



**UNIVERSITY OF GHANA
COLLEGE OF HUMANITIES
DEPARTMENT OF SOCIAL WORK**

**THE EXPERIENCES OF STUDENTS WITH PHYSICAL DISABILITIES IN TWO
SELECTED UNIVERSITIES IN GHANA**

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INTEGRI PROCEDAMUS

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DECLARATION

I, Berchie Andrews, hereby declare that this thesis is the result of my research. This research was carried out under the supervision of Dr. Augustina Naami and Dr. Kwabena Frimpong-Manso, both of the Department of Social Work. All references cited in this work have been duly acknowledged. This thesis has not been submitted elsewhere in part or whole for any other degree.



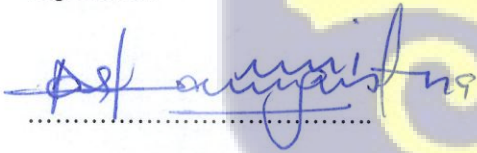
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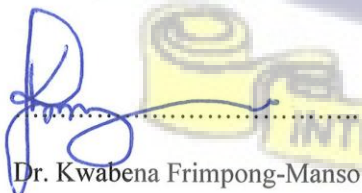
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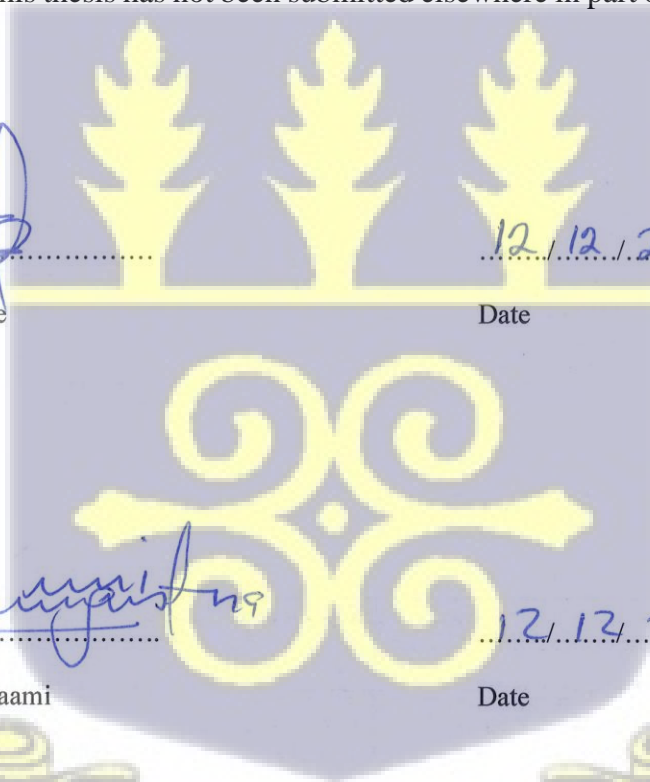
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ABSTRACT

Students with physical disabilities face a plethora of challenges in learning and participating in higher education in Ghanaian universities. Studies on students with physical disabilities have focused on challenges with built environments. However, students with physical disabilities could face barriers that are related to teaching and learning, bureaucratic issues, and attitudinal barriers in higher education. Hence, the purpose of this study was to explore the experiences of students with physical disabilities at the University of Ghana and the Kwame Nkrumah University of Science and Technology regarding the challenges they face and the factors that foster their academic learning and to ascertain their educational needs. A qualitative research design was employed for this study. Purposive sampling techniques were adopted to select 18 participants for the study. Purposive sampling helped the researcher recruit participants who possessed the characteristics as determined by the researcher. Data were collected through face-to-face and phone interviews using a semi-structured interview guide in English. Data for this study were analysed using the Interpretative Phenomenological Analysis developed by Smith and Osborn (2008). The results of the study showed that students with physical disabilities encounter barriers such as inaccessible school environments, inaccessible information, poor lighting systems and seating arrangements, and negative relational experiences with students without disabilities. The findings indicate that familial, personal, religious, and institutional factors led to the improvement in the academic learning of students with physical disabilities. Additionally, it was revealed in the study that students with physical disabilities needed fixing elevators and ramps in buildings and eBooks on library computers as measures to improve their learning in higher education. The study recommends that in the long run, university buildings in both universities should be renovated following provisions in the disability act of Ghana to

enhance access to services by students with physical disabilities. However, in the short run, the study recommends that classes that have students with physical disabilities in both universities be held on the ground floor of buildings to enable easy access. Additionally, the study recommends that faculty members be trained in inclusive pedagogy to enhance their knowledge and skills in teaching students with disabilities.



DEDICATION

I dedicate this work to my mother, Rev. Irene Ohenewaa Hanson Gunn, and my siblings Selorm, Lydia, and Danny for their care, love, and support throughout my life. I am forever grateful to them. I also dedicate this work to myself for not giving up throughout tough times. I dedicate this work to all persons with disabilities; indeed, disability is not inability.



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TABLE OF CONTENTS

| | |
|---|----|
| DECLARATION | i |
| ABSTRACT..... | ii |
| DEDICATION..... | iv |
| ACKNOWLEDGEMENT | v |
| CHAPTER ONE | 1 |
| INTRODUCTION | 1 |
| 1.0 Background Information..... | 1 |
| 1.1 Problem Statement..... | 7 |
| 1.2 Research Objectives..... | 10 |
| 1.3 Research Questions..... | 10 |
| 1.4 Significance of the Study..... | 10 |
| 1.4.1 Policy..... | 10 |
| 1.4.2 Social Work Practice..... | 11 |
| 1.4.3 Research..... | 11 |
| 1.5 Definition of Terms..... | 11 |
| CHAPTER TWO | 13 |
| LITERATURE REVIEW AND THEORETICAL PERSPECTIVE | 13 |
| 2.0 Introduction..... | 13 |
| 2.1 Challenges of Students with Physical Disabilities in Higher Education | 13 |

| | |
|--|----|
| 2.1.1 Inaccessible Physical Environment..... | 13 |
| 2.1.2 Attitudinal Barriers | 17 |
| 2.1.3 Inaccessible Curriculum, Information and Communication Barriers | 19 |
| 2.2 Factors that Foster Academic Learning Among Students with Disabilities | 23 |
| 2.2.1 Personal Characteristics | 23 |
| 2.2.2 Demographic Characteristics | 26 |
| 2.2.3 Institutional Factors | 27 |
| 2.3 Support and Needs of Students with Physical Disabilities | 29 |
| 2.4 Theoretical Perspective | 30 |
| 2.4.1 Multidimensionality | 32 |
| 2.4.2 Social Model of Disability | 32 |
| 2.4.3 Voices of Disability | 33 |
| 2.4.4 Language | 33 |
| 2.4.5 Rights | 34 |
| 2.4.6 Valuing Diversity | 35 |
| 2.4.7 Transformative Politics | 35 |
| 2.4.8 Relevance of Critical Disability Theory to the Study | 36 |
| CHAPTER THREE | 37 |
| RESEARCH METHODOLOGY | 37 |
| 3.0 Introduction..... | 37 |

| | |
|---|----|
| 3.1 Research Approach and Design | 37 |
| 3.2 Study Sites | 38 |
| 3.2.1 The University of Ghana..... | 38 |
| 3.2.2 Kwame Nkrumah University of Science and Technology | 39 |
| 3.3 Target Population and Study Population | 40 |
| 3.4 Sampling Techniques and Selection Criteria..... | 40 |
| 3.5 Recruitment Process..... | 41 |
| 3.6 Sample Size..... | 42 |
| 3.7 Data Collection | 43 |
| 3.8 Data Analysis | 44 |
| 3.9 Ethical Considerations | 46 |
| 3.10 Measures to Ensure Credibility..... | 47 |
| 3.11 Limitations of the Study..... | 48 |
| CHAPTER FOUR..... | 49 |
| PRESENTATION OF FINDINGS..... | 49 |
| 4.0 Introduction..... | 49 |
| 4.1 Demographic Characteristics of Participants..... | 49 |
| 4.1.1 Various Types of Disabilities..... | 50 |
| 4.1.2 Religious Affiliation of Study Participants from both Schools | 50 |
| 4.2 Objective One | 51 |

| | |
|---|-----|
| 4.2.1 School Environment..... | 51 |
| 4.2.2 Inside Arrangement of Buildings..... | 55 |
| 4.2.3 Information | 58 |
| 4.2.4 Negative Relational Experiences | 64 |
| 4.3 Objective Two:..... | 66 |
| 4.3.1 Familial Factors | 66 |
| 4.3.2 Personal Factors | 68 |
| 4.3.3 Positive Relational Factors | 71 |
| 4.3.4 Religious Factors | 73 |
| 4.3.5 Institutional Factors | 75 |
| 4.4 Objective Three..... | 78 |
| 4.4.1 Fixing Elevators..... | 79 |
| 4.4.2 Need for Electronic and Braille Books | 80 |
| 4.4.2 Other Needs | 80 |
| 4.5 Discussion of Findings..... | 85 |
| 4.5.1 Challenges Students with Disabilities Encounter in Higher Education..... | 85 |
| 4.5.2 Factors that Foster Learning among Students with Physical Disabilities..... | 92 |
| 4.5.3 Needs of Students with Physical Disabilities in Higher Education | 97 |
| CHAPTER FIVE | 101 |
| SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATION | 101 |

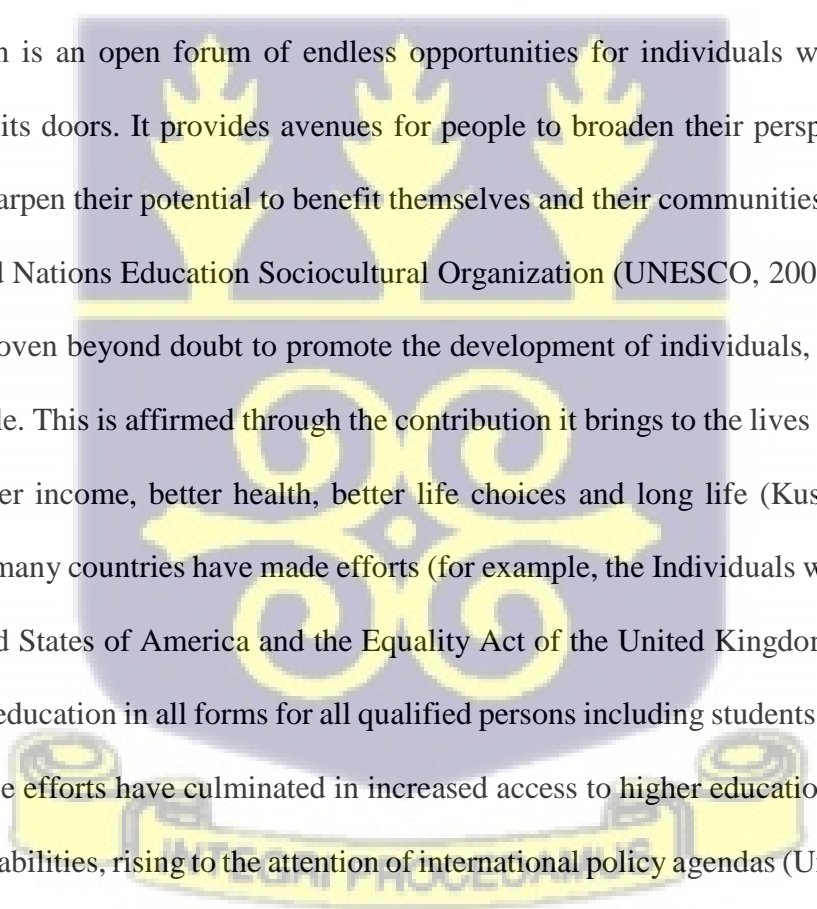
| | |
|--|-----|
| 5.1 Introduction..... | 101 |
| 5.2 Summary of Findings..... | 101 |
| 5.3 Conclusions of the Study | 103 |
| 5.4 Recommendations of The Study..... | 104 |
| 5.5 Implications for Social Work Practice..... | 106 |
| REFERENCES | 108 |
| APPENDIX A..... | 129 |
| APPENDIX B..... | 133 |



CHAPTER ONE

INTRODUCTION

1.0 Background Information



Higher education is an open forum of endless opportunities for individuals who happen to obtain access to its doors. It provides avenues for people to broaden their perspectives about the world and sharpen their potential to benefit themselves and their communities. In a broader sense, the United Nations Education Sociocultural Organization (UNESCO, 2009) asserts that education has proven beyond doubt to promote the development of individuals, societies, and nations as a whole. This is affirmed through the contribution it brings to the lives of individuals in terms of higher income, better health, better life choices and long life (Kusi & Sarpong, 2019). As such, many countries have made efforts (for example, the Individuals with Disability Act of the United States of America and the Equality Act of the United Kingdom) to enhance access to higher education in all forms for all qualified persons including students with physical disabilities. These efforts have culminated in increased access to higher education for students with physical disabilities, rising to the attention of international policy agendas (United Nations, 2015).

International educational policy directives give entrenched priority to the education of students with physical disabilities, to which many countries are signatories. The Universal Declaration on Human Rights (UDHR) set the pace for the creation of educational opportunities for every person, including students with physical disabilities. Article 26 states that every individual, regardless of their differences, should have equal access to higher education. Similarly, access

to higher education as a right of students with physical disabilities was clearly stated in the United Nations Convention on the Rights of the Child Article 28 Clause 3, Convention on the Right of Persons with Disabilities Article 24, and it was later reaffirmed in nonbinding instruments, for example, the World Program of Action Concerning Disabled Persons (1982) and the 1993 Standard Rules on the Equalization of Opportunities for Persons with Disabilities. Moreover, in the early 1990s, the heads of States from 92 countries and 25 international organizations (UNESCO, 1994) embarked on an agenda of inclusive education that not only aimed at providing accessible structures but also an all-inclusive pedagogy. The main idea of inclusive education came to the limelight at the Salamanca World Conference on Special Education held in Spain in 1994 (UNESCO, 1994). This was reiterated at the World Education Forum in Dakar, Senegal in 2000.

Furthermore, the United Nations' Sustainable Development Goals (SDGs) show a considerable amount of concern regarding the issue of inclusiveness in the area of education. Several goals (8, 9, 10, 11, and 16) focus on addressing the issue of inclusiveness and equality to a greater extent, with goal 4 underscoring the promotion of inclusive education, which is equitable to all (Kusi & Sarpong, 2019). The various international policy directives, including the United Nations Universal Declaration on Human Rights (UDHR) and the Convention on the Rights of Persons with Disabilities (CRPD), provide a strong foundation for countries to ensure equitable access to higher education by students with physical disabilities without much hindrance upon ratification.

Although efforts by the international community have led to increased access to higher education for students with physical disabilities (United Nations, 2015), students with physical disabilities continue to have lower academic achievement than their peers without disabilities

(World Health Organization, 2011a). The lower academic achievement of students with physical disabilities is worsened by learning barriers, barriers in the assessment of examinations and assignments, barriers in accessing information about disability support services on campus and barriers that result from inadequate support on the part of the staff (Fuller, Healey, Bradley & Hall, 2004). Students with physical disabilities have to encounter issues of institutional bureaucracy, discrimination, and the architecture of university buildings that were supposedly meant to aid in the process of academic learning (García-González, Gómez-Calcerrada, Hernández & Ríos-Aguilar, 2020).

In Africa, many countries are signatories to global policies on disability and have made political commitments with particular emphasis on the United Nations Convention on the Right of Persons with Disabilities (CRPD), World Declaration on Education for All (EFA, 1990), and the 1993 Standard Rules on the Equalization of Opportunities for Persons with Disabilities (Kochung, 2011). Despite these international treaties informing Africa's domestic policies and legislation on the education of students with physical disabilities, for example, the African Charter on Human and People's Rights (ACHPR) and its protocol on the rights of students with physical disabilities, Africa has less than 1% of its people with disabilities accessing higher education, and the successes of these small populations are very limited (Kochung, 2011).

In the African region, students with physical disabilities find it difficult to access university education due to barriers that exist in the higher education institutions and communities or societies from which these students come (Kochung, 2011). Kochung (2011) makes a list of external barriers that pose a threat to students with physical disabilities in accessing higher education. These include the unavailability of higher education institutions that cater to the needs of students with physical disabilities in every community, social exclusion and

stigmatization by society, stringent admission criteria to higher education institutions, and many students with physical disabilities seeking to enrol in higher education coming from low-income families. Again, Kochung outlines the internal barriers that students with physical disabilities experience when they finally gain admission to higher education institutions in Africa. These include rigid curriculum and examinations, lack of appropriate teaching and learning methodologies, and teachers' inadequate knowledge about disability pedagogy. These challenges notwithstanding could emanate from the lack of political will exhibited by successive and incumbent governments of African countries. It could also be aggravated by the politicization of educational institutions, giving rise to the high negligence of necessities that enhance the smooth knowledge acquisition by students with physical disabilities.

The Ghana Statistical Service (GSS) estimates the prevalence of disability in Ghana to be 8 percent (2,098,138) of the total population (GSS, 2021). It is estimated that 4 out of 10 persons with disabilities aged 3 years and above have no formal education (GSS, 2014). Available data suggest that less than 10% of persons with disabilities have vocational, technical, and university education (Senadza, Ayerakwa, Mills, Oppong & Asare, 2019). Ghana has been at the forefront of the ratification of international treaties on education and the subsequent formulation and implementation of its domestic policies to that effect. The Persons with Disability Act (Act 715), the Ghana National Disability Policy (2000), and the Constitution of the Republic of Ghana (1992) collectively emphasize that educational institutions must ensure that students with physical disabilities are not subjected to discrimination or disadvantage (Ashigbi, Danso, Tudzi, & Torgbenu, 2017).

The government of Ghana through the Ministry of Education launched the Inclusive Education Policy in 2015 with an overarching aim of redefining educational delivery and management to

correspond to the diverse learning needs of all learners, including students with physical disabilities in higher education. The objectives of this policy are to improve and adapt education and related systems and structures to ensure the inclusion of all learners, particularly those with special educational needs; to promote learner-friendly school environments for enhancing the quality of education for all learners based on the principles of universal design; to promote the development of a well-informed and trained human resource cadre for the quality delivery of inclusive education throughout Ghana; and to ensure the sustainability of inclusive education implementation (Ministry of Education, 2015, pp. 5-9).

Due to its relatively high enrollment rates (1,370 per 100,000 residents) and high government spending, that is, 13% of total education spending allocated to tertiary education (Darvas, Gao, Shen, & Bawany, 2017), Ghana's educational system was acknowledged as one of the region's success stories (Darvas et al., 2017). However, there is little to no information available on the representation of students with physical disabilities in higher education in Ghana (Braun & Naami, 2019).

In a study by Braun & Naami (2019) conducted in Ghana, students with physical disabilities reported having difficulties accessing buildings on campuses. Access routes to these buildings were further hindered by open gutters and the sloppy nature of the environment within the university premises. Braun and Naami (2019) added that inaccessible buildings and environments have a detrimental impact on the social, emotional, and psychological well-being of students with physical disabilities and eventually result in lower academic performance. Similarly, Ashigbi et al. (2017) found that 55% of access routes on campuses of higher education institutions were very restrictive to students with physical disabilities. Students with

physical disabilities also grapple with financial setbacks that affect their access to higher education institutions in Ghana (Naami, 2015).

