design of the built environment.

It can be said from the findings of the study that the passage of legislation and policies alone are insufficient. They must be implemented with effectiveness. The government must ensure an inclusive system at all levels directed towards the full development of persons with disabilities of their personality, talents and creativity, as well as their right to the use of the built environment especially at public places. All efforts must be done to remove the bottlenecks which impede PWDs access.

5.4 Recommendations

The following recommendations can be made based on the findings of the study.

- Review of the Disability Act: One will observe from the findings of the study that, the provisions of the Act does not have sufficiently provisions to "pinned down" designers and the local authorities to enforce the Act. The Act must include provisions which will ensure that all designs/drawings sent for approval are well scrutinized to ensure that they comply with the provisions of the act before the permit is given.
- Public Education: The level of knowledge of the Ghanaian populace about the Act is still
 low, hence, public education should be intensified through the mass and electronic media.
 Seminars and lectures should be held nationwide to educate PWDs of their rights under the
 Act
- Collaborating with the Human Rights Commission to make representation to town councils and local authorities.
- Promoting awareness among legal practitioners and court officials about the legal rights of PWDs.
- Progressive effort should be made so that the Government gives due priority to, by recognizing disability issues. It is imperative to recognize the right of PWDs to

selfrepresentation and to strengthen their capacity to participate in the much important decision making process. The various disability groups should also be given priority in the decision making process.

• The attitude of professionals of the built environment should be changed public education and training. By so doing they will recognize the changing needs of society.

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KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY COLLEGE OF ART AND BUILT ENVIRONMENT DEPARTMENT OF BUILDING TECHNOLOGY

Questionnaires for the Architects and Engineers and the local Authority

"Challenges with the implementation of the Disability Act, 2006 (Act 715) regarding the accessibility of the disabled to the built environment in Ghana"

Dear respondent,

This research is part of a Master"s Thesis being conducted at the Department of Building Technology of the Kwame Nkrumah University of Science and Technology, Kumasi, Ghana. The study is aimed at assessing the challenges with the implementation of the Persons with Disability Act 2006 (Act 715) in Ghana.

Your participation in this study is highly appreciated for the success of this project. All information offered will be treated confidentially.

Instructions

Please for each of the questions, provide the correct information that best suits your knowledge by ticking in the appropriate box or fill in the blank spaces where necessary. For any further clarification kindly contact the researcher on the address below:

Student: Caesar Julius Nathan

Email: anattyblue@yahoo.com Tel: 0207455460

Section A: Background of Respondents

1. Designation of respondent

	[] Engineer [] Architect [] Quantity Surveyor [] Planner [] Other (specify)
•••	
2.	Indicate your years of working experience?
	[] Less than 5 years [] $5 - 10$ years [] 15 years and above 3.
Do	you have knowledge of Act 715 of 2006? [] Yes [] No
4.	If yes, kindly rate your level of knowledge with the Act.
5.	[] Fair [] High [] Very High Do you incorporate the provisions of the Act in the design and construction of public
	buildings?
` ′	Yes (b) No During the past 5 years how many of the buildings or facilities you have designed or
	supervised was the needs of the disabled considered?
	(a) 5% (b) 10% (c) 25% (d) 50% (e) 75% (e) 100%
7.	What are your impressions about the accessibility of the disabled to the built environment
	at public buildings?
(a)	It is normal (b) It needs more improvement
8.	In your opinion how would you rate the restrictions posed by accessing the built
	environment (i.e. car parks, pedestrian walkways, market centres etc.) at public buildings?
(a)	No restrictions (b) Moderate restriction (c) Mild restriction (d) High Restriction

Section B: Accessibility of PWDs to the build environment: Challenges with its implementation

9. Years after the passage of the Disability Act, most public buildings (even newly constructed facilities) remains disabled unfriendly. The needs of the disabled are not considered in the design of these facilities. On a scale of 1-5, please indicate in your opinion the challenges which militate against the implementation of this provision of the

Disability Act on accessibility of PWDs to the built environment. l = highly insignificant 2 = insignificant 3 = neutral 4 = significant 5 = highly significant

		Level of Significance							
Sn	CHALLENGES	1	2	3	4	5			
(i)	Lack of public awareness about the Act								
(ii)	Complexity of designs which incorporate the requirements of PWDs.	1							
(iii)	High Cost of designs which incorporate the needs of PWDs)							
(iv)	Few number of disabled persons in the country								
(v)	Lack of enforcement of the Act to compel designers	3,							
(vi)	Weakness in the provisions of the Act								
(vii)	Inadequate policies and standards								
(viii)	Ineffectiveness of Disability Groups	7							
(ix)	Negative attitudes towards the disabled		1			_			
(x)	Lack of budget allocation for implementation	1	Z	£	7				
(371)	Lack of consultation and involvement of PWDs in decision making	3		7					
(xii)	Lack of coordination between departments	7							

10.	Besides the above, what are the difficulties or challenges in the incorporation of the
	provisions of the Disability Act in the design and construction of the built environment?
	(List as many as possible)
	(i)
	(ii)
	(iii)
	(iv)
11.	What is the level of commitment of client in the provision of access for the disabled?

