ACADEMIC EXPERIENCES OF BLIND STUDENTS IN TWO COLLEGES OF EDUCATION IN ZAMBIA

BY

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A DISSERTATION SUBMITTED TO THE UNIVERSITY OF ZAMBIA IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF EDUCATION IN SPECIAL EDUCATION

THE UNIVERSITY OF ZAMBIA

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DECLARATION

I, **Msoni Rodrick**, hereby declare that this dissertation truly represents my own work, except where otherwise acknowledged and that it has never been previously submitted before for the award of a degree at the University of Zambia or any other university.

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CERTIFICATE OF APPROVAL

This dissertation of **MSONI RODRICK** has been approved as a partial fulfilment of the requirements for the award of the degree of Master of Education in Special Education of the University of Zambia.

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ACKNOWLEDGEMENTS

In the writing of this research report, I received invaluable aid and guidance from many academicians and colleagues. In this regard therefore, I owe a great debt of gratitude to my supervisor, Mr. T. Mtonga who was readily available for guidance during my academic journey. Further recognition and appreciation are also directed at Dr. Muzata, Dr. Mandyata, Dr. Simalalo and many other dedicated lecturers at the University of Zambia who were equally readily accessible for consultation throughout the entire trek.

ABSTRACT

This study explored the academic experiences of blind students in two colleges of education in Zambia. It mainly investigated the nature of student induction programmes offered in colleges of education, barriers affecting the education of blind students in the two colleges of education and available support provisions. The study employed an interpretative paradigm, qualitative method and phenomenological design. Using purposive sampling, a total sample of fourteen (14) participants; eight (8) blind students, four (4) college lecturers for special education and two (2) college administrators were picked for the study. Semi-structured interview guides and observation checklists were used to collect data. The study established that the nature of induction programs offered to first-years students in the two colleges of education was mainly in twofold: actualisation of students to academic practices and general familiarisation of all students to the college environment. Although the study established that actualisation of students to academic practices enlightened first-year learners to their academic life at the colleges, narratives of discontentment were equally espoused concerning the inclusivity of the program in relation to absence of induction handouts in differentiated formats and the inability of the colleges to separately familiarise blind students to the college environment and absence of O&M training in colleges of education. The most pronounced academic hindrances experienced by blind students were linked to inaccessible and unpredictable college environment, difficulties in securing sighted guides during blind students' stay in the colleges, the dilemmas of repeatedly making individual follow-up of their written academic work, assessment dilemmas; lack of assistive technology and non-existence of resource rooms. The study recommended that the two colleges of education should undertake separate familiarisation programmes for blind students during first-year induction, Ministry of General Education should institute policy provisions that should compel colleges of education to provide O&M training to blind students, need for colleges to improve their physical learning environments and need to promote buddy system approach and other appropriate support provisions.

Keywords: *Academic experiences, blind, induction, Orientation and Mobility, support services*

DEFINITION OF KEY TERMS

The following definitions have been availed to ensure unison in the comprehension of terminological terms of the study:

Academic experiences: All events associated with learning.

Blindness: Total loss of sight.

Independent Travel: Ability to move about without being guided.

Orientation and Mobility: Techniques and strategies required by the blind to initiate independent travel.

Sighted-guide: A person who directs the blind to move from one point to another usually through trailing.

Student induction program: Activities set for first year students to enlighten about the institution and its academic demands.

ABBREVIATIONS

AT	Assistive Technology
DSS	Disability Support Service
ECC	Expanded Core Curriculum
HEI	Higher Education Institution
JAWS	Job Access with Speech
O&M	Orientation and Mobility
SWVI	Students with Visual Impairments

TABLE OF CONTENT

LIST OF TABLES

CHAPTER ONE: INTRODUCTION

1.0 Overview

Post-secondary education demands for increased academic independence and social identity for all students regardless of their well-being. College students with blindness are equally expected to be self-reliant in seeking out and participating in both academic and social activities (Gil, 2007). With dual limitations of being blind coupled with limited independent travel, the current study sought to explore the academic experiences of blind students in two colleges of education in Zambia. Therefore, this chapter presents the research background, statement of the problem, purpose of the study, research objectives and questions. The chapter further discusses the significance of the study, research limitations and delimitations, theoretical framework and lastly, it provides the definitions of terms.