Conversely, some students with physical disabilities excel despite these challenges. A study by Sachs and Schreuer (2011) compared academic success as measured by grade point average (GPA) and participation in higher education of 170 students with physical disabilities and 156 students without disabilities across the Republic of Israel. Students with physical disabilities had similar experiences concerning social, athletics, and academics. Again, the authors found that in terms of academics, as in grade point averages, students with physical disabilities performed similarly to their counterparts without disabilities. Similarly, Sparks, Javorsky, and Philips (2004) found that 68 college students with ADHD at a medium-sized university were academically competitive with their peer group without disabilities and graduated with grade point averages similar to those of typical graduates of the same university. Within five years, all 68 students, with and without disabilities, graduated from the university. Additionally, students with physical disabilities' personal characteristics, such as understanding their disability, how it impacts their academic performance (self-awareness), and knowledge of how to request accommodations (self-advocacy), have been linked to several outcomes in higher education, including achievement, persistence, and satisfaction (Belch, 2004; Daly Cano, Vacarro & Newman, 2015; Lombardi et al., 2011; Terras, Leggio & Phillips, 2015; Yssel et al., 2016). Given that students with disabilities from other countries, such as Israel and the United States of America, have similar grade point averages as their counterparts without disabilities (Sparks, Javorsky, & Phillips, 2004; Sachs & Schreuer, 2011), as well as factors that improved their academic learning (Belch, 2004; Daly Cano, Vacarro & Newman, 2015; Lombardi, Gerdes & Murray, 2011; Terras, Leggio & Phillips, 2015; Yssel et al., 2016), there is virtually nothing

regarding factors that could enhance the academic learning and participation of students with physical disabilities in Ghanaian higher education institutions. Additionally, deducing from the few studies performed in Ghana (Braun & Naami, 2019; Ashigbi et al., 2017) placed much emphasis on the physical and environmental barriers encountered by students with physical disabilities (SPDs). Students with physical disabilities could also experience other barriers, such as attitudinal barriers, communication and information barriers, in higher education institutions in Ghana. It is therefore imperative to explore the experiences of students with physical disabilities in higher education in Ghana.

1.1 Problem Statement

Many countries around the world continue to experience challenges in achieving universal access to education for students with physical disabilities despite international frameworks such as Education for All, Convention on the Rights of Persons with Disabilities and the Dakar Framework for Action in the African region calling for equitable and accessible higher education for all including students with physical disabilities. Although there is a general improvement in educational accessibility, the education of students with physical disabilities is marred with challenges. The report on 74 countries, including Ghana, by the World Report on Disability (World Health Organization, 2011), which adopted the World Health Survey Data for comparative analysis, found that study participants with disabilities have substantially lower rates of primary level completion and a lower number of years spent in school than their counterparts without disabilities. According to the report, these poor educational outcomes for students with physical disabilities emanate from challenges that have to do with divided ministerial responsibility concerning the education of students with disabilities, inadequate resources, inadequate training and support for teachers, rigid curriculum, and teaching methods.

This shows that there are still challenges that could hamper access to higher education for students in general including those with physical disabilities.

The situation is not different from Ghana. Even though the Persons with Disabilities Act, of 2006 (Act 715), the Inclusive Education Policy in 2015, the Ghana National Disability Policy (2000), and the 1992 Constitution of Ghana specify that students with physical disabilities should not be disadvantaged in any educational institution. The provisions of these policies appear to be well-defined, however, educational institutions, including higher education may lack the resources and facilities to operationalise these policies to facilitate the academic learning of students with physical disabilities. Furthermore, there seem to be barriers in the application process, admission procedures, school environment, information access, and curriculum that could affect the participation of students with physical disabilities in higher education.

The literature on the education of students with physical disabilities is limited in Ghana, with a focus primarily on mobility disabilities and the challenges these students face in relation to built environments (Ashigbi et al., 2017; Braun & Naami, 2019). Research conducted by Tudzi, Bugri, and Danso (2020) highlighted the inaccessibility of the university's built environment for students with mobility disabilities. The study indicated that due to a lack of data on disabled students, examination officers were unaware of the specific needs of these students, leading to a failure to provide necessary accommodations. Further research by Ashigbi et al. (2017) quantitatively demonstrated that the university's built environment posed various degrees and types of barriers to students with mobility impairments. The authors disclosed that 55% of the access routes at the study site were restrictive for disabled students. The study also revealed a disregard for universal design principles in the university's built environment. In a similar vein,

Braun and Naami (2019), using a photovoice methodology, unveiled the challenges faced by physically disabled students in accessing campus buildings. The accessibility of these buildings was further impeded by open gutters and the sloping nature of the university premises.

While previous studies (Tudzi et al, 2020; Ashigbi et al, 2017; Braun & Naami, 2019) concentrated on a single university and students with mobility disabilities, conducting research across two universities could yield diverse information, enriching the research findings. This study bridges this gap by comparing the experiences of students with physical disabilities at two universities. Moreover, broadening the research scope to include students with other physical disabilities, such as visual and hearing impairments, could help us understand students with diverse forms of disabilities in higher education. While these studies focused primarily on physical accessibility issues, they overlooked other potential challenges that students with physical disabilities could face. Students may struggle with having access to information, communication, and technological tools designed to assist students academically. Also, there remains a notable gap in the literature regarding the factors that contribute to the academic success of students with physical disabilities who make it to institutions of higher education, especially in the context of Ghana. Additionally, students with physical disabilities could face negative attitudes from their peers without disabilities and the broader university community. Therefore, this study sought to explore the experiences of students with physical disabilities at the University of Ghana (UG) and the Kwame Nkrumah University of Science and Technology (KNUST) using qualitative research methods.

1.2 Research Objectives

1. To investigate the challenges students with physical disabilities at the University of Ghana and the Kwame Nkrumah University of Science and Technology face.
2. To determine what fosters academic learning among students with physical disabilities at the University of Ghana and the Kwame Nkrumah University of Science and Technology.
3. To ascertain the needs of students with physical disabilities at the University of Ghana and the Kwame Nkrumah University of Science and Technology.

1.3 Research Questions

1. What are the challenges that students with physical disabilities at the University of Ghana and the Kwame Nkrumah University of Science and Technology face?
2. What fosters academic learning among students with physical disabilities at the University of Ghana and the Kwame Nkrumah University of Science and Technology?
3. What are the needs of students with physical disabilities at the University of Ghana and the Kwame Nkrumah University of Science and Technology?

1.4 Significance of the Study

1.4.1 Policy

The study provides information to the Ministry of Education's section on tertiary education in its policy formulation to enhance the academic learning of students with physical disabilities in higher education. The special education unit of the Ghana education service can use the findings and recommendations of this study to provide the necessary resources to assist students with physical disabilities in their quest to pursue higher education at various levels. The study

findings and recommendations could be useful to the office of students with special needs at the University of Ghana in providing services that are tailored to meet the needs of students with disabilities as needed by its mandate. Additionally, the Kwame Nkrumah University of Science and Technology could also use the findings of this study to provide comprehensive services and resource centres that cater to the needs of students with disabilities.

1.4.2 Social Work Practice

It would help social workers and disability support workers develop appropriate interventions to boost the factors that foster academic learning for students with physical disabilities. With the issues confronting students with disabilities unearthed, social workers working in both government and nongovernmental agencies can step up in their advocacy efforts so that the challenges raised in this study can be addressed. Social workers could also enhance the motivating factors to help students with disabilities improve their academic learning and performance in higher education institutions.

1.4.3 Research

This study would serve as a frame of reference for future research on persons with disabilities and the field of disability studies. It will also serve as a source of information for other scholars to read about disability in Ghana.

1.5 Definition of Terms

For a better understanding of the study, some key concepts must be defined and operationalized.

Persons with disabilities:

According to the International Classification of Functioning, Disability, and Health (ICF), disability connotes an umbrella term for impairments, activity limitations, and participation restrictions. Disability refers to the negative aspects of the interaction between individuals with a health condition (such as cerebral palsy, Down syndrome or depression), and personal and environmental factors (such as negative attitudes, inaccessible transportation and public buildings, and limited social supports)” in this case, persons with mobility impairment such as those using wheelchairs, crutches, etc., as well as those with sensory impairment such as visual impairment (ICF 2001 cited in WHO 2011, p.7).

For this study, students with physical disabilities included those with visual impairment, students with mobility impairment, and students with hearing impairment. Hence, disability is operationalized in this study as students who have impaired functioning regarding movement, seeing (either total or partial) and hearing.

In this study, the built environment refers to the buildings and structures on the campuses of higher education institutions.



CHAPTER TWO

LITERATURE REVIEW AND THEORETICAL PERSPECTIVE

2.0 Introduction

This section focuses on discussing and synthesizing literature about the experiences of students with physical disabilities in higher education institutions. The literature review discussed the challenges affecting students with physical disabilities in higher education and factors that foster academic learning among students with physical disabilities in higher education as well as exploring the needs of students with physical disabilities in higher education. Again, the review also discussed the theoretical frameworks that underpin the study and their relevance to the study.

2.1 Challenges of Students with Physical Disabilities in Higher Education

Students with physical disabilities may be confronted with a myriad of obstacles as they access and participate in the acquisition of knowledge in higher education institutions. These hindrances come in the form of inaccessible physical environments, attitudinal barriers, inaccessible curricula, and information and communication barriers.

2.1.1 Inaccessible Physical Environment

Difficulties that exist in the environment of higher education institutions pose a major threat to service access by students with physical disabilities. In a systematic review survey comparing the accessibility of structures and services between students with disabilities and those without disabilities in the United Kingdom, Madriaga et al. (2010) revealed that students with mobility

disabilities complained of having a severe challenge in using built structures in universities. This indicates that students with physical disabilities suffer many hurdles in regard to physical access and participation in higher education institutions. Similar to the study conducted by Madriaga and colleagues, Engelbrecht and de Beer (2014) in a mixed method study to determine access constraints of students with physical disabilities in South African higher education institutions, it was revealed that 40% of the architectural environment was inaccessible to students with physical disabilities, which rendered them incapable of obtaining services that were supposed to aid them in their studies. In another study by Emong and Eron (2016) in Uganda, it was found that students with physical disabilities have challenges accessing library facilities, lecture halls, and halls of residence due to the steep nature of the staircase as well as ramps that were meant to provide restriction-free access to some building facilities on campus. Emong and Eron (2016) went further to assert that as a result of challenges with the built environment in Ugandan higher education institutions, students with physical disabilities end up missing and losing interest in their classes, thereby affecting their academic learning.

According to a study conducted in Ghana by Tudzi et al. (2017) that used a mixed method approach with 53 students across six universities, 80% of students with physical disabilities attested that the built environment on the campuses of the universities was very restrictive. The study also revealed that students with physical disabilities had difficulties accessing transportation on campus, especially those with mobility impairment. Additionally, obstruction in access routes and entrances to buildings were estimated to be 55% (Ashigbi et al., 2017). Furthermore, in detailing the assessment of the built environment in a university in Ghana using a quantitative methodology to measure adherence to the codes of the universal design, Ashigbi

et al. (2017) posits that many entrances of structures on the campus of the university, such as libraries, sanitary facilities, and lecture halls, were very restrictive to students with physical disabilities. A similar study conducted in Ghana by Braun and Naami (2019) found that students with physical disabilities find it difficult to access the physical environment in the course of their studies. These physical environments were marred with staircases, open gutters, and narrow access doors, they said, not only prevent access to teaching and learning materials but also have an emotional and psychological impact that eventually affect their grade point average.

In addition to the physical structures, the terrains of university compounds were a major challenge that hampers physical accessibility on campuses of higher education institutions. In Tanzania, a study by Kabuta (2014) using both qualitative and quantitative research methods revealed that institutions of higher learning selected for the study had undulating terrains, which made it difficult for students with physical disabilities to have access to services and move around campus. The surroundings of the universities both inside and outside were flooded with open gutters, dunes and debris from rocks and building blocks, making it extremely difficult for students with physical disabilities to move around campus without assistance from other people (Kabuta, 2014; Tudzi et al., 2017; 2020). These unsafe environments can bring additional financial constraints to students with physical disabilities, especially those who use wheelchairs and crutches, as they constantly have to change their tire and crutch pads.

Additionally, overcrowded classrooms in some institutions of higher education, especially in African universities, also hinder access to students with physical disabilities. In his study of the inclusion of students with physical disabilities in higher education in Zimbabwe, Chataika (2010) found that students with physical disabilities also encounter barriers that have to do with

overcrowded classrooms and lack of specially reserved seats for students with disabilities, inadequate standing space and very poor acoustics. Chataika (2010) continues to argue that as a result of overcrowding in lecture halls, students with physical disabilities who happen to come late will have to sit at the back, and they find it difficult to hear from lecturers. Chataika's (2010) findings can be attributed to the fact that there are few universities in most African countries that have contributed to a large number of students in the classrooms.

In a divergent view, Venter, Rickert, and Maunder (2012) assert that there are numerous barriers that disabled students must overcome to attend colleges in South Africa, such as the lack of wheelchair accessibility in the country's public transportation networks. The majority of developing nations, according to the authors, are working to establish specialized environmental access for persons with disabilities rather than general access, which makes travelling to and from institutions challenging. On the other hand, in Spain, Morina and Morgado (2018) found that students with hearing impairments complained of nonaudible announcements at the various bus stops in public transport, which makes it difficult to locate their destination. The authors pointed out that in the event students with disabilities were driving their cars, they encountered difficulties with parking spaces, as the spaces left for the persons with disabilities were often occupied by other people in the school.

In conclusion, the environment, as seen in built infrastructure and terrains in higher education institutions, has become a major hurdle for students with physical disabilities to grapple with every day of their life during the period they stay in school. These physical barriers, as evident in the studies above, could also be the plight of the students with physical disabilities at the University of Ghana and the Kwame Nkrumah University of Science and Technology, hence the need for the current research.

2.1.2 Attitudinal Barriers

Students with physical disabilities are prone to experience negative attitudes from their peers without disabilities as well as faculty and disability support workers. Attitudinal barriers in the form of discrimination, prejudice and labelling from lecturers, disability support workers and students without disabilities have been a constant threat to the participation of students with physical disabilities in higher education institutions (Chikwature, Oyedele & Ntini, 2016; Jenjekwa, Rutoro & Runyowa, 2013; Liasidou, 2014). According to a qualitative research study conducted by Majoko (2018) in Zimbabwe, faculty members' perceptions and patronizing behavior hindered the participation of students with physical disabilities in higher education. Majoko further points out that lecturers' inability to meet the needs of students with physical disabilities undermines the participation of students with disabilities in the teaching and learning process. These findings may be due to the inadequate training given to lecturers on disability pedagogy and the educational requirements of individuals with disabilities.

A similar study conducted in the Czech Republic by Strnadová, Hájková & Květoňová (2015), with an overarching aim of exploring students' experiences regarding barriers to access to education at the tertiary level using a semi-structured interview, revealed that students with physical disabilities encounter challenges due to faculty members' lack of understanding and lack of inclusive practices. The authors posit that some lecturers refused to allow students with physical disabilities to audiotape them while teaching. This assertion by Strnadová et al. (2015) was confirmed by Macleod and Cebula (2009) and Madriaga (2007), who opined that participation in higher education by students with physical disabilities is compounded by disablist practices and attitudes by higher education institution staff. In contrast, Madriaga (2007) asserts that students with physical disabilities were not aware of the people who have

the responsibility of attending to their needs as well as their information regarding support facilities and entitlement or rights that were due to them. This study suggests that students with physical disabilities always live in oblivion of the resources that will make their lives better on the campuses where they find themselves.

Students with physical disabilities also suffer discrimination and exclusion from their peers without disabilities, which is evident in their daily interactions on campus, in lecture halls, in halls of residence and in general gatherings (Musenga & Chireshe, 2012). Students with physical disabilities, for example, those with hearing impairment, experience moments of subtle social exclusion in the events that their peers become unaware of their presence. In South Africa, Swart and Greyling (2011) assert that the lack of awareness, lack of understanding of disabilities and consistent negligence of the presence of students with hearing impairments by students without disabilities creates feelings of social exclusion for students with hearing impairments. The findings of Swart and Greyling (2011) are in tandem with Croft and Morley (2011), who assert that students with disabilities are socially isolated and that their presence is not felt during social gatherings. For Nel, Rankoana, Govender & Mothibi (2015), these experiences of concurrent hypervisibility and invisibility leave students with disabilities feeling misunderstood by their counterparts without disabilities as well as their lecturers. This implies that students with physical disabilities experience ghost shadowing, as no one turns to notice them during social gathering activities on the campus of higher education institutions. Students with physical disabilities experience labelling and name tagging from their peers without disabilities, which affects their self-worth and self-esteem (Tremblay, Harris, Berman, MacQuarrie, Hutchinson, Smith, Braley, Jelley & Dearlove, 2008; Troaino, 2003; Moswela & Mukhopadhyay, 2011). The lives of people with disabilities are significantly impacted by the negative attitudes of their peers. The individual's sense of self, social

and cognitive growth, academic achievement, and general psychological wellness may all be significantly impacted (Idrees & Ilyas, 2012). To ensure that students who have physical disabilities are treated fairly and without any form of discrimination, colleges must play a critical role.

In conclusion, the attitudes of students without disabilities and faculty members, including disability support workers, add up to the difficulties students with physical disabilities encounter as they engage in interactions on campuses of higher education institutions. These behaviors can demean the self-esteem of students with physical disabilities, and of course, they could be the situation of Ghanaian higher institutions, which needs to be investigated.

2.1.3 Inaccessible Curriculum, Information and Communication Barriers

Inaccessible information consists of curriculum and policies that are not suited to the needs of students with physical disabilities, a lack of information about disability support services from the onset of application and admission and difficulties when communicating with people, especially students with hearing impairments. According to Habulezi and Phasha (2012), modifications should be made to the classroom's physical layout and teaching methods, specifically concerning those who have disabilities in higher education institutions. Additionally, access should entail employing a communication medium that is appropriate and available to all students to promote individual engagement with teaching materials. The challenges surrounding how social institutions generate fantastic and equitable chances for everyone to profit take centre stage inside the access discourses. Skrtic (1991) contends that students' disability is an organizational pathology resulting from the inherent structural and cultural characteristics of traditional school organizations. It is neither a human pathology nor an objective differentiation. (p. 169). With regard to Skrtic's (1991) justification, the institutions

that house disabled students are to be blamed for their marginalization. Although it may seem excessive, providing minority groups and students with disabilities access to school is fundamentally an endeavour to change institutions so that they can promote and accommodate human diversity. However, studies from the UK, Turkey, and Canada reveal that obstacles frequently prevent institutions from carrying out this task.

According to Vickerman and Blundell (2010), the UK has robust policies, but these regulations are not supported by enough staff training outlining educators' duties to ensure that education at higher education institutions is accessible. Although some students continue to conceal their disabilities to prevent harassment, institutions are rewarded for creating equality plans, and funding is linked to the participation of students with disabilities (Riddell & Weedon, 2014). The implementation of well-known policies and laws supporting the right to education for students with disabilities at all levels exists in nations such as the United States of America (USA), but it is still a challenge. That is, it has been determined that there is a shortage of assistance for students with impairments at the level of policy implementation.

Furthermore, as reported by Gelbar et al. (2015), students with disabilities continue to face barriers such as inaccessible buildings, rigid curricula, and negative attitudes of staff and lecturers who lack knowledge of disability issues and allow only minor accommodations, limiting access to education for students with disabilities (Murray, Wren, & Keys, 2008). Similarly, in Turkey, the requirements of disabled students are overlooked (Arslan-Ari & Inan, 2010), owing to a lack of resources and the location of disability units inside authority departments that do not deal with disability concerns. Services for students with impairments suffer as a result of the lack of a separate budget. Based on Mullins and Preyde's (2013) study in Canada, despite the country's rules requiring higher education institutions to remove physical

obstacles and enable access, structural hurdles remain an impediment to curricular access. As noted by Sachs and Schreuer (2011), some institutions prioritize academic and physical accessibility at the expense of students' social participation and support. There are grounds to suspect that the integration of students with impairments in higher education institutions is frequently mismanaged. As these authors point out, there is clearly a gap between what policies indicate and what happens, and the challenges to inclusion and accommodation are not only practical but also social.

The curriculum is an important element in regard to the participation and success of students with physical disabilities; however, this is not always the case. The curriculum employed in higher education institutions fails to meet the needs of students with physical disabilities. In a study by Morina, Cortes and Melero (2014), participants complained about the bulkiness of the syllabus used in the university, as the syllabus that was due to being completed in a year was compressed into a four- or five-month period of completion. This rendered students with physical disabilities incapable of completing their courses as needed by the higher education institution (Morina et al., 2014). The finding of this study could be likened to the current social reality as evident in the reduction of the duration of the normal period of university education due to the outbreak of the coronavirus disease in 2019.