12.	Whom do you blame for the failure to incorporate the requirements of PWDs in the designs
	of public buildings?
	(a) The Government (b) Designers (c) Clients (d) Disability Groups (d) All
	(e) others, please specify
13.	What measures do you think should be put in place to ensure total implementation of the
	Disability Act?
	(i)
	(ii)
	(iii)
Tha	ink you.

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY COLLEGE OF ART AND BUILT ENVIRONMENT

Questionnaire for Disability Groups / Dept. Of Social Welfare

DEPARTMENT OF BUILDING TECHNOLOGY

"Challenges with the implementation of the Disability Act, 2006 (Act 715) regarding the accessibility of the disabled to the built environment in Ghana"

Dear respondent,

This research is part of a Master"s Thesis being conducted at the Department of Building Technology of the Kwame Nkrumah University of Science and Technology, Kumasi, Ghana.

The study is aimed at assessing the challenges with the implementation of the Persons with Disability Act 2006 (Act 715) in Ghana.

Your participation in this study is highly appreciated for the success of this project. All information offered will be treated confidentially.

Instructions

Please for each of the questions, provide the correct information that best suits your knowledge by ticking in the appropriate box or fill in the blank spaces where necessary. For any further clarification kindly contact the researcher on the address below:

Student: NATHAN Caesar Julius

Email: anattyblue@yahoo.com

Tel: 0207455460

Se	ction A: General Information
1.	Designation
	[] Director [] Manager [] Leader [] others (specify)
2.	How long have you been in the organization (years)? $[\]0-5[\]6-10$ $[\]$ More than
	10
3.	State the type of special need/impairment you deal with. [] Physical [] Visual []
	Mental [] Speech [] Hearing [] Multiple [] Other (Specify)
4.	What is the approximate number of PWDs that your organization oversees?
5.	Do you have knowledge of Act 715 of 2006? [] Yes [] No
6.	If yes, kindly rate your level of knowledge with the Act.
	[] Fair [] High [] Very High
7.	In your opinion, do you think the Act had been helping the cause of PWDs? [] Yes [] No
8.	Do you require that the needs of the PWDs be incorporated into the designs of all public
	facilities? [] Yes [] No

9.	Have you ever demanded the retrofitting of public facilities which are not disabled friendly?
	[] Yes [] No
10.	Have you received complaints from PWDs about the inaccessibility of the built environment
	[]Yes[]No
11.	If yes, describe the complaints
12.	In your opinion do you think the government is doing enough to improve on the needs of
	the disabled persons especially regarding the access to public facilities? [] Yes [] No
13.	Do you also think Consultants (Architects, Engineers, and Planners etc.) seek to make their
	designs all inclusive? [] Yes [] No
14.	What are your impressions about the accessibility of the disabled to the built environment
	at public buildings?
(a)	It is normal (b) It needs more improvement
15.	In your opinion how would you rate the restrictions posed by accessing the built
	environment (i.e. car parks, pedestrian walkways, market centres etc.) at public buildings?
(a)	No restrictions (b) Moderate restriction (c) Mild restriction (d) High Restriction
Sec	ction B: Accessibility of PWDs to the Built environment (Implementation challenges)
16.	Ten (10) years after the passage of the Disability Act, most public buildings and facilities
	(even newly constructed facilities) in Ghana remains disabled unfriendly. The needs of the
	disabled are not considered in the design of these facilities. On a scale of $1-5$, indicate the
	reasons why you think the needs of the disabled are still not being considered in the design
	of the built environment as enshrined in the Disability Act. 1

= highly insignificant

2 = insignificant 3 = neutral

4 = significant 5

= highly significant

		Level of Significance							
Sn	CHALLENGES	1	2	3	4	5			
(i)	Lack of public awareness about the Act		Т						
(ii)	Complexity of designs which incorporate the requirements of PWDs.								
(iii)	High Cost of designs which incorporate the needs of PWDs								
(iv)	Few number of disabled persons in the country								
(v)	Lack of enforcement of the Act to compel designers	d							
(vi)	Weakness in the provisions of the Act								
(vii)	Inadequate policies and standards								
(viii)	Ineffectiveness of Disability Groups		ė.		_				
(ix)	Negative attitudes towards the disabled		3	7	3				
(x)	Lack of budget allocation for implementation	-		4	1				
(xi)	Lack of consultation and involvement of PWDs in decision making	8	X	K					
(xii)	Lack of coordination between departments			N 1	U				

17. Whom do you blame for the	ne fai <mark>lure to incorp</mark> ora	ate the requirements	of PWDs in the designs
of public buildings?			13

(a) The Government	(b) Designers	(c) Clients	(d) Disability Group	(e) All
--------------------	---------------	-------------	----------------------	---------

18. What measure do you think should be put in place to ensure total implementation of the Disability Act?

(1)	
(ii)	
(iii)	
	IZNILICE
	KINII

Thank you.