1.1 Background to the study

Visual input and movement help individuals to gather information about the environment and more than 80% of incidental learning is aided by vision (Brasher & Holbrook, 2007). The World Health Organization (2011) reported that over 285 million people in the world were visually impaired with 39 million being totally blind. Huebner & Wiener (2005) observed that the loss of power to move about freely and safely is arguably the greatest deprivation inflicted by blindness. Without the richness of information provided by typical vision, the development of the persons with visual impairments can be adversely affected across many domains. This developmental difference occurs as a result of the limited extent and frequency of experiences with the environment, including interactions with family members and peers. Ferrell (1996) pointed out that individuals with visual impairments have decreased opportunities for incidental learning and are less likely to gather complete sensory information to interpret the world around them and make sense of their surroundings.

However, besides the same educational curriculum that blind learners are required to learn together with their peers, they are equally expected to master concepts of the Expanded Core Curriculum (ECC) if they are to be successful (Hatlen, 2010). In Zambia, the Ministry of General Education uses the ECC to impart important independent living skills in learners with visual impairments. According to Halten (2007), an Expanded Core Curriculum (ECC) is a body of knowledge and independent living skills needed by learners with visual impairments to be

successful in school and in post-graduate pursuits as a result of their unique and specific needs. The components of the ECC include compensatory skills, social interaction skills, recreational and leisure skills, orientation and mobility (O&M) skills, independent living skills, assistive technology skills, career education skills, sensory efficiency skills, and self-determination skills.

Orientation and Mobility training is one of the important components of the ECC that helps to impart in blind learners with important skills of independent travel (Jacobson, 2012). It involves students learning about themselves and the environment in which they move, from basic body image to independent travel (Sapp & Halten, 2010). Alberta Education Special Programmes Branch (2010) observed that good O&M skills are highly correlated with the degree of independence achieved by students later in life. Developing body awareness, directionality, special awareness and practical knowledge associated with the characteristics of a given environment increases the probability that students will be actively involved in age-appropriate activities with peers. In addition to traveling safely and independently, mobility affords individuals with visual impairments opportunities to meaningfully engage in academic and social interactions and to maintain a quality of life. By the time blind learners complete secondary school, they are expected to acquire all the necessary ECC skills to help them pursue their tertiary education and employment prospects. Wahl, Oswald & Zimprich (1998) warned that young persons who are blind are at real risk of living lonely, dependently and unproductive lives if they do not develop skills across all areas of life during childhood and adolescent stages.

McBroom, (1997) noted that whereas in the secondary school environment, educators and administrators were responsible for facilitating their access to both academic and social activities, at the college level, students with blindness and visual impairments are expected to be proactive and independent. However, several studies by Trief & Feeney (2003), Opie (2018), Sapp & Halten (2010), Allman & Lewis (2014), Ball & Nicolle (2015), Islek (2016), Shanzi (2016) and Simalalo (2017) reviewed that despite implementation of the ECC, many blind learners were unable to effectively initiate independent orientation and mobility travel in schools. This entails that such learners enter colleges and universities with limited skills of independent travel. McBroom (2010) observed that most students with blindness entered higher learning institutions with inadequate study and independent living skills besides other deficits.

While all students face challenges as they move from secondary to higher education, students with disabilities face particular challenges as a result of diminished support systems after high school, inadequate self-advocacy skills and low expectations on the part of people with whom they interact with (Burgstahler, 2012). With these limitations, the college environment tends to be hostile and uninviting, in part because it excludes blind individuals especially when support provisions are not equivocally provided (Matson, 1990). Although colleges of education in Zambia have embraced the policy of inclusive education, their services do not cater for the provision of trained sighted guides to blind students. With a heterogeneous category of students in colleges of education, little is known on how blind students fulfil their day-to-day academic requirements in colleges of education in Zambia. In their study, Trief & Feeney (2003, p.137) reported that 32% of learners with visual impairments dropped out of college due to challenges in coping with academic and social demands.