Students with physical disabilities experience poor academic performance as a result of not having access to course materials on time. Students with physical disabilities' access to course materials is delayed due to transcription at the resource centres and as a result of the uncertainty of course instructors about the types of reading materials that will be used in the teaching and learning process (Bollard, 2009; Pozo & Monero, 2009; Pozo & Perez, 2009). Morina et al. (2014) found that students with physical disabilities complained of inflexible tutorial times as

well as rigid assessments and examinations that were not favourable to students with physical disabilities. They assert that students with physical disabilities often receive the same time duration during tests and examinations as their counterparts without disabilities. This is evident in the study of Hopkins (2011), who found that there were no adaptation modules for students with disabilities during examinations. In a similar study, Vickerman and Blundell (2009) reveal that teaching and assessment were not tailored to meet the individualized needs of students with disabilities because tutors felt it would be an unfair advantage to other students without disabilities. Vickerman and Blundell argue that students with physical disabilities were reluctant to disclose their disabilities to higher education institutions due to fear of not being placed on the course of their choice. The findings of Vickerman and Blundell (2009) show the insensitivity of higher educational institutions to the plight of students with disabilities.

Additionally, students with physical disabilities experience information barriers at the onset of the application process and within higher education institutions. In the United Kingdom, students with disabilities lamented the lack of adequate information provided to students during the application process (Wray, 2011). According to Wray (2011), participants with disabilities reported that they found it difficult to obtain information on campus, which obstructed their ability to participate in the activities that go on campus.

In summary, challenges and difficulties emanating from inaccessible curricula and information and communication add up to the daily hurdles students with physical disabilities have to go through before completing their higher education.

2.2 Factors that Foster Academic Learning Among Students with Disabilities

Despite the plethora of challenges that students with physical disabilities go through in their bid to access and participate in higher education, some still manage to excel and make headway in their chosen fields of study. There are many contributing factors that enhance the academic learning of students with physical disabilities. These factors are evident in their personal characteristics, institutional factors and demographic characteristics.

2.2.1 Personal Characteristics

Personal characteristics are the inherent skills and capabilities, including self-efficacy, self-motivation and self-determination, that students with physical disabilities employ to enhance their academic learning.

Students with physical disabilities employ several means and techniques to manoeuvre the academic ladder. According to a study conducted by Dinther, Dochy & Segers (2011), student self-efficacy was a major driving force behind the heightened academic performance of students with physical disabilities. Self-efficacy has been defined as the belief in one's abilities to perform a given course of action to achieve an expected end (Bandura, 1997). When students with physical disabilities believe in their self-worth and capabilities, it overrides the difficulty that their specific impairments present in the course of performing a given task, in this case, the task of learning and participating in higher education. Similarly, belief in one's capabilities affects students with physical disabilities' performance and learning behaviour in certain aspects of their life, such as the task they choose, their exertion, perseverance and performance (Schunk, 1995; 2003).

Moreover, student factors evident in their behaviors and academic characteristics have been earmarked to change students' success in higher education. That is, academic engagement,

which is usually defined as a student's ability to participate and interact with faculty members and colleagues in social and educational activities as an integral part of university programming, has a strong correlation between students with disabilities and success (Kuh, Kinzie, Buckley, Bridges & Hayek, 2006; Strayhorn, 2012). In their study looking at the experiences of college students with disabilities and the importance of self-determination in higher education settings, Getzel and Thoma (2008) reveal important themes and activities related to self-advocacy germane to college students with disabilities, which include the ability to seek appropriate disability support services, forming a formidable relationship with faculty and lecturers, developing an on-campus support system and being aware and understanding of their own needs as students with disabilities. Self-advocacy and the age of students with disabilities in higher education have also been closely linked to high academic performance (Getzel & Thoma, 2008).

Similarly, determination to succeed in academic endeavours is a factor that helps foster academic learning and participation in higher education by students with physical disabilities. Researchers have accepted the fact that self-determination is a major instrument in regard to higher education success for students with physical disabilities (Bae, 2007; Cobb, Lehmann, Newman-Gonchar & Alwell, 2009). Self-determination, as defined by Field, Martin, Miller, Ward & Wehmeyer (1998), is “a combination of skills, knowledge, and beliefs that enable a person to engage in goal-directed, self-regulated, autonomous behaviour” (p.115). These characteristics enable students with physical disabilities to forge forward in their academic pursuits in the face of difficulties. In a synthesis of the literature on self-determination and academic success for students with physical disabilities, Ju, Weng & Landmark (2017) found that self-determination and self-advocacy were important determinants for students with

physical disabilities to excel in their academic endeavours in higher education. They argued that students with physical disabilities develop diverse self-determination skills, including problem-solving skills, self-awareness, goal setting, self-management and self-advocacy. Additionally, these self-determination skills employed by students with physical disabilities are used in areas such as self-knowledge to help students understand their disabilities and needs for accommodations, advocacy for academic accommodations and disability services, self-regulation in academic studies, and perseverance and resilience in academic learning (Getzel & Thoma, 2006, 2008; Hadley, 2006; Skinner, 2004; Thoma & Getzel, 2005; Ju et al., 2017). Multiple outcomes in higher education have been connected to students' understanding of their disability, how it affects their academic learning and performance (self-awareness), and knowledge of how to obtain adjustments (self-advocacy), including performance, persistence, and satisfaction (Belch, 2004; Daly Cano et al., 2015; Lombardi et al., 2011; Terras et al., 2015; Yssel Pak & Beilke, 2016).

In contrast, self-motivation has been proven to be a driving force behind successful academic learning for students with disabilities. According to a study conducted by Dryer et al. (2016) in Australia using a quantitative method and a sample size of 83, it was revealed that there was a strong correlation between self-motivation and the quality of life and academic achievement of students with physical disabilities. The study also found that students with physical disabilities who have poor social relationships happen to obtain higher grade point averages at the end of their assessment years. The findings of Dryer et al. (2016) seem to suggest that students with physical disabilities invested more time in their studies and neglected their social relationships, which were able to help them focus on their academic endeavours.

In conclusion, for students with disabilities to enhance their academic learning and succeed in their academic aspirations, they must learn to employ these personal skills to overcome the challenges presented by their impairment as well as the environment. The personal characteristics involving self-efficacy, self-determination and self-motivation could also be a strength that persons with physical disabilities possess in Ghanaian higher education institutions and therefore warrant an exploration into these coping strengths.

2.2.2 Demographic Characteristics

Demographic characteristics of students with physical disabilities include their gender, type of disability, family background and income.

The demographic characteristics of students with physical disabilities influence their ability to excel and improve their learning. Students arriving at college with a collection of demographic factors and prior experiences form "inputs", such as disability, income, and gender status, which influence their academic learning and engagement, according to Astin's (1977, 1993) model of student involvement. Students' characteristics, such as gender, socioeconomic status and type of disability, speak volumes about the extent to which students with physical disabilities learn and succeed in higher education institutions (Kim & Kutscher, 2020).

The socioeconomic status of students with physical disabilities has been indicated to influence academic learning and participation in higher education. Empirical evidence shows that students with disabilities whose families, parents or guardians have higher income can complete their higher education programmes and do well in terms of academic performance, learning and participation in academic activities (Rojewski et al., 2013). In contrast, students with disabilities who come from lower socioeconomic backgrounds are more likely to have experienced financial constraints that affect their academic learning and their participation in college

(Lombardi et al., 2012) and reduce the rate at which they graduate from college (Thompson-Ebanks, 2014).

Students with physical disabilities attending inclusive education institutions at the secondary school level stand a better chance of excelling in their academic learning at higher education. According to Bolt et al. (2011), early success in obtaining accommodations for students with reading and writing difficulties in high school may boost their confidence in seeking comparable help in college, which may be reflected in their participation and academic learning in higher education.

In conclusion, the demographic characteristics of students with disabilities play a major role in determining their success in higher education. Demographic characteristics such as socioeconomic status and prior inclusive education experience are gaps that are non-existent in the Ghanaian literature and require further exploration to enhance the experiences of students with disabilities in higher education.

2.2.3 Institutional Factors

Academic learning and participation of students with disabilities are influenced by support factors in higher education institutions, as is evident in the role of faculty members, institutional facilities and institutional administrators.

Encouragement from faculty members about the high academic expectations of students with physical disabilities increases their participation and learning levels (Kim & Kutscher, 2020). Another study by Lau (2003) to suggest roles that faculty members could play to improve the academic success, learning, and retention of college students with disabilities recommended diverse roles that faculty members can play to help students with disabilities do well in their chosen fields of study. These roles include employment of computer-based teaching methods

to make teaching and learning interesting and fun, adopting a more practical way of teaching and learning that inculcates practical activities that are germane to students' future careers and encouraging cooperative learning where students with physical disabilities learn from their peers without disabilities, engage with students in academic advising and subsequent follow-up sessions in the semester. These roles could enhance the academic learning of students with physical disabilities.

Institutional facilities have been recognized as a contributing factor in the academic learning of students with physical disabilities. In Pakistan, Kamal et al. (2014) found that school facilities were positively associated with the academic performance of students with disabilities. Teaching and learning materials in accessible digital platforms contribute significantly to the learning and participation of students with physical disabilities. They offer a supplementary platform for learning. For example, Garcia et al. (2009) opine that the introduction of learning management systems (LMSs) enhances the learning of students with physical disabilities in and out of university premises to select their pathway to learn through a course. They can share their perspectives and ideas through tools provided on these platforms, such as chat rooms, emails, forums and discussion groups (Garcia et al., 2009). Distraction ally reduced testing, alternative format examinations, and assignment and test date flexibility were all significant predictors of academic learning, participation and graduation among students with disabilities who received university-based accommodations (O'Neil, Markward & French, 2012).

In summary, accessible university facilities are the first step in promoting higher education for students with disabilities. If these facilities can meet the individual needs of students with disabilities, the gap between the performance of students with disabilities and their counterparts without disabilities could significantly close.

2.3 Support and Needs of Students with Physical Disabilities

To improve the experiences of students with disabilities, their specific needs must be met. These needs could range from accessible environment, information, curriculum, assistive technology, etc. These needs are both the responsibility of the higher education institutions and the faculty involved with the students with physical disabilities. According to a quantitative study by Wessel et al. (2009), prior information should be provided to students with physical disabilities even before admission. This information according to the authors should be about the disability support offices and their services to students with disabilities, personnel who will be responsible for attending to students' needs and the type of accommodations available for students with physical disabilities. In another study, Tagayana et al. (2005) posit that assistive technology, education instructional support, career assessment and placement are needed to ensure students' success. This will enable students with physical disabilities to have a stress-free educational experience similar to their counterparts without disabilities.

Additionally, disability support guidelines could be consulted by higher education institutions to enhance teaching and learning for students with disabilities. For example, international guidelines such as Web Content Accessibility Guidelines (WCAG) and Instructional Management Systems (IMS Global) could be adopted to provide accessible text, images and multimedia resources for students with disabilities (IMS Global Consortium, 2020). Another guideline that is worthy of emulation by higher education institutions is universal design. Universal design has been defined as a method of designing products, architecture, goods and services that are accessible and usable by all people, including students with physical disabilities (Ostroff, 2011). These guidelines, if adhered to by the authorities and management

of higher education, can be a step in the right direction to enhance higher education opportunities for students with physical disabilities.

To conclude, knowing the needs of students with disabilities in higher education helps university authorities best serve them, so they can participate in the acquisition of knowledge without much hindrance. The absence of knowledge of the needs of students with disabilities in their Ghanaian context requires more research to ascertain the needs of students with disabilities, hence the need for this current study.

2.4 Theoretical Perspective

The study at hand is rooted in the framework of critical disability theory (CDT), which serves as its theoretical foundation. CDT is chosen for its ability to elucidate the root causes of barriers faced by individuals with disabilities while proposing innovative approaches to dismantle these obstacles. An essential aspect of CDT is its recognition of the diversity within the disabled community, which is pivotal for the integration and advancement of individuals with disabilities. CDT, as advocated by Hoskings (2008), calls for a comprehensive transformation of society's social structure to facilitate the full participation of individuals with disabilities. This perspective also emphasizes the importance of inclusive policies and empowering students with physical disabilities. Furthermore, CDT champions equal access for individuals with disabilities across various facets of social life, encompassing transportation, housing, economic entitlements, health, and education. Consequently, this theoretical framework enabled the researcher to gain a deeper understanding of the challenges encountered by students with physical disabilities and formulate appropriate recommendations to mitigate these issues.

Critical Disability Theory finds its origins in Max Horkheimer's work from 1937, particularly in his essay titled 'Traditional and Critical Theory,' as highlighted by Hosking (2008). This

theory emerges as a response to the dominance of the medical model of disability explanation during the early 19th century, subsequently supplanted by the social model of disability. CDT critically evaluates and challenges existing disability discourses and stereotypes that perpetuate disadvantages for individuals with disabilities and infringe upon their human rights, as noted by Gillies (2014). CDT posits that disability is fundamentally a matter of politics and power rather than a mere issue of medicine or compassion. It seeks to counter ableism and rectify the injustices arising from the denial of economic and social opportunities to individuals with disabilities, advocating for their rights to be renegotiated (Rioux & Prince, 2002). Furthermore, CDT emphasizes the importance of fair access to all aspects of social life, including transportation, housing, economic entitlements, health, education, and employment. It moves beyond the individual pathology perspective inherent in the medical model and transcends liberalism, embracing the social model of disability (Oliver & Barnes, 1993). In the Critical Disability Theory framework, disability is defined as the intricate interplay between an individual's disability, their response to it, and how they are treated by others, among other factors (Hosking, 2008). Therefore, proponents of CDT hold the existing social realities accountable for their failures and call upon individuals responsible for effecting change (Bohman, 2005; Baffoe, 2013).

According to Hosking (2008), there are seven basic tenets of critical disability theory. They include multidimensionality, social model of disability, voices of disability, language, rights, valuing diversity and transformative politics. For the present study, all seven tenets were applicable for the study: multidimensionality, social model of disability, voices of disability, language, rights, valuing diversity and transformative politics. All seven tenets are applicable because they provide a concrete understanding of the phenomenon under study.

2.4.1 Multidimensionality

The experiences of persons with disabilities are shaped by different factors. According to Hosking (2008), multidimensionality is attributed to the work of Kimberle Crenshaw in 1989 on intersectionality. According to Kimberle's work, intersectionality aims at demystifying the relationship that exists between gender and race and how it impacts black women (Carastathis, 2014; Dutta 2015 cited in Bekoe, 2018). Hosking explains intersectionality to mean that there is an interrelationship between educational level, gender, employment status, ethnic group and sexual orientation and how all these factors contribute to inequality and social injustices and shape the experiences of people, which include persons with disabilities. Multidimensionality, therefore, uncovers the different factors that intersect to influence the experiences of students with disabilities. Hence, it helps to understand the different intersecting factors that impact the experiences of students with physical disabilities in higher education institutions. This implies that many intersecting factors affect the academic learning of students with physical disabilities in higher education. For this study, the intersecting factors that could influence the experiences of students with physical disabilities may include the school environment, institutional facilities, peers, and tutors.

2.4.2 Social Model of Disability

This tenet posits that disability is not located in the impairment of the individual with the disability but rather is located in the barriers that are present in the environment (Sztobryn-Giercuskiewicz, 2017). Therefore, the negative social effect experienced by people with disabilities is caused by the physical and institutional environment as well as the attitudes in this environment towards persons with disabilities who are not able to live up to the expectations of normalcy (Sztobryn-Giercuskiewicz, 2017). Thus, people's negative cultural

patterns, attitudes, and assumptions are examples of attitudinal barriers, while inaccessible buildings, transportation, and insufficient assistive devices are examples of environmental barriers that prevent persons with disabilities from participating (Barnes & Mercer, 2005). This implies that the experiences of students with disabilities in higher education, whether positive or negative, could be a result of institutional provisions or negligence. This element of critical disability provided insight into institutional and environmental factors that could affect the academic learning of students with physical disabilities in higher education. For this study, negative attitudes from peers were evident.

2.4.3 Voices of Disability

Hosking argues that persons with disabilities' voices are distorted and silenced because they contradict "mainstream" conceptions of disability and their capacity and relevance. According to him, nondisabled individuals only hear what they want to hear from persons with disabilities and what is consistent with their perception of disability. As a result, the views of persons with disabilities about what best suits their needs are not taken into consideration during the decision-making processes. Critical disability theory gives voice to persons with disabilities. Thus, when the nondisabled give ear to the voices of persons with disabilities, it can better help to meet their needs. Therefore, this tenet could help provide the opportunity for students with physical disabilities at higher education institutions to voice out what best promotes their academic learning.

2.4.4 Language

This tenet posits that the concept of disability and the status of persons with disabilities are heavily influenced by language. According to Hosking (2008), language consists of words and

images that are used to describe disability. These words and images directly impact how people view disabilities and interact with them (Baffoe, 2013). The words used to describe persons with disabilities are also embedded in culture and perpetuated in the mass media, giving negative connotations about persons with disabilities (Hosking, 2008). This implies that words and definitions used to describe students with disabilities in academic discourses as well as within the higher education environment either from faculty or students without disabilities can affect the performance of persons with disabilities in higher education institutions. Hence, it helps to understand how the language used to portray persons with disabilities could either upwardly or downwardly impact the academic learning of students with physical disabilities. For this study, participants encountered name calling such as ‘yarefuo’.

2.4.5 Rights

Rights are an important instrument needed to ensure that persons with disabilities receive equal treatment and are also given opportunities that will enhance their full participation in society (Hosking, 2008). Hence, critical disability theory views the rights-based approach as an essential tool for promoting people with disabilities’ equality statements and encouraging their full incorporation into society in all respects while also bringing the importance of diversity into society (Sztobryn-Gierczakiewicz, 2017). Persons with disabilities are entitled to education, and higher education institutions need to provide the necessary resources for the realization of this right. The element of right helps in uncovering some of the resources available for students with physical disabilities at higher education institutions, which will enable them to exercise their full right to education. The resources available in Ghanaian higher institutions could be libraries, internet access, and assistive technology.

2.4.6 Valuing Diversity

The value of diversity talks about the fact that society with all its institutions cannot do away with differences, and it is an inevitable characteristic that cannot be visible all at once (Imle, 2016). Thus, persons with disabilities are unique individuals with different characteristics, such as the visually impaired and the hearing impaired, which have different needs and require different resources to meet their goals. They also have unique skills, abilities and contributions that require attention to help them contribute their quota to their communities. According to Hosking (2008), when these differences are not considered, it leads to the neglect and marginalization of the particular group with such characteristics. This implies that there are different calibres of students with disabilities pursuing higher education, and their unique characteristics must be taken into consideration when making decisions. This tenet helps our understanding of individual experiences of the higher education environment and how it impacts their academic learning.

2.4.7 Transformative Politics

The idea of transformative politics emanates from the Frankfurt school of thought, which posits that change in the economic, political and social structure of society will lead to the liberation of humanity (Sztobryn-Giercuskiewicz, 2017). This change should be able to bring about empowerment as well as equality. Critical disability theory argues that welfare programmes and policies should move away from the paternalistic and inflexible nature (Hosking, 2008) and adopt an all-inclusive method of policy formulation and implementation (Sztobryn-Giercuskiewicz, 2017). This suggests that the plight of persons with disabilities should be considered whenever decisions are made. This tenet helps to understand how policies, laws and

regulations impact the academic performance of students with physical disabilities. An example of these policies could include the Persons with Disabilities Act (2006) Act 715.

2.4.8 Relevance of Critical Disability Theory to the Study.

Critical Disability Theory (CDT) helps researchers understand the different facets that contribute to the challenges and factors that foster the academic learning of students with physical disabilities in higher education. Additionally, CDT provided an in-depth understanding of language (words and images) used to describe students with physical disabilities in the academic discourse, its environment and how it affects academic learning and contributes to the challenges of students with physical disabilities. In other words, the CDT gave a clear explanation of how words and images in daily discourses and prints are used to label students with physical disabilities. Moreover, CDT was also useful in understanding how the rights of persons with disabilities as spelt out in the UNCRPD and the Ghana Disability Act (Act 715) can improve academic learning and eliminate the challenges experienced by students with physical disabilities in higher education. Additionally, the theory was helpful in understanding how institutional and environmental factors in higher education contribute to academic learning and the challenges of students with physical disabilities. The CDT helped to understand the diverse population of students with physical disabilities, their different challenges, and the necessary resources needed to meet their individual needs.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter focuses on the research methods employed in the study. It discusses the research approach and design, study area, target and study populations, sampling techniques, methods of data collection and data analysis. It also provides information on ethical considerations and how ethical approval was obtained as well as measures that were put in place to ensure the credibility of the study.