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY COLLEGE OF ART AND BUILT ENVIRONMENT DEPARTMENT OF BUILDING TECHNOLOGY

Questionnaires for the Disabled

"Challenges with the implementation of the Disability Act, 2006 (Act 715) regarding the accessibility of the disabled to the built environment in Ghana"

Dear respondent,

This research is part of a Master"s Thesis being conducted at the Department of Building Technology of the Kwame Nkrumah University of Science and Technology, Kumasi, Ghana. The study is aimed at assessing the challenges with the implementation of the Persons with Disability Act 2006 (Act 715) in Ghana.

Your participation in this study is highly appreciated for the success of this project. All information offered will be treated confidentially.

Instructions

Please for each of the questions, provide the correct information that best suits your knowledge by ticking in the appropriate box or fill in the blank spaces where necessary. For any further clarification kindly contact the researcher on the address below:

Student: Caesar Julius Nathan

Email: anattyblue@yahoo.com

Tel: 0207455460

Section A: Demographic Information

1.	Gender [] Male [] Female					
2.	Group of special need/ impairment [] Physical [] Visual [] Hearing [] Mental []					
	Speech [] Multiple [] others (specify)					
3.	Cause of impairment [] congenital(present at birth) []acquired (developed later in life)					
4.	Do you use any assistive device? [] Yes [] No					
5.	If yes to Q5; which type of assistive device do you use? [] wheelchair [] cane					
	[] white cane [] calipers [] crutches [] other (specify)					
6.	How did you acquire this assistive device? [] donation [] purchase [] self-made					
	[] other (specify)					
7.	How much help to you need to access the built environment? [] I don"t need help					
	[] I need some help [] I need considerable amount of help [] I need continuous					
	help					
Sec	tion B: Accessibility of PWDs to the Built environment (Implementation challenges)					
8.	What is your level of knowledge about their Disability Act?					
	[] No Idea [] Fair [] High [] Very High					
9.	In your opinion, do you think the Act had been helping the cause of PWDs? [] Yes []					
	No					
10	. In your opinion do you think the government is doing enough to improve on the needs of					
	the disabled persons especially regarding the access to public facilities? [] Yes [] No					
11.	. Do you also think Consultants (Architects, Engineers, and Planners etc.) seek to make their					
	designs all inclusive? [] Yes [] No					
12	What are your impressions about the accessibility of the disabled to the built environment					
	at public buildings?					
	(a) It is normal (b) It needs more improvement					

- 13. How would you rank the level of accessibility and safety of using the built environment in general? (a) Highly inaccessible (b) Inaccessible (c) Accessible (d) High accessible
- 14. Ten (10) years after the passage of the Disability Act, most public buildings and facilities (even newly constructed facilities) in Ghana remains disabled unfriendly. The needs of the disabled are not considered in the design of these facilities. On a scale of 1-5, indicate the reasons why you think the needs of the disabled are still not being considered in the design of the built environment as enshrined in the Disability Act. 1 = highly insignificant 2 = insignificant 3 = neutral 4 = significant 5 = highly significant

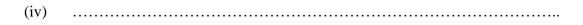
	CHALLENGES	Level of Significance					
Sn		1	2	3	4	5	
(i)	Lack of public awareness about the Act						
(ii)	Complexity of designs which incorporate the requirements of PWDs.	4					
(iii)	High Cost of designs which incorporate the needs of PWDs	,					
(iv)	Few number of disabled persons in the country						
(v)	Lack of enforcement of the Act to compel designers		1	7	5	1	
(vi)	Weakness in the provisions of the Act	K	Š	Ś	1		
(vii)	Inadequate policies and standards	(%)	X	X			
(viii)	Ineffectiveness of Disability Groups	Ś			Ŋ.		
(ix)	Negative atti tudes towards the disabled			9			
(x)	Lack of budget allocation for implementation		9				
(xi)	Lack of consultation and involvement of PWDs in decision making			/	3/		
(xii)	Lack of coordination between departments	_		5	=/		

15. Whom do you blame for the	Cailure to incorporate the requirements of PWDs in the designs
of public buildings?	SANE NO

(b) The Government	(b) Designers	(c) Clients	(d) others, please specify

16. What measure do you think should be put in place to ensure total implementation of the

Disability Act?



(v)

(vi)