Furthermore, the Ministry of Education (2016), indicated that Zambia has an educational system that runs from Early Childhood Education (ECE), primary, secondary and tertiary education levels. At tertiary level, there are several public and private colleges of education that have been mandated to train teachers. The public colleges include Zambia Institute of Special Education (ZAMISE), Charles Lwanga, Chipata, David Livingstone, Kasama, Kitwe, Malcom-Moffat, Mansa, Mongu, Mufulira, Solwezi, and St Mary's College of Education. Other institutions are the technical and Vocational College of education (TVTC) in Luanshya and private colleges of education around the country. Teacher education is further offered in public and private and universities.

While ZAMISE has been tasked to offer specialised programmes in hearing, intellectual, physical and visual impairments alongside teaching subjects together with the University of Zambia (Ministry of Science, Vocational Training and Early Education - MESVTEE, 2013), David Livingstone, Chipata, Malcom-Moffat, Mongu and Kitwe College of Education also enrol students with disabilities to train as teachers (Muzata & Ndonyo, 2019). Although there is a well-established structure of teacher preparation in Zambia, the curriculum for teacher education does not show how trainee teachers with visual impairments are prepared for the teaching profession in the colleges where they are enrolled. Orientation and Mobility is one of the critical areas for initial induction of trainee teachers with visual impairment.

Although various studies by Simui (2018), Simalalo & Hambulo (2020), Muzata, Simalalo, Ng'andu, Mahlo, Banja & Mtonga (2019), Muzata (2020), Kabwe, Mandyata & Chakulimba (2020), Hlatywayo & Mapolisa (2020), Simui, Kasonde-Ng'andu & Nyaruwata (2018), Frank, McLinden & Douglas (2019), Abed & Todd (2020), Raj (2018), Odana (2018), Zelelew (2018) among others, have broadly unearthed several challenges experienced by blind students and or students with visual impairments in higher education. It is cardinal to state that academic experiences are not a fixed and rigid set of disabling practices bounded within a single time and space but a conglomeration of individual narratives within a multitude of ableist and normative constructions defined by individual learning institutions and their support provisions. It should also be stated that very few studies have been conducted in Zambia to categorically ascertain the academic experiences of blind students in Colleges of Education.

Linda (2017) is of the view that listening to voices of specific disability categories of college students may be an appropriate method to engage them and encourage inclusive participation in actions to dismantle academic barriers and resolve challenges that subsequently benefit both students with disabilities and higher education institutions. Blind students are therefore experts in their own lives, thus listening to their experiences as students in colleges of education may help to resolve various academic barriers that impede their education. Alqaryouti (2010) also contended that it is cardinal to investigate a specific phenomenon as opposed to a broader spectrum of issues thus the current study opted to undertake a similar perspective by specifically investigating the academic experiences of blind students in two colleges of education in Zambia.

1.2 Statement of the problem

The academic demands in colleges of education require all students to take a leading role in fulfilling their daily educational tasks. Although colleges of education have embraced the policy on inclusive education, their services do not cater for the provision of sighted guides to blind students. With dual limitations of being blind coupled with limited independent O&M travel, it is obvious that such students encounter numerous difficulties in their studies. However, few studies have been conducted to account for the academic experiences of blind students in colleges of education in Zambia thus the current study sought to bridge that knowledge gap.

1.3 Purpose of the Study

To explore the academic experiences of blind students in two colleges of education in Zambia.

1.4 Objectives of the study

The objectives that guided this study were as follows:

i. To establish the induction programmes experienced by blind students in two colleges of education.
ii. To explore the learning experiences of blind students in the two colleges of education.
iii. To establish available support services that colleges of education have put in place for blind students.

1.5 Research questions

The following research questions guided this study:

i. How did blind students experience the induction programmes offered in the two colleges of education?
ii. What are the learning experiences of blind students in the two colleges of education?
iii. What support services have the two colleges of education put in place for blind students?

1.6 Significance of the study

It is hoped that this study may inform teacher trainers the academic experiences of blind students in the two colleges of education. The study may also inform colleges of education to institute reasonable accommodations and adaptations for blind students. The study may further be used as a basis to conduct other similar research.