3.1 Research Approach and Design

A qualitative research approach was used for this study. This approach was used because it helped to explore and understand meanings and definitions individuals and groups associate with their environments, including social problems (Cresswell, 2014). This approach was used to enable the researcher to understand and make meaning of the experiences of students with physical disabilities in their quest for higher education in Ghana. Furthermore, a phenomenological qualitative research design was adopted for the study. According to Creswell (2014), phenomenology design helps to describe the lived experiences of individuals or groups about a particular social phenomenon. Additionally, phenomenological design deepens the understanding of the meaning of the daily experiences of people (Patton, 2002). In this regard, Patton (2002) opines that phenomenological design enabled the researcher to have an in-depth understanding of the day-to-day experiences of individuals who experience phenomenology. Therefore, to shed light on and pinpoint the distinctive experiences of students with physical

disabilities in higher education from their viewpoints, the phenomenological technique was adopted.

3.2 Study Sites

The study was conducted in two selected public universities in Ghana. These universities were the University of Ghana (UG) and the Kwame Nkrumah University of Science and Technology (KNUST) situated in the Ashanti and the Greater Accra regions of Ghana, respectively. These institutions were chosen because one (UG) has a special unit that provides services to students with disabilities and the other (KNUST) does not have a special unit for students with disabilities. Thus, the researcher chose these two institutions because he believes that students could report different experiences due to the presence or absence of disability support services in the selected institutions. Additionally, both institutions have different environments that could impact the experiences of students with physical disabilities in unique ways. Ultimately, the study sought to compare the experiences of students with physical disabilities at two study sites: the University of Ghana and the Kwame Nkrumah University of Science and Technology.

3.2.1 The University of Ghana

The University of Ghana was the first university established in the country by an ordinance in 1948. The university operates in the collegiate system with four colleges. These colleges include the College of Basic and Applied Sciences, College of Health Sciences, College of Education and College of Humanities. The university has a student population of approximately 53,643 enrolled in Regular, Sandwich and Distance Education programmes (University of Ghana, n.d.). The University is a coeducational institution with an established Office of Students with Special Needs (OSSN). The Office of Students with Special Needs (OSSN) was

set up in 2005 to provide support services to students with special needs. Currently, the office caters to students with hearing, visual, and physical disabilities and specific learning difficulties, as well as students with chronic medical conditions such as sickle cell anaemia, mental health disorders and cerebral palsy. The OSSN serves a population of approximately 45 students with special needs (University of Ghana, n.d.). At the time this research was being conducted, the University of Ghana was the only public university that had an office complex to address the concerns of persons with disabilities pursuing various programs. This necessitated its selection as a study site.

3.2.2 Kwame Nkrumah University of Science and Technology

The Kwame Nkrumah University of Science and Technology is a public higher education institution located in the Kumasi Metropolis of Ghana (KNUST, n.d.). It was accredited by the Ghana National Accreditation Board in 1951. The University is stationed approximately on a sixteen-square-kilometre campus of undulating land, approximately seven kilometres away from the central business district of Kumasi (KNUST, n.d.). The university operates six collegiate systems, namely, the College of Agriculture and Natural Resources, College of Health Sciences, College of Humanities and Social Sciences, College of Art and Built Environment, College of Engineering and College of Science. Currently, the university has a population of approximately 64,187 students pursuing varied undergraduate and postgraduate programs (KNUST, n.d.). The university houses the Centre for Disability and Rehabilitation Studies and a hospital that provides health services to students, staff and the general public (Owusu-Ansah, Agyei-Baffour & Edusei, 2012). Kwame Nkrumah University of Science and Technology was chosen because it was yet to organize services for students with disabilities and data on students with disabilities (Owusu-Ansah et al., 2012). Currently, the university

admits students with mobility impairments, students with visual impairments and students with hearing impairments. The present population of students with disabilities is 29. Although there were other universities without offices for students with special needs, the Kwame Nkrumah University of Science and Technology was chosen because of convenience and proximity, as the researcher had some family members close to the school to provide accommodation for the researcher.

3.3 Target Population and Study Population

The target population for this study was students with disabilities in universities. The study population was students with physical disabilities (visual impairment, mobility impairment and hearing impairment) who were pursuing their undergraduate and graduate studies at any of the selected higher education institutions (the University of Ghana and Kwame Nkrumah University of Science and Technology) who had stayed in the school for at least one year. This was because the researcher believes that staying in a school for a minimum of one year was enough for the students to discuss any experiences, they had with regard to participating in higher education. The researcher opted for undergraduate and graduate students with disabilities because they are the category of students regularly admitted by both universities. Additionally, undergraduate and graduate students were chosen to compare their experiences.

3.4 Sampling Techniques and Selection Criteria

A purposive sampling technique was employed for the study. The purposive sampling technique is the selection of research participants based on desired traits or characteristics determined by the researcher (Kumar, 2011). According to Kumar (2011), purposive sampling aids the researcher in sampling participants who have in-depth information or understanding of

the topic under study and meet some characteristics that were determined by the researcher. Purposive sampling was adopted because the researcher selected participants based on a predetermined characteristic that was useful to the study. The participants were selected to be part of the study if they met the following criteria:

1. The student must be a person with a physical disability (i.e., visual impairment and mobility and hearing impairment).
2. The student must be pursuing undergraduate or graduate studies. The researcher opted for undergraduate or graduate students because they are the ones the university regularly admits.
3. The student must be enrolled in the school for at least one year.

Students were excluded from the study if they had other forms of disabilities other than physical disabilities as defined by this study, if they had stayed in school for less than a year, or if the student was not willing to participate in the study.

3.5 Recruitment Process

The researcher conducted a reconnaissance study in December 2020 to familiarize himself with Kwame Nkrumah University of Science and Technology. The researcher visited the academic affairs directorate and spoke to them about his intent and the purpose of his visit. He was told to submit an introductory letter from the Department of Social Work and Ethics Committee and a copy of his data collection instruments to the office of the dean of students. Subsequently, in the early part of May 2021, the researcher submitted the needed documentation to the office of the dean of students' affairs for review and approval. The researcher received approval from the office of the dean of students' affairs in mid-July 2021 and was directed to meet the person

who is in charge of the affairs of students with disabilities. The researcher then obtained a list of students with disabilities and their contacts. The researcher then called the students to ask them whether they would be willing to participate in the study and to create rapport. Some of the students responded positively, while others did not. Fortunately, for the researcher, he received the number of participants needed for the study. At the time the researcher contacted the students, they were already on vacation and therefore necessitated the need for the interviews to be conducted via telephone. Another factor that necessitated phone interviews was the researcher's financial challenge. He could not schedule individual meetings with participants even though they may reside around Kumasi and its environs due to the financial challenge. The researcher also visited the Office of Students with Special Needs (OSSN) at the University of Ghana. The researcher submitted an introductory letter, ethics approval letter and copy of the data collection instruments for permission to speak with students with disabilities. The researcher received approval and conducted both the phone interviews and the face-to-face interviews in August 2021.

3.6 Sample Size

In all, eighteen (18) students with physical disabilities participated in the study. Nine (9) participants from each university. In the Kwame Nkrumah University of Science and Technology, five (5) females and four (4) males participated. Similarly, five (5) males and four (4) females participated in the University of Ghana. Eighteen (18) participants participated because Creswell (1998) suggested that the sample size for a phenomenological study should be between five (5) and twenty-five (25) participants. This sample size was selected because the final sample was dependent on the point of saturation (Dworsky & Meehan, 2012). Expanding further on this perspective, the stage at which no new information emerged in the

data due to the completion of more interviews that were adequate for the study. It is important when choosing sample size in qualitative research, as pointed out by Guest, Bunce and Johnson (2006). Consequently, with regard to the above assertion, the researcher completed the study when no new or additional information was received from the participants from either study site. Students with hearing impairments were not included in the study because there were no students with hearing impairments admitted to either study site at the time of data collection.

3.7 Data Collection

Primary data were collected for this study. The primary data collection approach was adopted because it provided the researcher with first-hand information about the phenomenon under study (Kumar, 2011). The data were collected through individual face-to-face in-depth interviews and phone interviews using open-ended questions. Phone interviews were conducted with all participants from KNUST and were recorded automatically with permission from the participants. Phone interviews were collected because it was convenient for both the researcher and participants at the KNUST. Phone interviews were conducted for participants in KNUST because, at the time of the data collection, the students were on vacation and had travelled to their various homes. This necessitated the need for phone interviews. For example, available studies have shown that telephone interviews generate the same data richness as face-to-face interviews in terms of word count and topic-related information (Sturges & Hanrahan, 2004; Vogl, 2013). Additionally, although IPA prescribes that data should be collected on a face-to-face basis for the purposes of observing nonverbal cues and actions, the absence of these cues did not have any impact on the results obtained for the study. Face-to-face individual in-depth interviews were conducted with participants from the University of Ghana. An interview schedule written in English was used as a guide to collect data from the participants at places and times convenient to them. The interview

guide was semi-structured. It consisted of open-ended questions about the challenges of students with physical disabilities, factors that foster academic learning of students with physical disabilities and their needs as well. Open-ended questions were asked to allow participants to freely express themselves about the phenomenon under study. The interviews were conducted in English for all the participants. Each of the interviews lasted for approximately 60 minutes. The interviews for participants at the University of Ghana were audiotaped with their permission. During the interview, no human triggered traumatic emotions among the participants. However, the researcher made sure to spend a few minutes with the participants to determine whether they had any emotional disturbances regarding the questions they answered. The researcher also made provisions for the services of a psychologist in case some emotional traumas were triggered.

3.8 Data Analysis

After being recorded, the interviews were transcribed verbatim into a Word document, and a backup copy was stored in the researcher's email, Google Drive and hard drive. In analysing the transcribed data, the four stages of the Interpretative Phenomenological Analysis (IPA) developed by Smith & Osborn (2008) cited in Pietkiewicz & Smith (2014) were used. IPA is a qualitative study that investigates how individuals make sense of their experiences (cited in Pietkiewicz & Smith, 2008). The IPA was selected because it helped the researcher draw more attention to the distinctiveness and similarities in the data while addressing the unique experiences shared by the students with physical disabilities from both institutions. Additionally, IPA emphasizes the role of the researcher in deducing the meaning of the information provided by the participants. It is a two-stage interpretation process or what is referred to as double hermeneutics (Osborn & Smith, 2008). Based on this idea of IPA, the researcher deduced and derived meaning from what participants said in the transcripts, which

has been appropriately discussed. In addition, the IPA enabled the researcher to give an accurate description of the experiences of the students who had expert knowledge about the phenomenon under study. The four stages of the IPA are listed below.

- **Multiple Reading and Making Notes:** The analysis began with reading the transcripts and listening to the audio recordings several times to become familiar with the interviews, as advised by Pietkiewicz and Smith (2014). Reading and rereading the transcripts helped me understand the participants better while taking notes about the researcher's observations and experiences. Participants' comments about noteworthy things they said during the interviews were noted down (Smith & Osborn, 2008). Line by line, the transcripts were coded, and several themes were discovered in the process (Fade, 2004). Symbol pauses and repetitions were also noted in the various transcripts (Pietkiewicz & Smith 2014). Statements that were distinct from others, as well as emotional responses, were sought out (Pietkiewicz & Smith 2014). (For example, the reluctance of students without disabilities to come closer to students with disabilities, rejections, derogatory utterances, friendship with students without disabilities and approachable lecturers were some of the notes derived).
- **Transforming Notes into Emergent Themes:** At this stage, the analysis concentrated on the notes taken in the previous stage, that is, multiple readings and making notes. The notes were interpreted by identifying similar and divergent notes, and words and sentences were constructed, all based on the contents of the participants' accounts (Pietkiewicz & Smith, 2014). The codes and phrases in the various transcripts were used to identify emerging themes (Smith & Osborn, 2008; Osborn & Smith, 1998). These developing themes were duplicated and listed in a table, and the notes and transcripts were then arranged under each theme (Fade, 2004). (For example, negative experiences and positive experiences were some of the emergent themes).

- ***Seeking Relationship and Clustering Themes:*** Emerging themes were recognized, as well as the connections between them (Smith & Osborn, 2008). Some themes emerged as master themes, while others originated as subthemes (Smith & Osborn, 2004). For each master topic, a table was produced that linked the many subthemes and included excerpts from the transcript (Fade, 2004). The relationship that exists between these ideas was thoroughly elucidated. (For instance, negative relational experiences and positive relational experiences became positive and negative relationships).
- ***Writing Up the Analysis:*** The study's findings were narrated by picking a subject and describing it with verbatim quotes from the interviews (Pietkiewicz & Smith, 2014). The discussion part was built around the researcher's analytical remarks and the relationship between the current study and the literature (Pietkiewicz & Smith, 2014; Smith & Osborn, 2008).

3.9 Ethical Considerations

The researcher received approval from the Institutional Review Board (IRB) at the College of Humanities at the University of Ghana with approval number ECH 215/21-22. Ethical guidelines and standards that involved informed consent, confidentiality, plagiarism, voluntary participation and anonymity were religiously followed. Informed consent implies that the study participants were made adequately aware of the type of information needed from them, why the information was being collected, the purpose for which it was used, how they were expected to participate in the study and whether it would affect them directly or indirectly (Kumar, 2011). Informed consent statements were read to students with visual impairment, and they were assented by thumb printing. Students with mobility impairment were given informed consent to read and either append their signature or thump print. Informed consent was also read for

students who participated in the interview on the phone, and they assented through their initials mentioned to me on the phone. Furthermore, confidentiality implied that information collected from participants was used for the research and nothing else (Kumar, 2011). Information collected was kept safe and protected from third parties except for the supervisors of the researcher. Furthermore, voluntary participation implied that participants were not to be coerced or forced to participate in the study; they did so of their own free will and were free to opt out at any point in time. In addition, anonymity was maintained, as participants could not be traced back to the information they gave. Their names were replaced with pseudonyms. Participants were made aware of information about the researcher, the purpose of the study, the role of the participants and the dissemination of research findings (Creswell, 2014). Additionally, acknowledgements were given to the various authors and scholars whose works were cited in the study, making sure that plagiarism was avoided.

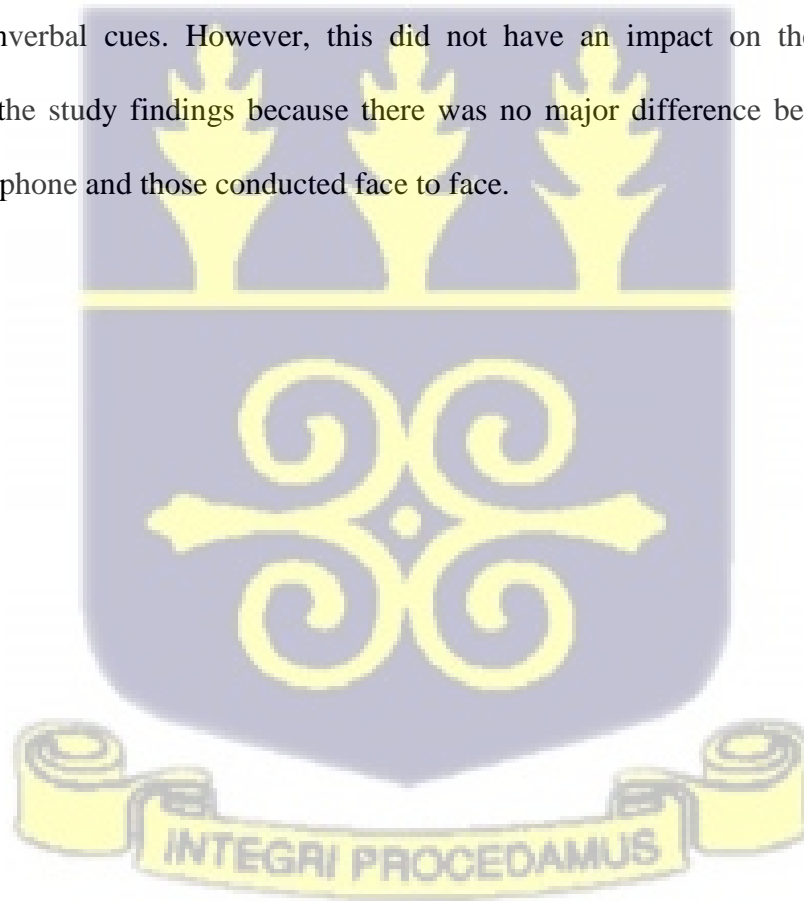
3.10 Measures to Ensure Credibility

Member Checking: The researcher followed up on the participants with the transcribed data to ensure that the data represented what transpired during the interview. That is, the researcher sent the transcribed data via email to participants who were far from the researcher (participants from KNUST) and gave hard copies to those who were close to the researcher (participants in UG). Five (5) participants from both the University of Ghana and the Kwame Nkrumah University of Science and Technology responded with their feedback after verifying the transcripts. This ensured a balance between the participants' perspectives and how the researcher interpreted them to make meaning out of them (Williams & Morrow, 2009).

Reflexivity: The researcher's thoughts, feelings, and ideas were recorded in field journals (Krefting, 1991). The researcher was able to recognize his prejudices and preconceived ideas as a result of issues with the full research process being documented.

3.11 Limitations of the Study

The researcher conducted some of the interviews on the phone and hence was not able to capture participants' nonverbal cues. However, this did not have an impact on the analysis and presentation of the study findings because there was no major difference between the data collected on the phone and those conducted face to face.



CHAPTER FOUR

PRESENTATION OF FINDINGS

4.0 Introduction

This chapter presents the findings from the study based on the data collected. The chapter starts by describing the demographic characteristics of students with physical disabilities, after which the findings of the research were discussed. The findings of the study were discussed based on the objectives of the study, which included investigating the challenges students with physical disabilities at the University of Ghana and Kwame Nkrumah University of Science and Technology face, exploring factors that foster learning among students with physical disabilities at the University of Ghana and the Kwame Nkrumah University of Science and Technology and ascertaining the needs of students with physical disabilities at the University of Ghana and the Kwame Nkrumah University of Science and Technology. Pseudonyms were employed in the presentation of quotes to ensure the anonymity of participants. This chapter also includes a discussion section, where findings were discussed in conjunction with other studies as well as the Critical Disability Theory, which was used as a theoretical framework for this study.

4.1 Demographic Characteristics of Participants

This section presents the sociodemographic characteristics of the study participants. It describes the types of disability of the participants and their religious affiliation.

4.1.1 Various Types of Disabilities

Table 1

Types of Disability

| School | Types of Disability | | Sex | |
|--------------------|---------------------|----------|--------|------|
| | Visual | Mobility | Female | Male |
| UG | 5 | 4 | 4 | 5 |
| KNUST | 2 | 7 | 5 | 4 |
| Grand Total | 18 | | 18 | |

Table 1, displayed above, provides an overview of the types of disabilities present in the two universities, along with the corresponding number of male and female students with disabilities in each institution. The study involved a total of eighteen (18) participants, evenly distributed with nine students from each university. Specifically, the University of Ghana (UG) had five (5) students with visual disabilities and four (4) with mobility impairments, while the Kwame Nkrumah University of Science and Technology (KNUST) had two (2) students with visual impairments and seven (7) with mobility disabilities. In terms of gender distribution, UG had four (4) male and five (5) female students with disabilities, whereas KNUST had a representation of five (5) male and four (4) female students with disabilities.

4.1.2 Religious Affiliation of Study Participants from both Schools

Table 2

Religious affiliation

| School |
|--------|
|--------|

| Religion | UG | KNUST |
|-------------------------------------|-----------|--------------|
| Christianity | 9 | 9 |
| Islam | - | - |
| African Traditional Religion | - | - |

As depicted in Table 2, the religious affiliations of the study participants from both the University of Ghana and the Kwame Nkrumah University of Science and Technology are presented. All eighteen (18) students with disabilities took part in the study, and without exception, all of them identified as Christians. None of the participants had affiliations with Islamic or African Traditional religions.

4.2 Objective One

To investigate the challenges students with physical disabilities at the University of Ghana and Kwame Nkrumah University of Science and Technology face.

Under this objective, four (4) themes emerged from the study. They are the school environment, inside arrangement of buildings, information and negative relational experiences.

4.2.1 School Environment

This section reports on the various barriers that exist in the social environment. These barriers have, however, been grouped into three (3) subthemes. They are unlevelled walkways, open drains, and difficulty accessing lecture halls.

4.2.1.1 Unlevelled Walkways

There were complaints about the bumpy nature of the walkways around the campuses of the two universities investigated. Participants with mobility and visual impairments from both universities lamented that the irregular shape and rough nature of pavements caused them to trip, stumble and fall when they walked. Below are their comments:

The purpose of pavements is to ensure safety, but unfortunately, they are in poor condition with uneven surfaces. In some areas, bricks are missing, and the unevenness of the pavement creates challenges for pedestrians. This can result in tripping and falling, which is even more dangerous than walking on a properly levelled road (David, Male, level 400, mobility impairment, UG).

The ground is uneven and bumpy, causing an unpredictable mix of elevated and lowered sections while walking. This irregularity often catches me off guard, leading to stumbling and falls. It is far from a comfortable walking experience (Ohenewaa, Female, level 200, visual impairment, KNUST).

Additionally, one male participant with a visual impairment from UG raised concerns about the breach of speed regulations by drivers on campus. This led to incidents where he was knocked down by a car. He had this to say:

One of the significant issues we face regarding transportation on campuses is excessive speeding. While there are signs urging drivers to reduce their speed, it appears that many drivers disregard this regulation. I believe it is essential for the university to initiate a more effective dialogue with the drivers on campus. Personally, I have experienced the consequences of this problem first-hand, having been involved in accidents with vehicles

on campus multiple times. This is a pressing issue that needs to be addressed (Obeng, male, level 300, visual impairment, UG)

4.2.1.2 Open Drains

Some of the male participants with visual impairments and mobility impairments from UG complained that there were open drains and non-maintenance of the coverings on gutters. These factors posed a severe danger to them, thereby hindering their movement, as they sometimes fell into the gutters when walking without the support of their sighted colleagues. See excerpts below:

There are numerous uncovered drains scattered across the campus, and some of them have been damaged for years without any repairs. During my four-year stay here, I have noticed that a particular drain cover has remained broken and unattended. This situation poses a significant safety hazard, especially for students with visual and mobility impairments (David, male, level 400, mobility impairment, UG).

The absence of covers on these gutters creates a major obstacle for students, particularly those with visual impairments who may not always have friends available to assist them. When faced with urgent needs and no assistance, individuals like myself are forced to navigate these open gutters independently, resulting in frequent accidents. The sheer number of these open gutters obstructs our movement and poses a persistent challenge (Obeng, male, level 400, visual impairment, UG).

4.2.1.3 Difficulty Accessing Lecture Halls

Participants with mobility disabilities from KNUST, especially those who used wheelchairs and prostheses, reported that they had difficulties accessing the lecture halls because the halls had staircases and corridors that had slippery floors. The staircases were steep, and therefore, climbing

posed serious challenges. In contrast, there was an issue of proximity. Students with mobility disabilities from both universities lamented the distances they must cover before reaching the lecture halls, between lecture halls, and back to the halls of residence. Those who use wheelchairs indicated that they had to be pushed around campus due to the wide distance between their halls of residence and the lecture halls as well as between lecture halls. Again, they complained that there was no consideration of students with disabilities during the selection of halls. This made mobility difficult for them. Thus, due to the distance and irregular schedule of their buses, participants from both universities reported that they had to pay for the services of private transportation such as Bolt and Uber to get to class.

The lecture halls on campuses are often multi-storey, and unfortunately, some of them lack elevators. This presents a significant challenge for me because I rely on crutches. The added issue of slippery tiles in some areas increases the risk of falls. Climbing the stairs was already difficult, and even a minor misstep could result in a fall. This makes attending classes a real challenge for me (Antwi, male, level 300, mobility impairment, KNUST).

My college is located in the Ayeduase area. Sometimes, I need to attend lectures at the School of Business, which requires me to travel a considerable distance. In such situations, my friends kindly assist me by pushing my wheelchair from the College of Agriculture and Natural Resources to the School of Business. This journey typically takes ten to fifteen minutes, and having to rely on my friends for such assistance can be embarrassing and uncomfortable. To avoid this, I often find myself resorting to using ride-sharing services such as Uber or Bolt to get to my lectures (Agyei, male, level 300, mobility impairment, KNUST).

My issue is the location of the lecture halls. The distance between the lecture halls is very long, and walking there is exhausting. The school does not consider whether people with disabilities will be able to get to the lecture hall or not. This prevents us from attending lectures on a regular basis (Beatrice, female, level 400, mobility impairment, UG).

From the perspective of one male participant with a mobility disability from KNUST, he had to be carried from the ground floor to the fourth floor to attend classes, and this made him feel uncomfortable, leading to his inability to attend classes above the ground floor. He shared his experience:

Due to the multi-story structure of the lecture halls, my friends are often needed to assist me in carrying my wheelchair up to the third floor and back down. Consequently, I have had to skip some of these classes because relying on others to carry me around is not only uncomfortable but also inconvenient. As a result, I tend to avoid classes located above the ground floor (Agyei, male, level 400, mobility impairment, KNUST).

4.2.2 Inside Arrangement of Buildings

In this section, participants complained of poor lighting and seating arrangements within the buildings on the campuses of both universities. Two (2) subthemes were derived from this main theme. There were poor lighting systems and poor seating arrangements.

4.2.2.1 Poor Lighting System

Lighting (low and high lighting) was an issue for some of the female participants with low vision at KNUST. They complained that due to inadequate lighting in the lecture theatres, they could not see what the lecturers wrote on the board. They also bemoaned that sometimes and in some of the lecture halls, the light was rather too much, which made them dizzy, forcing them to close their

eyes for a couple of minutes to adjust themselves to the atmosphere in the lecture rooms. Again, they complained that the poor lighting caused them to make mistakes by bumping into people. See the narratives below:

In the lecture hall, I frequently encounter difficulties due to inadequate lighting. This often results in accidental collisions with fellow students and occasional missteps. Moreover, during lectures, the quality of the projector's display leaves much to be desired, making it challenging for me to discern the content being presented. Even when I sit in the front rows, the darkness in the lecture hall still hampers my ability to see the lecturer's presentations clearly (Ohenewaa, female, level 200, visual impairment, KNUST).

The font size on the slides exacerbates the issue further. In the dimly lit environment of the lecture hall, the small text often becomes blurred, causing me to feel disoriented and even dizzy at times. As a result, I occasionally need to close my eyes for a few minutes to regain my composure. The combination of insufficient lighting and tiny font size on the slides presents an ongoing challenge for me (Evelyn, female, level 200, visual impairment, KNUST).

4.2.2.2 Poor Seating Arrangement

Additionally, some of the participants with visual impairment and amputation from the University of Ghana pointed out that students without disabilities often occupy the seats reserved for students with disabilities in the front row of the lecture halls. According to them, when this happens, they have to find seats at the back, which did not favour them due to the constant pushing and shovelling received from colleagues without disabilities. They had this to say:

The seating arrangement can be quite challenging because people often expect you to accommodate their requests to shift or move around. As far as I understand, when I first entered as a freshman, the front seats were designated for students with special needs. However, students without disabilities often occupy those seats, forcing us to find alternative seating and inconveniencing both us and others (David, male, level 400, mobility impairment, UG).

While the university authorities have allocated the front seats to us, there are times when some students do not adhere to the policy, especially the rule that the first four seats in the front are reserved for students with special needs. When you arrive at the lecture hall, particularly if you're running late, you might be left standing outside or forced to sit far from the lecturer unless a friend can save a seat for you. This also disrupts the learning experience for me (Darlington, male, level 400, visual impairment, UG).

Another challenge relates to getting out of the hall after lectures. According to a male student with amputation from the University of Ghana, he gets shoved and pushed around by students without disabilities in the course of moving out of the lecture room. Therefore, he had to sit and wait for other students to move, as he did not want to be talked to anyhow by students without disabilities.

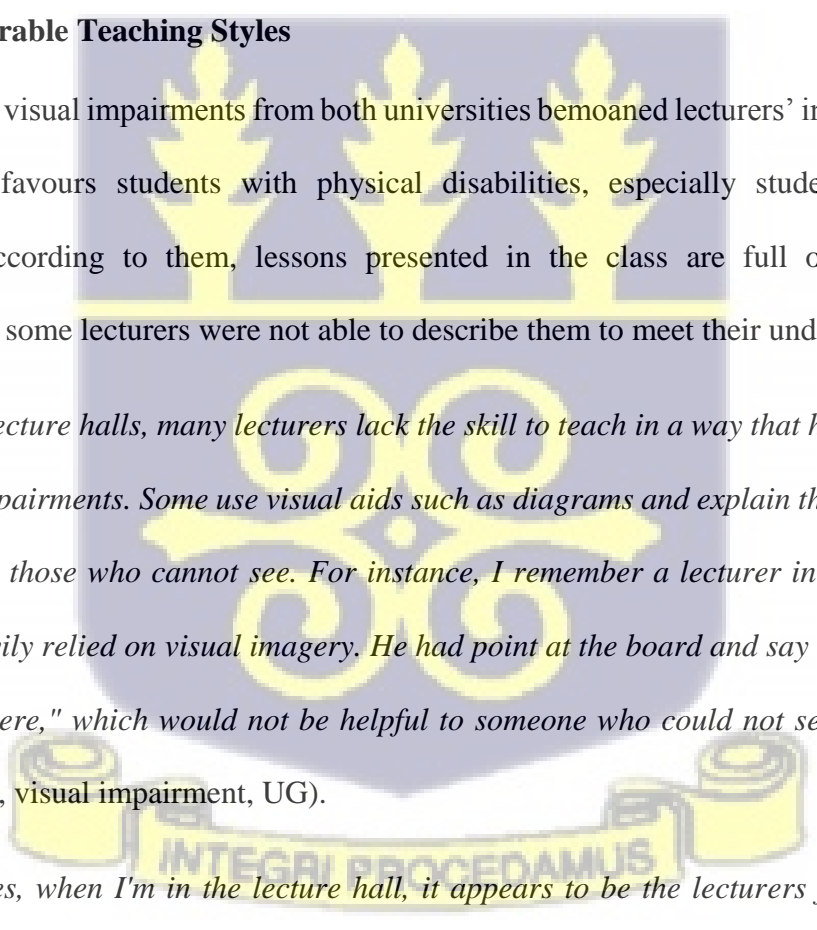
Typically, what my friend and I, both of us having physical disabilities, do is to wait patiently after the class concludes. We wait until everyone else has exited the room before we slowly make our way out. This approach is driven by our desire to avoid being pushed, stepped on, or subjected to insensitive remarks from others who might perceive our walking pace as a hindrance (David, male, level 400, mobility impairment, UG).

4.2.3 Information

Participants reported on the difficulties they encountered in accessing information at the two universities. This has been grouped into four (4) subthemes. They are unfavourable teaching styles, delays in obtaining access to course materials, poor dissemination of information and lack of electronic books.

4.2.3.1 Unfavourable Teaching Styles

Participants with visual impairments from both universities bemoaned lecturers' inability to lecture in a way that favours students with physical disabilities, especially students with visual impairments. According to them, lessons presented in the class are full of diagrams and illustrations, and some lecturers were not able to describe them to meet their understanding.



In most lecture halls, many lecturers lack the skill to teach in a way that helps people with visual impairments. Some use visual aids such as diagrams and explain things that are not visible to those who cannot see. For instance, I remember a lecturer in my second year who heavily relied on visual imagery. He had point at the board and say things like "from here to here," which would not be helpful to someone who could not see (Obeng, male, level 300, visual impairment, UG).

Sometimes, when I'm in the lecture hall, it appears to be the lecturers forget that there might be visually impaired students in the class. They do not describe what's on the board very clearly. They often just point and say things like "this" at the top, bottom, or far end without proper explanation. As a visually impaired student, this makes it hard for me to understand what the lecturer is referring to, which is a challenge (Darlington, male, level 400, visual impairment, UG).

They further stated that they had to prompt lecturers to be aware of the present students with visual impairment. According to the students with visual impairment when that happened, they were not able to have a fair idea of the lessons being taught. They shared these experiences:

Sometimes, we face these kinds of things (unfavourable teaching styles) unless you approach the lecturer before he or she realizes that okay I have a student with special needs in my class, so I have to come back (Darlington, male, level 400, visual impairment, UG).

A student with a visual impairment from the University of Ghana lamented that lecturers were not able to speak louder when there was a need to differentiate between subtopics on their slides. Students with visual impairment could not read from the slides during class hours, hence these complaints. She had this to say:

In the lecture hall, mostly the lecturers, their slides are displayed on a projector and it's not read out loud and so it's a problem because if there's anything that they need to differentiate between subtopics, they point it out and the sighted colleagues can tell but it's not read out for students with visual impairment to know the subtopics being treated (Felicia, female, level 400, visual impairment, UG).

It is noteworthy that one male participant with visual impairment tried to seek help from the Office of Students with Special Needs (OSSN) to address the issues he encountered in the lecture halls, that is, the unfavourable teaching style of lecturers at the University of Ghana but that also did not yield any results.

I complained about the unfavourable teaching styles of the lecturers. I also engaged our special office; I mean the office of students with special needs. However, the lecturer could

not change the strategy. Therefore, it affected us negatively (Obeng, male, level 300, visual impairment, UG)

4.2.3.2 Delay in Getting Access to Course Materials

Some participants with visual impairments from UG lamented that lecturers felt reluctant to give reading materials in formats that were usable for students with visual impairment. This delays access to the reading materials, as they would have to send them to the office of students with special needs to be put into accessible formats. Below are their comments:

Some lecturers feel very reluctant to give us materials to read; they know perfectly well that giving somebody with a visual problem a hard copy to read is impossible, but they would not understand. The lecturers make the situation very difficult, sometimes before these materials are ready for us, I mean the whole semester is exhausted. Therefore, the acquisition of information is very problematic on campuses (Obeng, male, level 300, visual impairment, UG).

Academic materials, sometimes it is not easy taking it from the lecturer. Most of them do print the materials out for us to buy, we have to also take them to the office (office of students with special needs) to also scan it for us, in order to get the soft copy. It delays access to reading materials (Darlington, male, level 400, visual impairment, UG).

One male participant with a visual impairment from the University of Ghana lamented that when he finally got the reading materials, he had to send them to the office of students with special needs for the materials to be put in accessible formats. This he said often delays. He had this to say:

The acquisition of information on campuses is extremely problematic. Unlike our sighted colleagues, as soon as the semester starts, they will go to their various departments to

purchase the reading materials. However, as a visually impaired student, I will have to go and purchase the book and send it to the office (Office of Students with Special Needs) for them to put the books into accessible format for me to be able to read. Before that will be done, I mean about five to six weeks is already gone. Therefore, looking at the current system we are running now, the double track, we are just using six weeks for academic work. Just imagine I go to my department, by the time I get the book being converted into accessible formats the semester is already gone. For example, last semester, I could not get my rationalism course material to read because a lot of people had sent their material to the office (Office of Students with Special Needs) so they have to finish with everybody's material before mine is done. Therefore, accessing information on campuses is very problematic (Obeng, male, level 400, visual impairment, UG).

4.2.3.3 Poor Dissemination of Information

Some participants with mobility disabilities from both universities described their inability to obtain information (reading materials) from their various departments. They complained that they did not get direct access to information regarding their studies unless they heard from their friends without disabilities as a result of not being able to visit their various departments. This can be seen from the excerpts below:

For my department, it is quite difficult to get access to information about the change of venues to a particular course and the change of lecturers to a course and reading materials. One semester you have a lecturer teaching you, and the next a different one is handling it (course). Because I am in a prosthesis, I am not able to go out to mingle with other students due to the difficulties I have walking in it. As a result, I am not able to go to

the department often so if there is any change I do not get to know (Kofi, male, level 200, mobility impairment, KNUST).

In regard to the department, there is nothing like that (information to students with disabilities). When something happens, for example, there is a new lecturer in the department who will replace another lecturer, I do not get to know of it and I am already used to the old one. If you do not hear it from your colleagues, it means that is it. So that one there is truly a problem that needs to be addressed (Beatrice, female, level 400, mobility impairment, UG).

While most students with visual and mobility impairments indicated that they had issues accessing information (change of lecturers to a particular course, change of venues, addition of new faculty members), some participants with mobility impairments said that they did not encounter problems with accessing information. They indicated that they received information from social media platforms and electronic mail from the university and their friends.

I did not encounter any challenges because WhatsApp groups and emails have made it very easy. Therefore, if any information is posted on the page, I get access to them easily. In addition, most of the time too it depends on the lecturer. I have instances where the lecturer knows that they have students with special needs there. Therefore, with us, he assigns teaching assistants who will specifically feed us with certain information (David, male, level 400, mobility impairment, UG).

Actually, we have this WhatsApp platform and telegram and all these platforms whereby any information that the lecturer wants us to know or the college wants us to know, the class rep will relay it to us, if in terms of the school or the school authorities, we have our

sim card whereby they send information to us (Antwi, male, level 300, mobility impairment, KNUST).

4.2.3.4 Lack of Electronic Books

Other participants, especially students with a visual impairment from UG, could not have access to additional readings in their course of study. According to them, computers in the library lacked electronic books that could be accessible to students with visual impairment. As a result, students with visual impairment had to find someone to read books to them.

In the library we have our section, the computers over there have screen readers which read whatever we are doing on the computers for us but the most disturbing problem we encounter in the library is that the computers do not contain the various books in the library. Therefore, I will go there, the computers do not have any books to read so in case when I go there and I need a book, I will have to find somebody to read that book for me and it is a challenge (Obeng, male, level 400, visual impairment, UG).

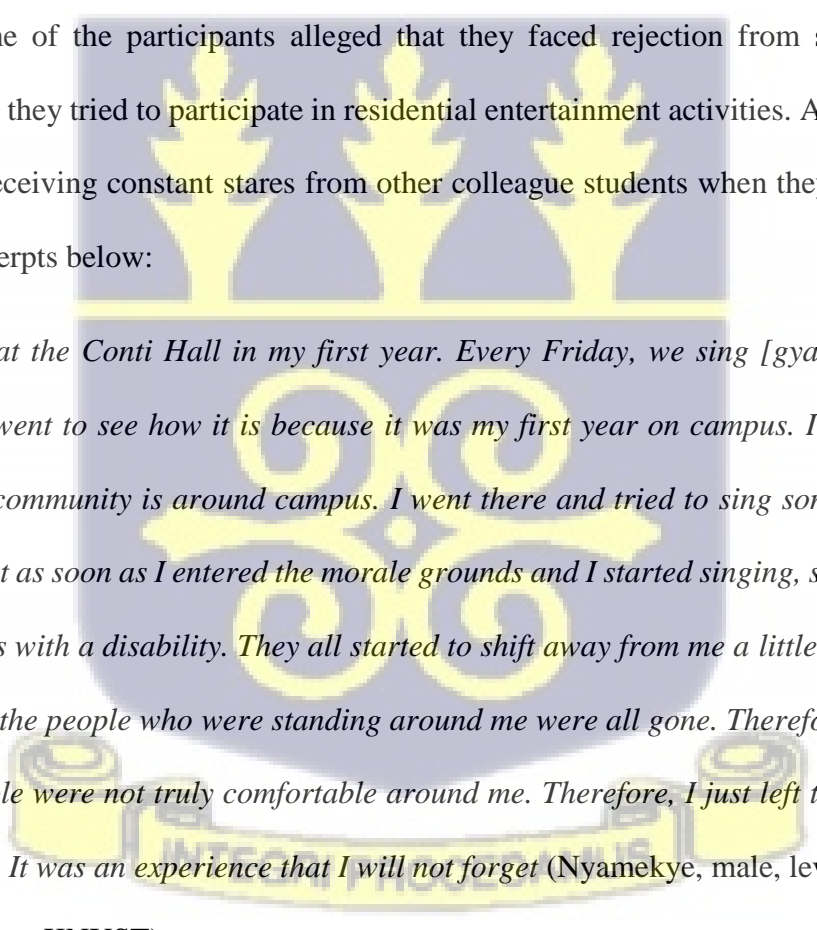
We do not have soft copies of our books on the computers at the library. We have computers at the IT lab, but the computers do not have electronic books on it. Therefore, if I go there, I can only browse but cannot read some of the needed books for my course. That is the challenge we are facing as students with special needs. In the main library, there is a section for us (students with special needs), but there are no electronic books, apart from a few computers, which have virtually nothing on them (Adutwumwaa, female, level 300, visual impairment, UG).