1.7 Limitations of the study

The study was conducted in two public colleges of education in Zambia; hence the results cannot be generalised to other settings. Despite its non-generalisation in other wider settings, the study findings can however be generalised in the two college settings and serve as a precursor in understanding the academic experiences and support needs of blind students. Furthermore, the study was conducted at a critical time when many parts of Zambia including the two research sites recorded an increase in Covid 19 cases, thus restricting the researcher's frequency of conducting follow-up interviews which would have provided more in-depth and richer information regarding the experiences of blind students in the two colleges of education. To avert this limitation, immediately after each interview, the researcher made sure that data derived from each participant was thoroughly counter checked for any inconsistencies. The researcher also sought further clarifications from participants through the use of mobile phone calls and emails. The use of different data collection strategies in the study that included interviews

schedules, document analysis and observation checklist provided some form of triangulation which augmented the study findings.

1.8 Delimitation of the study

Delimitations explain the boundaries the researcher imposes prior to initiating a study and is important to narrow the focus of a study (Creswell, 2003). The main research delimitations were; (i) the study only explored the academic experiences of blind students (ii) the study was conducted in two selected colleges of education in Zambia that had a record of enrolling blind students.

1.9 Theoretical framework

Creswell (2007) noted that a theoretical framework is an essential component in building a qualitative design, to inform the study and guide the research process, analysis and discussion. This study therefore is augmented by Nevitt Sanford (1962) development theory of challenge and support. Sanford's theory (1962; 1966) is premised on two fundamental concepts associated with student development and these are: cycles of differentiation and integration, and readiness, challenge and support in a college environment. The first foundational concept of Sanford's Student Development Theory (1962) involves the cycles of differentiation and integration. Differentiation occurs when students understand themselves as unique individuals, while integration happens when students recognise themselves as members of various groups (Patton et al., 2016). Through this process, students learn about their own characteristics and begin to understand how their personality shapes their identity, and subsequently their academic progress. Individuals with disabilities can see themselves as unique individuals with different strengths, abilities and weaknesses with or without their disability in mind. They can also see themselves as members of various groups as they integrate into college, including but not limited to peers with similar disabilities. Therefore, as students integrate into college, they learn who they are individually and as members of different academic and social groups. This further demonstrates the importance of integration into the academic and social systems of college.

Gardner (2009) noted that the second fundamental concepts of Sanford's Development Theory examine three evolving conditions: readiness, challenge, and support. Readiness refers to the maturity and preparedness of the student; challenge relates to circumstances where the student does not have the necessary skills to cope with the situation (Sanford, 1967a), and support focuses on providing an environment that is encouraging and allows the student to explore the

conditions of his/her identity in a safe setting. When a challenge is presented to a college student, it requires them to change their behaviour and further grow in their development (Sanford, 1962). Support is a direct component in that it helps with the student's ability to be successful with the challenge (Sanford, 1967a). Depending on support that is given from the student affairs professionals during a challenge, this will influence the amount of growth achieved by the student (Boehman, 2010).

In addition, Boehman (2010) argued that for development to happen, there should be a balanced amount of challenge and support that is appropriate to the situation. According to Sanford (1966), the amount of challenge a student can handle should be dependent of the support available. If there is too much challenge and not enough support, students may regress to less adaptive behaviours, ignore the challenge, or try to escape the challenge. Although, if there is not enough challenge, then students may feel too safe and do not develop. Furthermore, Sanford was one of the first developmental theorists to focus on the idea of student development as a function of person-environment interaction. He contended that, "individuals cannot exhibit certain behaviours until they are ready to do so (Patton et al., 2016:36)." These challenges and supports depend not only on the student and their development, but the environment they are in and the people in their lives (Boehman, 2010).

Sanford (1966) further argued that a college environment should be considered as a developmental community where students' abilities ought to be nurtured to enhance their academic progress. The ultimate outcome is to find the range of optimal dissonance in a person's environment. The environment should not present too many challenges for an individual as this may lead to regression and allow for less adaptive modes of behaviour. If the environment seems too challenging, individuals may want to escape or ignore the situation. On the other hand, if the environment seems less challenging or easy, an individual may feel safe and satisfied with the situation but does not develop in that atmosphere (Evans et al., 2010).