4.2.4 Negative Relational Experiences

This theme presents reports on the negative attitudes experienced by the participants. Two (2) subthemes emerged. These are: starring, rejection, and labelling.

4.2.4.1 Staring and Rejection

Students from both universities lamented their negative experiences with students without disabilities. Some of the participants alleged that they faced rejection from students without disabilities when they tried to participate in residential entertainment activities. Additionally, they complained of receiving constant stares from other colleague students when they walked around campus. See excerpts below:



I stayed at the Conti Hall in my first year. Every Friday, we sing [gyama] and morale songs. I went to see how it is because it was my first year on campus. I wanted to know how the community is around campus. I went there and tried to sing some of the morale songs, but as soon as I entered the morale grounds and I started singing, some of them saw that I was with a disability. They all started to shift away from me a little bit, and before I realized, the people who were standing around me were all gone. Therefore, I determined that people were not truly comfortable around me. Therefore, I just left them and went to my room. It was an experience that I will not forget (Nyamekye, male, level 400, mobility impairment, KNUST).

The obstacle I am facing is people staring at me. I do not know why it is a major problem faced by people with physical disabilities. I do not have a problem if I am to pass by and then you turn to look at me that will be fine, but for you to look at me to the extent like it

becomes so weird it is the major hindrance (Kwaku, male, level 400, mobility impairment, UG).

Similarly, some of the participants alleged that students without disabilities felt reluctant to come near them because they thought the disability was infectious and that they would become infected if they got close. They shared their experiences below:

Students on campus feel very reluctant to be with us, I mean they behave as if the disability is infectious because they feel when they come closer to you the problem will be extended to them. Therefore, making friends on campus is very problematic, I mean it doesn't happen normally for you to get friends. I have colleagues and classmates but not friends. Hardly will you see the people without disabilities paying you a visit. It doesn't happen, and it makes us feel isolated (Obeng, male, level 300, visual impairment, UG).

4.2.4.2 Labelling

Some participants with visual impairments from KNUST suggested that students without disabilities treated them as if they were not humans and called them derogatory names. They share these experiences:

Sometimes when I am walking around with my white cane and I mistakenly bump into someone. Their reaction towards me is not pleasant. They treat me as if I am not a human being. I remember some time ago; I was walking with my friend while holding hands and we got to a place where a security man was standing and he asked my friend whether I was a Sickler. The statement the man made hurt me a lot (Ohenewaa, female, level 200, visual impairment, KNUST).

When I go to parties and students' gatherings, people make derogatory remarks about me. They call me names like [yarefu], and this makes me feel uncomfortable. As a result, I have stopped attending parties and social gatherings (Nyamekye, male, level 400, mobility impairment, KNUST).

4.3 Objective Two:

To determine what fosters learning among students with physical disabilities at the University of Ghana and Kwame Nkrumah University of Science and Technology

Under this objective, four themes emerged. These are familial factors, personal factors, positive relational factors, and religious and institutional factors.

4.3.1 Familial Factors

Some participants at both universities described how their parents and other family members contributed to their academic learning. According to them, they received encouraging words and support such as advice and financial support from their parents, especially their mothers. They shared these experiences below:

My mother and siblings make sure I lack nothing. Mother will always tell me that you are a special person instead of using the word disabled. She will tell me; you are a special person and so you are entitled to special things so learn for me. My siblings also tell me the same thing (Ohenewaa, female, level 200, visual impairment, KNUST).

My mum always checks up on me. She calls and prays with me that my son you are there to be a conqueror and a victor. She motivates me and says encouraging words to me. All these motivate and encourage me to learn. Mum wants me to learn, and for me, I

want to praise my mum. Other family members also encourage me. Kwame this is not the end; the downfall of a man is not the end of his life, so you should not underrate yourself or think about what has happened to you. They motivate me with these statements and a lot more (Kofi, male, level 200, mobility impairment, KNUST).

The support I am receiving from my parents encourages me to learn. They are doing their best for me even though they know that I am with this disability. They try their best to provide my needs. Therefore, it encourages and motivates me to do more (Selorm, male, level 400, mobility impairment, UG).

For some participants from both universities, their source of motivation for academic learning came from their family situation. According to them, their family background motivates them because their families were not well-to-do and they were the only ones to have pursued education to the tertiary level. The participants continued to say that they did not want to bring their spirits down because of the kind of family they came from.

My family background is one key thing that motivates me because I am not coming from a well to do family. That one alone is a source of motivation and life for me (Antwi, male, level 300, mobility impairment, KNUST).

I come from a family of four girls and one boy. Among the girls, I am the only one to pursue education to this level. I will want to do my best to improve the family situation (Kekeli, female, level 200, visual impairment, UG).

I know the family from which I am coming, so I try not to allow anything to bring my spirit down. Every time that I feel like my spirit is down, I pray to God and I remember

the family that I am coming from then it keeps me motivated and I always do my best in regard to academics (Nyamekye, male, Level 400, mobility impairment, KNUST).

One student with a visual impairment from UG, on the other hand, lamented that the family did not play any role in her academic learning. According to the participant, her family did not check up on her and did not ask her about what goes on in her schooling. She shared this with me:

I have a very complicated family; nobody will monitor my progress. Since level 100 until now, nobody has ever requested for my transcript, nobody has ever asked how you are faring on campus (Beatrice, female, level 400, mobility impairment, UG).

4.3.2 Personal Factors

Participants mentioned that their personal characteristics contributed to improving their academic learning in both universities. Two subthemes emerged. These are time management and self-motivation.

4.3.2.1 Time Management

Some participants from the University of Ghana mentioned that they strategized their time properly when they found themselves in difficult situations. Below are their comments:

Effectively managing one's time is essential in situations such as this. I recall instances when I returned from lectures, my artificial leg causing discomfort, and even my singlet stained with blood. I would be utterly fatigued and in need of rest. In such moments, I needed to carefully plan my time. I would promptly put on my artificial leg, venture beyond the campus, and ensure that I completed essential tasks, whether it meant a

quick stop at the library for some additional learning or merely taking a break before returning to remove my prosthesis. This routine proved to be immensely beneficial for me (David, level 400, mobility impairment, UG).

The system itself is very difficult for me. Whenever I find myself in a situation, I strategize. Therefore, for me what I do is that in a situation where the materials are not ready, I use the little ICT skills I have to roam on the internet to find something to read to wait for the materials to return. I am able to draw a time table and stick to it (Obeng, male, level 300, visual impairment, UG).

4.3.2.2 Self-Motivation

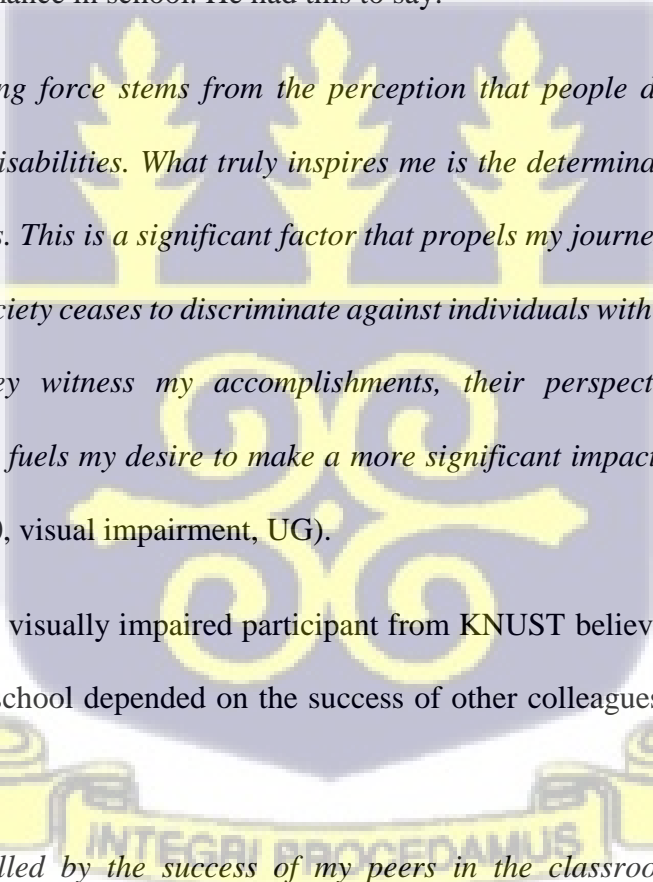
Participants from both universities pointed out that they were self-motivated and encouraged to work harder because they did not want to fail in their educational pursuits since they noted they had no strength to do other labourer work like their counterparts without disabilities. They shared these experiences:

I am inherently self-motivated. When faced with a challenging academic course, I believe that one's personal drive plays a pivotal role. Without it, one might either switch courses or struggle to succeed. Therefore, excelling in academics primarily hinges on self-motivation and the ability to uplift oneself (Antwi, male, level 300, mobility impairment, KNUST).

I just do not want to be a failure. People without disability are even struggling to make ends meet, how much more me? With persons without disabilities, if education does not work for them, they can venture into laborer work. However, with me, the laborer work will be too much. I cannot do it. Therefore, I just have to strive and then make it with


education. Yeah, so that has been my motivation (Kwaku, male, level 400, mobility impairment, UG).

For a male participant with visual impairment from the University of Ghana, the zeal to continue learning and succeeding came from the notion that students with disabilities were incapable of achieving anything in life and therefore he wanted to prove people wrong by studying to improve in his performance in school. He had this to say:



My life's driving force stems from the perception that people doubt the abilities of persons with disabilities. What truly inspires me is the determination to debunk these misconceptions. This is a significant factor that propels my journey. I aspire to reach a point where society ceases to discriminate against individuals with disabilities. I believe that when they witness my accomplishments, their perspective will shift. This transformation fuels my desire to make a more significant impact on campus (Obeng, male, level 400, visual impairment, UG).

Interestingly, a female visually impaired participant from KNUST believed that continuing to study and do well in school depended on the success of other colleagues. The person shared this with me:



My motivation is fuelled by the success of my peers in the classroom. Witnessing their achievements serves as a significant source of inspiration for me (Eillen, female, level 200, visually impaired, KNUST).

4.3.3 Positive Relational Factors

Participants reported that they experienced cordial relations with their peers and lecturers. This is categorized into two categories. They have positive relationships with peers and positive relationships with lecturers.

4.3.3.1 Positive Relationship with Peers

Positive relationships with peers fostered the education of students with physical disabilities in both universities. The students stated that they had positive relationships with some of their mates and lecturers. They expressed that they had friends who were nice to them and that they usually went to them to say hello, just to get them to be happy. Additionally, the participant reiterated that their friends did check up on them when they did not attend lectures and they did not feel stigmatized.

I am fortunate to have many friends, and I have found that the people I meet are generally kind and friendly. I am grateful that I have not experienced any stigmatization or discrimination for a long time. It's wonderful to be surrounded by people who accept me for who I am (Beatrice, female, level 400, mobility impairment, UG).

When I am around, I am often greeted by friendly people who ask how I am doing. They seem to genuinely care about my well-being and happiness, which is always a nice feeling. It's great to be surrounded by such positive energy (Agyei, male, level 300, mobility impairment, KNUST).

4.3.3.2 Positive Relationship with Lecturers

Some of the participants from both universities expressed that they had good relations with some lecturers, and those lecturers were able to give them their contacts to call them in times

of need relating to their academics. They also mentioned that some lecturers check up on them during lectures to ensure that they come to class. Below are their excerpts of experiences:

As I arrive at my faculty, I enjoy a strong rapport with my tutors. They often approach me with friendly greetings, asking how I'm doing. They genuinely care about my well-being and always offer their assistance. If I ever require anything, they provide me with a contact number, ensuring I have the support I need. Their dedication to helping students is truly commendable (Agyei, male, level 300, mobility impairment, KNUST).

Our lecturers go above and beyond to support us. They proactively express their interest in identifying students with special needs and provide their personal contact information. This semester, I had remarkable experience with my human rights lecturer, who personally reached out to me on three separate occasions. During our Zoom classes, she ensures I'm engaged by mentioning my name and inquiring about my progress in the course. This level of attention and care is truly exceptional. Additionally, when we reach out to them via text or message, they are prompt and responsive (David, male, level 400, mobility impairment, UG).

Honestly, ever since my freshman year (level 100), my professors have been consistently supportive and approachable. It is not that they have not offered their help - in fact, some of them have even shared their phone numbers, which I have in my contact list. However, I tend to reach out only when I truly need assistance. It is not because they have discouraged me from seeking help; it is just my approach. I can confidently say that I have never had a negative experience with any faculty members, department staff, or university staff. They have all been incredibly helpful and supportive (Felicia, female, level 400, visual impairment, UG).

Furthermore, some of the participants claimed that their confidence and good interpersonal relationships with others fostered their academic learning.

I possess self-confidence and excel in building strong interpersonal relationships, allowing me to adapt seamlessly to various situations. I prioritize maintaining harmonious interactions with others, which is especially crucial because we all come from diverse backgrounds with different personalities. This ability to coexist peacefully with individuals from varied walks of life, essentially forming a close-knit community, is immensely valuable. This communal living encourages meaningful interactions, facilitating mutual learning. For instance, when faced with challenges in my assignments, I often seek assistance from my roommate, who provides valuable insights. This collaborative learning process enriches my understanding and reinforces my willingness to accept constructive feedback (Beatrice, female, level 400, mobility impairment, UG).

4.3.4 Religious Factors

Study participants from both universities asserted that religion played a role in their academic learning through the motivation, encouragement and prayers they received from the church. Some of the students also mentioned that their relationship with God contributed to their academic success.

Indeed, religion plays a significant role in my life while on campus. I am an active member of the Royal House Chapel community. It is noteworthy that when newcomers join our church, they often extend a warm welcome, providing spiritual guidance and motivation. Regular prayers play a pivotal role in uplifting our spirits and fostering a

sense of unity among us. Our congregation gathers in a communal space where we conduct our services, and this fosters a strong bond, akin to that of brothers and sisters. The guidance and motivation offered by our pastors are particularly instrumental in keeping us spiritually inspired and connected (Darlington, male, level 400, visual impairment, UG).

I identify as a Christian, and within our faith, there are various denominations. The denomination I belong to consistently encourages and motivates students, especially young people, to pursue personal growth and development. As a current student, the religious teachings and activities I engage in at my church greatly contribute to my ongoing learning and help me stay focused on my studies (Kofi, male, level 200, mobility impairment, KNUST).

Apart from encouragement and motivation, some participants with mobility and visual impairments from KNUST pinpointed that their studies had been influenced by their God. According to them, the Spirit of God gave them the direction they should undertake regarding their studies.

My faith has played a profound role in my life. Attending church has facilitated my spiritual growth, helping me align with godly principles, even if not perfectly. I have gained clarity on what's right and wrong, with God and the Holy Spirit guiding my path. Whether it is studying, praying, or making decisions, I attribute my actions to the influence of the Holy Spirit, guiding me towards what's beneficial and steering me away from potential harm. Religion has significantly moulded and directed my life, for which I am immensely grateful (Nyamekye, male, level 400, mobility impairment, KNUST).

Indeed, I believe that God has been a tremendous source of support in my life. Without His guidance and intervention, I doubt I would have reached the point I'm at today. I have witnessed His response to my prayers on numerous occasions, and His boundless grace has been abundantly evident (Ohenewaa, female, level 200, visual impairment, KNUST).

While religious organizations played a positive role in the academic learning of some students in both universities, other participants with mobility and visual impairments from the university of Ghana lamented that religion did not play a role in their studies. They attributed their success to their hard work.

Certainly, I do pray to the God I serve, not because I doubt the power of prayer to improve my life, but rather because I hold a strong belief in the importance of complementing prayer with diligent effort. While I have faith in a supreme being and the potential for miracles, I also recognize that to truly see results, one must put in hard work. Prayer alone, without corresponding action, may not yield the desired outcomes. Therefore, I primarily attribute success to hard work, even though I acknowledge and trust in the efficacy of my prayers. I do not believe that prayer alone is the sole factor that brings about meaningful change (Felicia, female, level 400, visual impairment, UG).

4.3.5 Institutional Factors

In this section, study participants reported on the institutional resources that contributed to their academic learning. Three (3) subthemes emerged. They are special needs offices, libraries, internet and online resources, and departmental seminars.

4.3.5.1 Special Needs Office

Regarding institutional factors that fostered academic learning for the study participants, some participants from the university of Ghana pointed to the office of students with special needs, which supports the academic learning of students with disabilities.

The University has established the Office of Students with Special Needs (OSSN) to oversee my academic matters, which serves as a valuable resource. Whenever I encounter academic challenges, this office is my go-to for assistance (Darlington, male, level 400, visual impairment, UG).

Within the Office of Students with Special Needs, every student is paired with a dedicated representative, tutor, or mentor who plays a crucial role in supporting us throughout our campus journey. They serve as our campus guardians, maintaining regular contact and providing guidance, especially when academic results are released, offering advice on how to navigate grade fluctuations and related issues (Kwaku, male, level 400, mobility impairment, UG).

4.3.5.2 Libraries, Internet and Online Resources

Some of the participants with mobility impairments from both universities mentioned that their universities had provided them with WI-FI in their residential halls, lecture halls, lecture rooms and libraries to aid them in their learning process. This helped reduce their movement on campus. Furthermore, they pointed out that their universities had provided them with three library facilities that are meant to be used by students with disabilities. In addition, they have access to online websites that aid them in obtaining free electronic books that otherwise would have bought.

They shared their experiences below:

They have made Wi-Fi available throughout the campus, ensuring convenient access from anywhere. Additionally, the library extends its hours from 6 pm to 9 pm, providing evening study opportunities. The school has also established three library facilities in the basement to cater to individuals with disabilities, offering valuable support (Kwaku, male, level 400, mobility impairment, UG).

In addition to the physical library, university of Ghana students enjoy access to various online resources. For example, the university provides access to certain books that would typically require purchase, saving us money. Considering the high cost of internet services today, the Wi-Fi available in our halls, lecture rooms, and library significantly enhances the learning experience (Beatrice, female, level 400, mobility impairment, UG).

At KNUST, students benefit from an extensive collection of electronic books available online. Even if I cannot make it to the library, I can access a wide range of books and materials electronically, although not all are found in the physical library. Additionally, the university offers a wealth of recorded slides and online books, further enriching our learning opportunities (Agyei, male, level 300, mobility impairment, KNUST).

4.3.5.3 Departmental Seminars

Some of the participants from KNUST pointed out that their departments organize business seminars and debates and that their participation fosters their academic learning.

I can attest that the business school consistently engages in various business-related activities, often incorporating competitions with prizes. As a dedicated student aspiring

for academic excellence and recognition, I actively participate in these business debates to secure awards, which significantly contribute to my learning and personal growth (Nyamekye, male, level 400, mobility impairment, KNUST).

In our school, we benefit from guest speakers from diverse companies and informative seminars. These opportunities play a pivotal role in enhancing our educational experience (Antwi, male, level 300, mobility impairment, KNUST).

For a female visually impaired participant from UG, the use of computers during the examination was something the university had done that improved her learning. According to her, the introduction of the computers makes work easier and easy for the staff of the office of students with special needs to send it to the lecturer directly for marking.

One notable advantage is the freedom to use computers for academic work, which greatly simplifies our lives. Particularly for those of us who use braille, transcribing our work before submission to lecturers can be time-consuming. However, using a computer allows us to easily print and submit assignments, streamlining the process and ensuring efficient communication with our lecturers (Felicia, female, level 400, visual impairment, UG).

4.4 Objective Three

To ascertain the needs of students with physical disabilities at the University of Ghana and the Kwame Nkrumah University of Technology

Under this objective, two themes emerged: fixing elevators and other needs.

4.4.1 Fixing Elevators

Participants with visual and mobility impairments from both universities indicated that they found it difficult to climb the staircase because the existing elevators in the lecture halls were not working. They expressed the need for school authorities to fix elevators and ramps that will help them access the lecture, library and residential halls. Below are their comments:

I must say, you know that my problem makes it difficult for me to climb stairs. In addition, we have others who are in wheelchairs. I think they should provide them with ramps that wheelchair users can use or an elevator for those who cannot climb the stairs to the lecture halls. Yes, I think if these measures are implemented, they will truly help.
(Kekeli, female, level 200, visual impairment, UG).

At KNUST, we have three different floors, the humanities and the social sciences. Our floor is on the top floor. Therefore, if someone is disabled or even in a wheelchair, I do not think the person can climb or walk the stairs on their own. He or she will need help. Sometimes you will feel uncomfortable always putting your burden on people. Some of them do not want to come to the library because they cannot climb the stairs. Their faculty's books are upstairs in the main library, but they cannot go up, so they stay inside and maybe do their own research, but you know that if they could have come into the library, maybe they could have found a book that would be helpful, but because they cannot climb, they stay inside. Therefore, if they build a ramp or elevator for wheelchair users, that would be very helpful
(Nyamekye, male, level 400, mobility impairment, KNUST).

4.4.2 Need for Electronic and Braille Books

Some participants with a visual impairment from the University of Ghana suggested that university authorities provide them with braille books and computers stocked with electronic books in the library that students with physical disabilities could use for their studies. Additionally, they further assert that the library should be furnished with enough computers and furniture.

Regarding the library, I believe it would be beneficial if they could offer books in braille and establish an E-library tailored to our needs. This E-library could include digital versions of our textbooks accessible on designated computers, enabling us to conveniently access these resources as soon as we enter the library (Adutwumwaa, female, level 300, visual impairment, UG).

In terms of library improvements, creating a dedicated unit within the library fully equipped with ample computers and suitable furniture would be a valuable addition. These computers could be loaded with a comprehensive collection of digital books, providing us with enhanced learning opportunities and resources (Obeng, male, level 300, visual impairment, UG).

4.4.2 Other Needs

Participants with visual and mobility impairments from both universities presented diverse views on what should be done to improve their academic learning. These are the employment of additional workers as note-takers, reservation of front seats for students with disabilities in the lecture halls, provision of lecture notes before class, provision of library facilities at the basement of multi-storey buildings, and allocation of inner rooms to students with disabilities.

For one participant with a visual impairment from UG, there was a need for note takers at lecture halls to help in taking notes on their behalf, as some lecturers dictate notes in class. The person had this to say:

To enhance the support provided by the Office of Students with Special Needs (OSSN), it is essential to ensure that an adequate number of staff members are available. This would facilitate smoother assistance, especially when I require note-taking assistance during lectures. Having an assistant available to take notes for me while the lecturer dictates in class would be greatly beneficial (Darlington, male, level 400, visual impairment, UG).

For another participant with mobility impairment from KNUST, there was a need for the reservation of the front seat for students with disabilities. According to the person, students with disabilities have varying degrees of impairment and may not feel comfortable sitting in the middle or at the back of class.

In considering students with disabilities, it is important to acknowledge the diversity of their needs. Some may have visual impairments, while others may have mobility challenges. Therefore, it would be beneficial to tailor accommodations based on the specific disability of each individual. Providing front-row seating in classes for all disabled students could help create a more comfortable learning environment (Rahinatu, female, level 200, visual impairment, KNUST).

Another participant with visual impairment from UG also mentioned that there was a need for lecturers to provide students with disabilities with lecture notes before the start of class.

One effective way to support students with disabilities is by providing lecture slides in advance of class. This would allow us to access the material simultaneously with the projector, which is essential for those who cannot read the projected content directly. Such an approach would be highly beneficial (Adutwumwaa, female, level 300, visual impairment, UG).

For one student with mobility impairment from KNUST, there was a need to provide library facilities in the basement of buildings for easy accessibility for students with disabilities. According to the person, this would ease the burden of students with disabilities from climbing staircases before accessing the library.

Accessing the library can be quite challenging for individuals with physical disabilities, particularly climbing stairs. To address this issue, a more accessible system should be implemented. One potential solution is to locate libraries on the ground floor or in the basement of buildings, making it easier for physically challenged individuals to access books without having to navigate multiple flights of stairs (Antwi, male, level 300, mobility impairment, KNUST).

A male student with a visual impairment from the University of Ghana suggested that inner rooms should be allocated to students with disabilities, especially those with visual disabilities. According to him, this would prevent other people from stealing from them when they are given outer rooms. He had this to say:

The school should consider implementing a policy, especially for students with visual impairments. They could assign inner rooms for students with specific visual impairments. In the outer rooms, there have been recurring incidents of theft and items

going missing. Sometimes, roommates may leave without locking the door, and this can lead to theft. For instance, laptops and my own phone have been stolen before. In the inner rooms, security is more manageable. With a locked door, you can answer the doorbell to see who's outside and decide whether to let them in (Obeng, male, level 400, visual impairment, UG).

Surprisingly, one participant with a visual impairment from UG was of the view that fountains within the halls should be walled to prevent a student with a visual impairment from falling into them. The person shared this with me

Speaking specifically about Akuafu Hall, there is room for improvement around the fountain area. Building a small protective wall around it could be beneficial. This would help individuals with visual impairments who use white canes navigate safely without accidentally falling into the fountain. Such an addition would greatly enhance our access to the hall and our rooms (Adutwumwaa, female, level 300, visual impairment, UG).

Interestingly, one male student who uses clutches from KNUST suggested that there should be a provision of special hostels for students with all forms of disabilities. The person had this to say:

There should be a dedicated hostel designed to accommodate physically challenged individuals. This hostel could serve as a special facility for all students with special needs, regardless of their specific disabilities. Ensuring that everyone has access to this facility would be a significant step towards inclusivity (Antwi, male, level 300, mobility impairment, KNUST).

A female student with visual impairment from the University of Ghana recommended that pavements should be improved and that gutters should be covered. The person had this to say:

If they can start working on the pavements and the gutters. They should cover some of the gutters for us (Adutwumwaa, female, level 300, visual impairment, UG).

Another student with amputation from UG proposed that there should be provision of disability road signs along the various road networks on campus. The person had this to say:

To create a more inclusive campus environment, it is important to have clear signage indicating the presence of disabled students. These signs could serve as a cautionary reminder for others to drive cautiously and be mindful of students with special needs. Including images of a blind person with a white cane, someone in a wheelchair, or someone with crutches on the signs can be especially helpful (David, male, level 400, mobility impairment, UG).

In addition, one female student with mobility impairment from the University of Ghana believed that students with disabilities should be taken into consideration when selecting venues for lectures for easy accessibility.

It would be helpful to conduct surveys to identify specific classrooms with students with special needs. When a lecturer is aware of a student with special needs in their class, they can make the necessary adjustments. For instance, if the class is initially scheduled in JQB 23 but a student with special needs is enrolled, the lecturer could request a change to a more accessible location, such as Room 11. Creating a conducive learning environment for all students should be a priority (Beatrice, female, level 400, mobility impairment, UG)

4.5 Discussion of Findings

This section focuses on the discussion of the findings of the study and looks at the implications of critical disability theory for the study. The discussions were made based on the objectives of the study.

4.5.1 Challenges Students with Disabilities Encounter in Higher Education

Persons with physical disabilities worldwide undoubtedly face challenges in their communities. This stems from barriers such as inaccessible structures and a lack of understanding of the needs of persons with physical disabilities. This in turn could hinder their access to resources and participation in mainstream society compared to their counterparts without disabilities. The barriers that confront persons with disabilities may also be evident in their quest to access and participate in higher education as students. Students with physical disabilities are challenged with difficulties that exist in the school environment, curriculum and pedagogy. The results of the present study indicated that inaccessible school environments, poor lighting and seating arrangement of buildings, inaccessible information and negative relational experiences were the challenges encountered by students with physical disabilities. First and foremost, concerning inaccessible school environments, students with physical disabilities were confronted with uneven pavements and open gutters. Both males and females with visual and mobility impairments from the University of Ghana and KNUST encountered these challenges. The pavements were not levelled and were in bad shape with some of the blocks removed, leaving potholes in the walkways and making them fall when they walk without the support of their sighted colleagues. There were also open gutters spread across the length and breadth of the University of Ghana campus, making it difficult for students with visual impairment to move around campus by themselves. Thus, they relied on their friends to attend lectures or any

other function on campus. The findings about open gutters and uneven pavements are in consonance with observations made in studies conducted in Ghana by Braun & Naami (2019) and Ashigbie et al. (2017), who found that students with physical disabilities encountered an unfriendly environment due to open gutters spread across the campuses of higher educational institutions.

Additionally, the study found that lecture halls and libraries were not accessible to students with physical disabilities because they were mostly multi-storey buildings flooded with many staircases and slippery floors, making it difficult for students with physical disabilities, especially those who use wheelchairs, crutches and prostheses. As a result, they either missed classes or allowed themselves to be carried by their friends to attend lectures or visit the library.

It is important to note that the challenges that had to do with inaccessible lecture halls were mostly experienced by students with mobility disabilities from both universities. This finding about inaccessible lecture halls and libraries was in tandem with assertions made by Emong and Eron (2016) and Braun and Naami (2019), which indicated that students with physical disabilities have challenges accessing library facilities, lecture halls and halls of residence due to the steep nature of the staircase as well as ramps to some building facilities on campus.

Emong and Eron (2016) further stated that students with disabilities end up missing and losing interest in their classes, thereby affecting their academic performance. These issues of inaccessibility may still exist as a result of not having enough administrative commitment to ensure that provisions that were made in the Persons with Disability Act 2006 (Act 715) were incorporated into the architectural designs of school buildings on campuses of higher education institutions in Ghana.

Additionally, issues of proximity were another finding that pertains to inaccessible environments. The study found that students with physical disabilities had challenges with the distance between their hall of residence and the location of their lecture theatres and between lecture theatres. Students with physical disabilities, especially those who use wheelchairs and prostheses from both universities, must cover long distances before reaching their destinations, which could be tiring. Thus, students who used wheelchairs had to pay for private transport services such as taxis, bolts or Uber, which could be expensive. The findings relating to proximity are a discovery, adding to the literature relating to environmental challenges that students with physical disabilities encounter in higher education institutions. According to Morina and Morgado (2018) and Braun and Naami (2019), it was found that the absence of flights of steps and the lack of accessible ramps at buildings on university campuses prevent students with physical disabilities from accessing essential services on campus. Engelbrecht & de Beer (2014) and Muzemil (2018) also found that library facilities were inaccessible due to the constraint of the staircase and lack of ramps to enable access to the library. It is worth noting that the difference between these studies (Morina & Morgado, 2018; Braun & Naami, 2019) and the current study may stem from the methodologies employed. While Morina & Morgado (2018) used the biological-narrative methodology, Braun and Naami (2019) adopted the photovoice methodology. In the present study, a phenomenological qualitative method was used. According to Mohajan (2018), qualitative phenomenological methods enable people to open up and allow for fresh evidence, resulting in a more complete picture of the social phenomenon under investigation.

Moreover, the findings revealed that students with physical disabilities encountered difficulties inside buildings when accessing services provided in those buildings. Poor lighting and seating

arrangements were the main issues of concern to students with physical disabilities. Inadequate lighting in the lecture halls made it difficult for some of the students with low vision to see projections or writings in the lecture halls. Regarding the seating arrangements in the lecture hall, the study found that seats reserved for students with special needs in the front rows were often occupied by students without disabilities at the University of Ghana. When this occurs, students with physical disabilities are often compelled to navigate their way to the rear and central seats of the classroom. Unfortunately, this can be challenging for them, as they may encounter frequent pushing and shovelling from their peers without disabilities, which is not conducive to their well-being because they may end up hurting and injuring themselves. The problem is further worsened when moving out of the lecture halls because they are pushed and insulted by their counterparts without disabilities for moving slowly. These challenges were mainly encountered by students with low vision and leg amputations from both the universities of Ghana and the Kwame Nkrumah University of Science and Technology. The result of poor seating arrangements was in agreement with a finding from a study conducted in Zimbabwe by Chataika (2010). According to Chataika (2010), students with physical disabilities also encounter barriers that have to do with overcrowded classrooms, lack of specially reserved seats for students with disabilities, inadequate standing space and very poor acoustics. Poor lighting inside buildings was unique to this study. Contrary to the finding about poor seating arrangements, a study conducted in Lesotho by Mosia and Phasha (2020) revealed that furniture in lecture halls was unsuitable for students with physical disabilities. Participants from this study lamented that furniture was not suited to the individual needs of students with physical disabilities, as furniture was stationary. The differences between the present study and that of Mosia and Phasha (2020) may stem from the fact that the present study did not focus on

measuring the suitability of equipment used within the lecture hall. The findings relating to the various forms of challenges (school environment, poor lighting and seating arrangements) encountered by students with diverse physical disabilities are tandem with multidimensionality, which posits that various factors intersect to influence the experiences of persons with disabilities (Hoskings, 2008) and contribute to the challenges they experience.

Additionally, the study found that dining halls were also not accessible to some of the students with visual and mobility impairments due to staircases, steep ramps and improper positioning of flowerpots. Thus, some of the students reported that they were mostly unable to eat at the dining halls but travelled long distances to the food vending markets, which are inaccessible. While some students with mobility disabilities and visual impairment complained of the inaccessible nature of dining halls and hall entrances, others had no challenges with room arrangement inside the hall. The result of inaccessible dining halls concurs with a finding of a study conducted in Ghana by Ashigbi et al. (2017), who found that 66% of corridors and entrances or access routes were restricted to students with physical disabilities who participated in their study. Similarly, Kabuta (2014) posits that infrastructures in her study institutions were generally unfavourable to students with physical disabilities. Again, non-maintenance of malfunctioning toilets and kitchen facilities or equipment. These issues were identified by students from both universities who have mobility disabilities, including those who use crutches, have amputations and have visual impairments. The issue of non-maintenance of toilets and kitchen facilities poses physical injuries to students with physical disabilities, especially visual impairment, as a result of the non-maintenance of broken doors and water closets. The result of the non-maintenance of kitchen and toilet facilities from the present study agrees with the view of Kabuta (2014), who asserts that in the washroom and kitchen, the

infrastructure conditions were much worse, especially for students with physical disabilities, to the extent that their health was in danger. According to Kabuta (2014), students with physical disabilities complained about having a difficult time using bathrooms that were unsupportive, unclean, and open to the public. Croft (2010) found that the infrastructure and schooling environment, in general, are less favourable to physically challenged students in school/college contexts. The findings from the present study about the inaccessible school environment, including uneven pavements, open gutters, staircases and the absence of ramps at the entrances of buildings in both universities, concur with the social model of disability, which indicates that disability is not located in the impairment of the individual with a disability but rather in the environment, which is inaccessible.

Study participants were confronted with inaccessible information, including pedagogical challenges relating to how lectures were structured and delivered through teaching aids such as slides and projectors. This problem was mainly encountered by students with a visual impairment from the University of Ghana, with males being the highest of them. Inadequate computers and lack of electronic books on the computers also hindered access to information. These challenges were experienced by the majority of the study participants from both universities. This makes them reluctant to use the library and affects their academic performance, as students with disabilities were not able to read beyond what is being taught in class. The findings about inadequate computers and the lack of electronic books on computers were unique to this study. However, the results about pedagogical challenges relating to how lectures were structured and delivered confirmed an observation made by a study in Pakistan by (Bano et al., 2013) that higher education institutions struggle with a variety of issues that

negatively affect students with disabilities, such as an inadequate curriculum, learning challenges, poor instructional practices, and a lack of equipment.

A further challenge to the academic learning of students with physical disabilities is the negative relational experience with some of their counterparts without disabilities. The study revealed that students with physical disabilities faced attitudinal barriers, including derogatory remarks, rejection, and stares. Additionally, there was reluctance among students without disabilities to engage with their peers with physical disabilities, ultimately leading to the isolation of the latter from their counterparts. The negative relational challenges were encountered by both students with visual and mobility impairments from both schools. The findings about derogatory utterances and rejection agreed with assertions made in studies conducted by Strnadova, Hajkova & Kvetonova (2012; 2015) and Papatiririou and Windle (2013) that students with physical disabilities in their study experienced prejudice from their classmates. Similarly, Mosia & Phasha (2020) discovered that students with physical disabilities experience bullying and verbal discriminatory utterances from their peers without disabilities. However, the finding about the reluctance of students without disabilities to relate with students with physical disabilities is unique to the present study, which adds to the literature on attitudinal barriers encountered by students with physical disabilities. It can be inferred from the discussions in this section that there were diverse students with physical disabilities who encountered different challenges. For instance, whereas students with mobility disabilities faced barriers that had to do with the inaccessible school environment, students with low vision had challenges with poor lighting inside buildings and unfavorable teaching styles of lecturers at both universities. This is in line with valuing diversity, a tenet of the critical disability theory, which indicates that disability populations are diverse and face different challenges that require different resources

to address them. Additionally, findings about derogatory utterances confirm language, a tenet of the critical disability theory that language in the form of images and words used to describe persons with disabilities affects their experiences either negatively or positively. In the case of the present study, students with physical disabilities had negative experiences as a result of the negative utterances made by their counterparts without disabilities.

4.5.2 Factors that Foster Learning among Students with Physical Disabilities

The factors that promote learning among students with physical disabilities encompass both internal elements originating from the students themselves and external factors derived from their families, educational institutions, or religious affiliations. Familial factors, including encouragement and support from their parents, especially their mothers and siblings, contributed to the academic learning of students with physical disabilities. Such parental involvement presupposes a strong, supportive relationship with students with disabilities, which in turn enhances their academic learning. The majority of participants from both universities reported experiencing a significant familial impact on their academic development. This finding aligns with an observation made by Wintre and Yaffe (2000), who identified parental support as a significant predictor of students with disabilities' adjustment to the university environment. However, the study also revealed that some student's parents were not actively engaged in their academic learning due to neglect stemming from their disabilities.

In addition to familial support, the study revealed family background as a driving force that pushes some students with physical disabilities to do better and improve upon their academic learning. Students with physical disabilities from poor family backgrounds who happen to find themselves in the corridors of knowledge in higher education institutions use their families as a point of reference to work hard to break out of the cycle of poverty. These were experienced

by students with visual and mobility disabilities from both universities. Whereas the present study revealed that poor family situations served as a source of motivation for study participants, the results of Onatsu-Arvilommi (2003) showed that such situations in the family create problems for students with disabilities in school, which in turn affects their academic learning. This disparity stems from the fact that students with physical disabilities in the present study were more resilient in overcoming and turning problems they face at home to their advantage.

Furthermore, personal factors such as self-motivations and time management improved the academic learning of students with physical disabilities. Participants with mobility disabilities from the University of Ghana shared this perspective. They noted that they had to strategize activities, including schedules for lectures, personal studies, entertainment and extracurricular events. For participants, strategizing activities became necessary as a result of the changes brought into the academic calendar by the coronavirus disease in 2019 (COVID-19), where the management of the university resorted to a double-track system to control the spread of the coronavirus disease. This brought an unusual burden on students, especially students with physical disabilities, as they had a short time to complete the syllabus slated for thirteen weeks. This finding agrees with an assertion of Krause and Coates (2008), who reported that students' ability to effectively manage their time is the foundation for creating strong study habits and tactics.