Similarly, Gardner (2009) equally alluded that environments that are weighted too heavily in the direction of challenge without adequate support are toxic; they promote defensiveness and anxiety. Those weighted too heavily toward support without adequate challenge are ultimately boring; they promote lifelessness. Both kinds of imbalance lead to withdrawal. In contrast, the balance of support and challenge leads to vital engagement. Readiness emphasizes that people

cannot demonstrate certain behaviours until they are ready in their own time. This phase can be a result of internal maturation or of environmental conditions (Evans et al., 1998). Sanford's Micro Theory of Challenge and support postulates that the ability to handle challenges is a direct function of how much support is available for an individual. Hence, colleges and universities should make students and parents aware of the support services that are offered to students to help make the transition. It is therefore important to examine students' support and challenges in order to understand the relationship of this factor to the academic progression of blind students in colleges of education.

As espoused by King and Howard-Hamilton (2001), there are multiple theoretical frameworks that can be used to assess learning and development of students in colleges of education, but Nevitt Sanford's development model best suits this inquiry as the framework is congruent in augmenting the study on academic experiences of blind students in two colleges of education in Zambia. Similarly, Gardner (2009) observed that Sanford's challenge and support theory acts as the catalyst in examining how a student grows as a result of participating in the college experience. The application of the theoretical framework by Psychologist Nevitt Sanford's explorations of student development in higher education best supports this study since the construct of the theory was founded on personal shared lived experiences from the lens of the student while attending college.

It is important to note that although all students are expected to integrate into the colleges both socially and academically, the way they integrate, the challenges they face, and the supports they receive may be different for each student. This is especially true for students with disabilities who may face many challenges different from their non-disabled peers. Furthermore, if the college environments do not provide the appropriate supports, or if students do not use or experience the supports, then the challenges they experience may be too great to overcome. This can cause many different negative outcomes. Although not specifically stated in his theory, one of these negative outcomes of lack of appropriate support systems may include poor academic performance and subsequently dropping out of college to escape their challenges. Therefore, since students with disabilities may face numerous academic challenges and require additional supports compared to the general population, the researcher chose to utilise Sanford's Challenge

and Support Theory (1962; 1966) because of its focus on these variables and how they impact on student retention, progression as well as their academic performance.

1.10 Summary

The above chapter presented the background of the study, statement of the problem, purpose of the study, research objectives and questions and the significance of the study. It further provided the theoretical framework, limitations and delimitations of the study and definitions of terms used in the study. The next chapter covers reviewed literature related to the study at hand.

CHAPTER TWO: LITERATURE REVIEW

2.0 Overview

The main aim of reviewing research literature is to explore what has been investigated, determine what research still needs to be conducted, and address links between theory and practice (Randolph, 2009). In this chapter, the researcher is therefore indebted to review similar studies done by other scholars from the global, African, and Zambian perspectives and subsequently highlight the gaps which the present study is attempting to fulfil. The three thematic areas under review focused on the nature of induction programmes experienced by blind students in higher learning institutions, learning experiences of blind students in colleges of education and available support services for blind students.

2.1 Induction programmes experienced by blind students in higher learning Institutions

Tinto (2010) noted that student attrition is often at its highest level during the first year of study as students struggle with competing roles and academic expectations. The transition from high school into higher institutions of learning is more challenging for most students, including persons with disabilities. While attendance by students with disabilities in post-secondary institutions has increased in past decades (National Center for Educational Statistics, 2014), few individuals with disabilities graduate from most colleges (Dowrick, Anderson, Heyer, & Acoster, 2005). This suggests that high school experiences of students with disabilities do not adequately prepare many of them for post-secondary success (Drake, 2011). Many learning institutions therefore use orientation procedures to provide first year students with the skills to navigate the rigors of studying, independent living, social life among others (Conley, 2010; Drake, 2011; Espinoza & Espinoza, 2012; Scott-Clayton, 2011).

A study by Hill, Posey, Gomez & Shapiro (2018) examined the impact of a university outdoor orientation program on participants' transition to higher education. The study utilised an experimental, comparative design to study the levels of resilience and well-being in participants of the First Ascent Program at Mid-Atlantic University. The questionnaires (pre and post-test) were administered to twenty-five (25) participants to ascertain their resilience and well-being following the outdoor orientation program. Pre- and post-test instruments consisted of two pre-

established scales and a series of open-ended questions, which were administered during a 4-day university outdoor orientation program. Findings revealed significant improvements of resilience, well-being and readiness levels in participants as a result of outdoor orientation program involvement. Participants stated that because of the program, they felt comfortable with their decision to attend university academics. Despite yielding several positive results, the above study did not include blind participants in its study; hence, the current study.

Quite consistent with the findings of Hill et al (2018) inquiry is Rude, Bobilya's & Bell's (2017) study which equally explored the contribution of outdoor orientation experiences to student thriving. Study participants included 295 first-year college students from three institutions across Canada. A thriving model was tested using structural equation modelling and the included variables were outdoor orientation, thriving, involvement, spirituality, psychological sense of community, student–faculty interaction, and control variables. Although the predictive importance of outdoor orientation was modest ($\beta = .048$), it contributed significantly to a model explaining 72.8% of the variance in thriving levels. Outdoor orientation directly predicted campus involvement ($\beta = .246$) and spirituality ($\beta = -.146$). These findings indicated that participating in an outdoor orientation created a propensity for students to become more involved in campus life and fostered a greater sense of campus community, culminating in thriving. While the above findings were generated from a quantitative inquiry, the current study sought qualitative methods in its enquiry

Similarly, Davis (2013) conducted a quantitative inquiry to ascertain the value of one new student orientation program at a rural community college of Appalachia in Kentucky. The study assessed the impact of orientation program on retention rates and other measures of student success. There were 105 students (35.5%) who participated in the Academic Orientation Program, while 191 (64.5%) students did not participate in the program. Two independent groups, those who participated in orientation and those who did not participate in orientation, were compared utilising independent sample t-tests to determine if there were significant differences in the mean levels of the indicators of academic success utilised in this study. Descriptive, inferential, and correlational statistics were utilised to determine study findings.

Data revealed from Davis' (2013) study showed that persistence and retention rates increased for students who participated in the Academic Orientation Program (AOP) as compared to those students who did not. The grade point average for those who participated was slightly higher (M=2.12) as compared to those who did not participate (M=2.06). Persistence rates were significantly higher for students who participated in the AOP compared to those who did not, with rates of 93% and 84%, respectively. Retention rates were also higher for students who participated in the program (M=73%) as compared to those who did not (62%); a statistically significant difference of 11%. Upon combination, this data revealed that student participation in the orientation program is strongly associated with student endurance which resulted in higher credential rates. Despite the above study revealing appealing benefits of orientation programs, its applicability in inclusive higher education settings needs to be interrogated further.

A similar study by Rhodus (2016) sought to evaluate the impact of outdoor orientation programs on incoming students at the Ohio State University. This study utilised a survey and 150 participants were involved in the inquiry. Findings indicated differences in student outcomes between students who participated in the study and those who did not. These findings were in tandem with those of Posey et al (2015) which reviewed that outdoor orientation programs provided students with skill-transference, resilience and greater connection to the university. Besides having a western cultural perspective, there is need to interrogate the above findings by utilising a phenomenological inquiry which the current study endeavours to do.

A comparative study by Fowler and Boylan (2010) focused on assessing a comprehensive development program for students pursuing reading, writing, and Mathematics courses. The program included orientation, first-year experience transition course, advising and tutoring. Students participating in the study were compared with a similar group of students who were placed into the same courses prior to the Pathways to Success (PWAY) program being implemented (Fowler & Boylan, 2010). The study findings revealed that students in the PWAY program had significantly higher cumulative GPAs, better academic standing, more success in the developmental course work, and higher one-year retention rates than the students in the control group. While Fowler & Boylan (2010), Rude, Bobilya & Bell (2017) and Davis (2013) employed quantitative means to collect data from non-disabled participants, the current study

used a phenomenological approach to elicit data from blind students, administrators and lecturers of special education on the nature of induction programs offered in the two colleges of education.