The current study unveiled a significant motivator for students with physical disabilities, particularly those with mobility and visual impairments from the University of Ghana. These students demonstrated a remarkable drive in their academic pursuits, driven by a strong desire not to be perceived as failures or burdens to their families and society at large. In Ghana,

prevailing negative perceptions persist regarding the abilities and potential of individuals with disabilities. Consequently, students with physical disabilities were inspired to excel academically, aiming to challenge and overturn these societal stereotypes. Notably, this motivation to avoid failure or dependency contradicts the perspective put forth by Ju, Weng, and Landmark (2017), which emphasized self-determination and self-advocacy as crucial factors for academic success among students with disabilities in higher education.

The present study further found that the self-motivation of students with physical disabilities, especially students with mobility impairment from KNUST, was a factor that fostered their academic learning. Self-motivation in this study relates to believing in one's capabilities and motivating oneself to keep moving forward in the quest to participate in knowledge acquisition in higher education in the face of adversities. While their counterparts without disabilities could have the chance to excel without many impediments, students with physical disabilities face a double tragedy of overcoming the difficulties that come with their impairment and barriers that exist in higher education institutions; hence, self-motivation becomes the major avenue within themselves that prevents them from giving up on their education. Given the circumstances of students with physical disabilities and the lack of specially defined resources to meet their individual and collective needs, it is imperative to motivate them to look past their impairment and excel in their academic learning. In contrast, Dinther, Dochy and Segers (2011) found that students' self-efficacy is a major driving force behind the heightened academic performance of students with physical disabilities. Self-efficacy has been defined as the belief in one's abilities to perform a given course of action to achieve an expected end (Bandura, 1997).

Religious affiliation was a means of motivation for some participants, as it improved their academic learning. The majority of the students with visual and mobility impairment from

KNUST expressed that they received encouragement and support in the form of financial assistance from their religious organizations, mostly churches. For others, they believe that the God they serve directs them and answers their prayers, which has resulted in their ability to excel in their academic learning. This points to the fact that many of these students come from a religiously inclined family background, as indicated in the demographics that all participants were affiliated with the Christian religion. As a result, it was easy for them to join a religious organization to continue religious practices as they had been taught at home, hence having a positive impact on their studies. This could be because Ghanaian society is governed by religious beliefs and powers of superior beings, which are often referred to as influencers of success and prowess in any endeavour (GSS, 2021). The result about religious factors contributing to the academic learning of students with physical disabilities confirmed a systematic study of religion and academic achievement in secondary and higher education by Horwitz (2021) that religiously inclined students had higher grade point averages than students who were not inclined to religious practices and beliefs. In contrast, some participants, especially students with visual impairment from the University of Ghana, disclosed the influence of religion on their academic learning. According to them, religion did not play a role in their studies. They believe they were able to excel in their academics through their hard work. The reason for the detachment of religion from academic learning by students with visual impairment can be attributed to the ordeals they had been through in trying to find solutions to cure their impairment. This is because many of the students with visual impairment were not born with their impairment but rather acquired their disabilities, which might have resulted in seeking remedies, including going to churches, mosques, shrines, etc., which did not yield any result.

Additionally, excellence in academic learning for students with physical disabilities was also dependent on the institutional provisions available in higher education institutions. The offices of students with Special Needs, library facilities, WIFI and educational seminars were some of the institutional provisions identified in the present study. The Office of Students with special needs assisted students with physical disabilities in their academic activities in terms of going to lectures and coordinating the writing of their examinations. The office of students with special needs translates their learning materials into accessible formats. Participants with visual and mobility disabilities mentioned this institutional facility. Additionally, both students with visual and mobility impairments from both universities mentioned that library and WIFI facilities helped them in their research and studies as well. These resources, especially WIFI on the University Ghana campus, help students access online resources from their online learning platforms, for example, the SAKAI learning management system and other useful websites in the comfort of the hall or rest benches around their department. The findings about WIFI and libraries concur with a finding of a study in Pakistan by Kamal, Asrar, Younes and Chishti (2014) that school facilities were positively associated with the academic performance of students with disabilities. Similarly, Garcia et al. (2009) opine that the introduction of Learning Management Systems (LMSs) enhances the learning of students with disabilities in and out of university premises to select their pathway through a course. The present findings and those of Kamal et al. (2014) and Garcia et al. (2009) show that when higher education institutions make provisions to meet the needs of students with disabilities, they will help to enhance their academic learning, leading to a higher-grade point average similar to that of students without disabilities.

4.5.3 Needs of Students with Physical Disabilities in Higher Education

Persons with disabilities are in the best position to determine what works for them in their various endeavours, including higher education. This happens when they are allowed to air their views on things that matter to them, which could result in a barrier-free society that encourages their growth and development. In light of this, the present study revealed that students with physical disabilities, especially those with visual impairment and mobility impairment, require note takers, reservation of a front seat, fixing elevators and provision of reading materials by lecturers before class as measures to help improve their academic learning in the lecture hall. These findings about note-takers, reservation of a front seat, fixing elevators and provision of reading materials by lecturers before class were contrary to an assertion made by Wessel et al. (2009), who revealed that prior information should be provided to students even before admission. This information according to the authors should be about the disability support offices and their services to students with disabilities, personnel who will be responsible for attending to students' needs and the type of accommodations available for students with disabilities. The findings, including the need for note-takers, front seat reservations, and fixing elevators, show that students with physical disabilities from both institutions were able to recommend appropriate accommodations necessary to improve their academic learning. This confirms Voice, a tenet of the critical disability theory that posits that persons with disabilities are in the best position to determine what is best for them.

The study found that students with physical disabilities, especially those with visual impairment and mobility impairment, require electronic books on library computers, more computers at the library, the introduction of libraries on the ground floor of university buildings and ramps at entrances of university buildings as the measures needed to improve the usability

of university facilities to students with physical disabilities. These measures recommended by students with physical disabilities cut across the two participating institutions, thus, the University of Ghana and the Kwame Nkrumah University of Science and Technology. According to participants, library computers do not possess electronic forms of books in readable formats, especially for students with visual impairments. This makes it difficult for students to develop an interest in doing extra reading outside what is being taught in the classroom and, hence, the need to have electronic books in accessible formats for students with visual impairment. Students also suggested that more computers should be provided to them to meet the needs of the growing number of students with disabilities. This is because there has been a surge in the number of students with disabilities admitted to the university every academic year. The findings about the requirement of electronic books on library computers, more computers at the library, introduction of libraries on the ground floor of university buildings and ramps at entrances of university buildings are in tandem with an observation by Tagayana et al. (2005) that assistive technology, education instructional support, career assessment and placement are needed to ensure student success. This will enable students with physical disabilities to have a stress-free educational experience similar to their counterparts without disabilities.

Furthermore, the findings of this study highlight the specific needs of students with physical disabilities at the University of Ghana. They expressed a need for improvements such as accessible inner rooms within residential halls, the installation of elevators, the construction of protective walls around fountains, and the establishment of specialized hostels. Students from the University of Ghana, especially those with visual impairment, proposed inner rooms of halls of residents be given to them to ensure safety of themselves and their belongings. This

suggestion is as a result of impediments they run into, which sometimes cause injuries as well as theft cases. Meanwhile, participants from KNUST require that students with disabilities should be given special hostels that will better meet their residential needs since they claim that their residential facilities did not have the necessary accessible components to accommodate their needs. Although the suggestion about the allocation of special hostels to students with physical disabilities sounds laudable, it could give room for discrimination and exclusion, defeating the motives of the inclusive education models being advocated for by disability activists in the Ghanaian education system.

Moreover, students with physical disabilities recommended that pavements should be levelled by replacing all lost pavement blocks. Gutters around residential halls, lecture halls and major roads should be covered with cement slabs to prevent students with a visual impairment from falling into them when they walk without assistance from their sighted colleagues. Additionally, participants with physical disabilities who participated in the study suggested the need to mount disability road signs to enhance their safety in the university environment. This is because their lives are threatened by reckless driving from drivers on campus. Drivers on campus often disobey traffic regulations, thus going beyond the speed limit and not stopping when students stand at the zebra crossing, making movement difficult for students with disabilities and necessitating disability-friendly road signs and regulations. Again, consideration of students with disabilities in selecting venues for lectures was a measure needed by students' mobility impairment in the lecture hall. This is because students with mobility impairment go through many hurdles when accessing lecture halls because they will have to walk long distances and climb many staircases before accessing the lecture hall; hence, there is a need to make those considerations when selecting venues for lectures that have students with physical disabilities.

Additionally, students with visual impairment and mobility impairment from KNUST requested that more buses be provided for students with disabilities to enhance their movement on campus. According to them, movement around campus was hectic for them, as they must be in class on time, hence the need for more buses.



CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATION

5.1 Introduction

This is the final chapter of the study. It gives a summary of the study, conclusions and recommendations of the study. It also provides comments on the study's implications for social work practice.

5.2 Summary of Findings

The study sought to explore the experiences of students with physical disabilities in higher education in Ghana. Specifically, it was purported to unearth the challenges students with physical disabilities face in higher education at two selected public universities: the University of Ghana and the Kwame Nkrumah University of Science and Technology. It also aimed to identify factors that foster the academic learning of students with physical disabilities and to discover the needs of students with physical disabilities in two selected universities in Ghana. It began with a background to the study and the statement of the problem. Higher education plays an important role in the life of individuals, including students with disabilities. This has given rise to many local and international policy directives, such as the Persons with Disabilities Act of Ghana (2006) (Act 715) and the Convention on the Right of Persons with Disabilities (CRPD), ensuring access, participation and increased enrolment of students with disabilities in higher education. However, students with disabilities continue to have lower academic achievement than their peers without disabilities (WHO, 2011a). This is because

environmental, attitudinal and pedagogical challenges exist in higher education institutions for students with disabilities.

The literature review was performed in themes based on the objectives of the study. These include challenges students with physical disabilities face in higher education, factors that foster academic learning of students with physical disabilities and the needs of students with physical disabilities in higher education. A phenomenological qualitative method was adopted for the study. This enabled the researcher to explore the experiences of students with physical disabilities in higher education in two selected public universities in Ghana. A nonprobability sampling technique, that is, purposive sampling, was used to select students with physical disabilities who qualified for the study. All eighteen students with physical disabilities, including those with visual impairments and mobility impairments, participated in the study. The data for the study were collected through face-to-face and phone interviews guided by a semi-structured interview guide. The data were transcribed and analysed using the four (4) key stages of interpretative phenomenological analysis (IPA) developed by Osborn & Smith (2008). Critical Disability theory (CDT) underpinned the study. All seven tenets, including multidimensionality, social model of disability, voice, language, valuing diversity and rights, applied to the study.

In summary, the study found that students with physical disabilities encountered barriers in the school environment, inside the arrangement of buildings and information and had negative relational experiences. The barriers in the school environment included irregular pavements, open gutters, steep staircases, slippery floors and wide distances between residential halls and lecture theatres and between lecture theatres. Additionally, students with physical disabilities encountered poor lighting and seating arrangements inside buildings in both universities.

Information access was hampered by the unfavourable teaching styles of lecturers, lecturers' reluctance to give reading materials in accessible formats and the lack of electronic books on library computers. In terms of negative relational experiences, students with physical disabilities reported that they received derogatory utterances, stares and rejections from students without disabilities.

Additionally, the results of the study indicated that familial, personal, positive relational experiences and religious and institutional factors contributed to the academic learning of students with physical disabilities. Pertaining to familial factors, study participants reported receiving encouragement and support from their families. Their family background was a source of motivation for them as well. Concerning personal factors, students with physical disabilities strategize their activities and self-motivate themselves to enhance their academic learning. Religious and institutional factors, including encouragement and financial support from the church, WIFI, libraries and online resources, enhanced the education of students with physical disabilities.

Additionally, the findings of the study indicated that fixing elevators and ramps at the entrances of buildings in both universities were measures needed to enhance access to buildings and services by students with physical disabilities. Study participants also suggested the need to have electronic books on computers at libraries at the University of Ghana.

5.3 Conclusions of the Study

In this study, students with physical disabilities had varied experiences. On account of these challenges, the study found that students with physical disabilities encountered inaccessible school environments, entrances and internal buildings in higher education institutions. With

this, it can be concluded that these inaccessible school environments, entrances and internal buildings pose a severe hindrance to movement and access to services on the campuses of higher education institutions. Again, the results of the study indicated that students with physical disabilities were confronted with negative relational experiences in the form of rejections, derogatory utterances and stares from their counterparts without disabilities. Based on this, the study concludes that there exist negative attitudinal barriers toward students with physical disabilities in higher education institutions.

The study also revealed that familial, personal, positive relational, religious and institutional factors contributed to the academic learning of students with physical disabilities. The study therefore concludes that despite the challenges students with physical disabilities encounter, they still possess inherent strengths and abilities coupled with external factors, including family, religious and institutional resources, which enhance their academic learning in higher education institutions.

Additionally, the results of the study indicated the suggestions of students with physical disabilities in the form of fixing elevators, ramps and electronic books on library computers as measures needed to improve their academic learning in higher education institutions. Therefore, the study concludes that students with physical disabilities are in the best position to recommend measures to help improve their academic learning in higher education institutions when given the nod, as was seen from the results of the study.

5.4 Recommendations of The Study

The inaccessible built environment hindered movement and access to services provided for students with physical disabilities in both universities. Hence, in the long run, the study

recommends that university buildings and infrastructure in both universities be renovated according to the provisions of the Persons with Disability Act of Ghana 2006 (Act 715) to enable easy access to services for students with physical disabilities. However, in the short run, the study recommends that classes that have students with physical disabilities in both universities should be held on the ground floor to enable easy access. Regarding seating arrangements inside lecture theatres, the study revealed that students without disabilities often occupied front seats reserved for students with physical disabilities, causing them to sit in the middle and back of the class. Therefore, the study recommends that the first row of seats in the lecture theatres of both universities should be reserved for students with physical disabilities so they would not struggle to find seats in the class. A front seat reservation policy could be infused into the course outlines of the various courses that have students with disabilities in its population. This will allow students without disabilities to be aware of the policy before they even step in class and abide by it. Additionally, posters could be placed on the front rows indicating a reservation for students with disabilities.

Additionally, the management of KNUST could employ the services of disability support workers to coordinate the academic learning of students with physical disabilities because the study found that they did not receive any form of accommodation for their unique needs, which affected their academic learning.

Given the teaching styles that did not promote inclusive learning at UG, the study recommends that the management of UG provide training on inclusive pedagogy for faculty members to enhance their knowledge and skills in teaching students with disabilities. Furthermore, it is advisable for universities in Ghana that admit students with disabilities to prioritize offering comprehensive training to their faculty members, ensuring they possess the requisite methods

and skills to effectively deliver course content that caters to the needs of students with disabilities. The study equally recommends that faculty members at the University of Ghana provide lecture notes and reading material to students with visual impairments before class begins. This will enable students with disabilities to have prior knowledge of topics to be treated in the next class and make meaningful contributions during class discussions.

The wide distances between the residential halls and lecture theatres and between lecture theatres compelled some students with physical disabilities to miss classes or incur an additional cost by using private transportation. Therefore, the study recommends that university authorities in both UG and KNUST provide additional buses that will help convey students with physical disabilities from their residential halls to lecture theatres as well as between lecture theatres. Furthermore, owing to the lack of electronic books on computers at the library in UG, the study recommends that authorities at UG and KNUST provide eBooks on computers at the library to enhance academic learning for students with visual impairment.

5.5 Implications for Social Work Practice

Social workers could educate parents to support (e.g., provide encouragement, motivation and financial assistance) students with disabilities in higher education to improve their academic learning. Social workers could advocate for more institutional resources in the form of computers and e-books to boost the academic learning of students with disabilities in higher education. Social workers could educate religious organizations about the need to provide support such as encouragement and financial assistance to students with disabilities in higher education to enhance their academic learning. Social workers could educate the general university population about the need to eschew negative attitudes towards students with

physical disabilities to promote a more inclusive higher education for students with physical disabilities.



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APPENDIX A

UNIVERSITY OF GHANA

DEPARTMENT OF SOCIAL WORK

THE EXPERIENCES OF STUDENTS WITH PHYSICAL DISABILITIES IN TWO SELECTED UNIVERSITIES IN GHANA

INTRODUCTION

My name is Andrews Berchie, an MPhil part II student of the University of Ghana, Department of Social Work. I am conducting research on the topic: “The experiences of students with physical disabilities in two selected universities in Ghana” in partial fulfillment of a Master of Philosophy Degree in Social Work. This instrument seeks to solicit information about the experience of students with physical disabilities in two selected universities in Ghana. These universities include the University of Ghana and the Kwame Nkrumah University of Science and Technology located in the Greater Accra and the Ashanti Regions of Ghana, respectively. The questions are asked based on the objectives of the study. Your contributions will help me understand the topic under study. Information gathered will be used for academic purposes only and will be kept confidential. Responses cannot be traced back to you in anyway, as your name will not be attached to your input.

DEMOGRAPHIC INFORMATION

1. What is your gender? a) Male b) Female
2. How old are you?
3. Which ethnic group do you belong to?

4. What is your religion? a) Christianity b) Islam c) African traditional religion d) others (specify).
5. Which year are you in? a) year one b) year two c) year three d) year four e) postgraduate.
6. Which college do you belong to?
7. Are you resident or non-resident?
8. What type of disability do you have?
9. How long have you lived with the disability?
10. Did you attend an inclusive secondary school?
11. Whom do you stay with?
12. What is the level of your parents' or guardian's education?
13. Do you receive external financial support? Like scholarship/grant

INTERVIEW GUIDE

Objective one: To investigate the challenges students with physical disabilities in the University of Ghana and the Kwame Nkrumah University of Science and Technology face in navigating higher education.

1. What challenges do you encounter in school in relation to your academic work? (In the Lecture halls, in the library and the environment of the university campus)
2. Do you encounter any challenges in accessing information on campus? If yes, what is the problem?
3. What challenges do you encounter with accommodation on campus? (The dining hall, room arrangement, access routes, toilet facilities and kitchen).
4. What challenges do you encounter relating to students without disabilities? Do they talk to you? Do you have friends? What are their attitudes towards you?

5. What challenges do you encounter in your interaction with faculty members? Are they approachable?
6. Are you able to participate in any social events on this campus? Please explain.
7. Would you say you have the necessary support from the university to achieve academic success? Explain why.

Objective two: To determine what fosters learning among students with physical disabilities at the University of Ghana and the Kwame Nkrumah University of Science and Technology.

1. What do you think encourages or promotes your learning amidst the challenges you face on campus?
2. Do any parental or family factors foster your learning?
3. Are there any personal motivation factors or characteristics that promote your learning?
4. Do you think your religion plays a role in your studies?
5. What institutional factors do you think foster your learning in this university?
6. Do you think some institutional factors facilitate learning for other students with disabilities in this university? If yes, what are these factors?

Objective three: To ascertain the need for students with physical disabilities at the University of Ghana and the Kwame Nkrumah University of Science and Technology.

1. What do you need to foster your learning in this university?
2. In the lecture hall? Library?
3. At your hall of residence?
4. On Campus?
5. Transportation?

6. Information? (At lectures, in the library, at the hall)



APPENDIX B

SOCIO-DEMOGRAPHIC CHARACTERISTICS OF PARTICIPANTS FROM BOTH SCHOOLS

| | | UG | KNUST |
|--------------------------------------|------------------------------|----|-------|
| Sex | Male | 5 | 4 |
| | Female | 4 | 5 |
| Types of disability | Mobility | 4 | 7 |
| | Visual | 5 | 2 |
| | Hearing | 0 | 0 |
| Religion | Christianity | 9 | 9 |
| | Islam | 0 | 0 |
| | African Traditional Religion | 0 | 0 |
| Level of education | Level 200 | 1 | 4 |
| | Level 300 | 2 | 4 |
| | Level 400 | 6 | 1 |
| Prior inclusive education experience | Yes | 7 | 7 |
| | No | 2 | 2 |
| Years lived with disability | Above 10 years | 8 | 6 |
| | Below 10 years | 1 | 3 |
| Scholarship | Yes | 3 | 5 |

| | | | |
|--------------------|--------------|---|---|
| | No | 6 | 4 |
| Residential status | Resident | 9 | 7 |
| | Non-resident | 0 | 2 |