Another investigation on how an outdoor orientation programme encourages transition and adaptation to university for first year students was conducted by Pickard (2019). This study broadly sought to explore how an outdoor orientation programme aids transition and adaptation to university for first year students, the role of Outdoor Orientation Programmes (OOP's) in social integration and personal growth and standardised practices for outdoor orientation programmes. The study utilised a mixed method design in which 139 students and 10 academic staff participated. The study results revealed that the intervention group had a significant overall better adaptation to university (and each of the 4 individual constructs) than the control group ($p<0.05$). Despite Hill et al (2018), Rude, Bobilya & Bell (2017), Rhodus (2016), Posey et al., (2015), Shellman & Hill (2013), Nguyen, Tuomo, Amir & Ari (2018), Webster (2016), Valentine et al (2011), Brophy (2013), Hope (2015), Kolenovic et al., (2013) and Pickard (2019) quantitative inquiries reviewing immerse benefits of orientation programmes conducted in higher institutions of learning, the above studies did not bring out the benefits of induction programs to heterogeneous categories of students in inclusive education settings; hence, the current study.

Deviating from several other research findings, Yanni's (2016) study established that there were no significant differences found in the relationship between orientation participation and first-year retention rates or orientation participation and persistence to graduation. The study findings also established that student age did not influence the prediction of first-year retention rates for students who did or did not participate in the orientation program. Overall, the study established that there was no relationship between a program-specific orientation program for associate degree students and their first-year retention and persistence rates. This study explored the relationship between a specific orientation program for associate degree nursing students and first semester course grades, retention, and persistence to graduation. This study was pitched with a western context in mind, with subsequent usage of quantitative procedures to elicit data. Thus, left knowledge gaps for further study in Sub-Sahara Africa, particularly the Zambian context.

However, a study by Correa-Torres, Conroy, Rundle-Kahn, & Brown-Ogilvie (2018) reported that most participants with visual impairments expressed dissatisfaction with the O&M services provided by the Disability Support Service (DSS) office during orientation period at the University of Northern Colorado. The study highlighted a discrepancy between the accommodations students expected DSS to provide and the actual range of services the offices provided. It was established that DSS did not provide O&M training upon entry into the university but just only walked students through their schedules once at the beginning of the semester. Participants reported that they had a disastrous start to their academic year because of difficulties in locating lecture rooms which they were not familiar with as a result of not being oriented. These findings also correlated with study findings by Goode (2007) and Hopkins (2011) which established that lack of meaningful first year induction programs for blind students lead to self-orientation and subsequently contributed to their dismal performance in their academic life. While the ten participants in Correa-Torres et al (2018) study were recruited through social media and snowball sampling recruitment strategy, the current study used purposive sampling technique when picking the desired fourteen participants from the two colleges of education.

In Ghana, Owusu et al., (2014) conducted a study to explore the impact of orientation on the academic performance of students at University of Cape Coast. The study used the descriptive survey design and multiple sampling procedures to select 200 students from the university and questionnaires were used to collect primary data. Among other findings, the results revealed that orientation programmes provided fresh students with good academic information regarding academic programmes, policies and regulation that enhance students' learning. It was further established that participation in orientation significantly and positively impacted their academic performance. The outcome also showed that a significant difference existed in the mean Cumulative Grade Point Average (CGPA) scores of students who participated in the orientation programme for fresh students and those who did not. These study findings require more interrogation to assert if truly orientation programmes have a positive impact on blind students' wellbeing and academic performance.

While blind students have to overcome the dual obstacles of academic demands combined with their disability, provision of appropriate orientation support helps them to compete favourably

with their peers. Laureate et al (2014) conducted a study that focused on the assessment of the situation of students with disabilities in selected universities in Ethiopia. A mixed method design was employed, and eleven (11) government universities were purposefully identified in order to make them representatives of Ethiopian Universities. The universities were: Adama Science and Technology University, Addis Ababa University, Aksum University, Bahir Dar University, Dilla University, Jigjiga University, Haromaya University, Hawassa University, Mekelle University, Gondar University and Samara University. A total of 422 students with disabilities completed questionnaires with close and open-ended questions; developed to solicited information from students with disabilities about their demographic data, educational challenges during their university studies, and service provisions and modifications in their respective universities. Besides other challenges, the study established that students with disabilities were not satisfied with the orientation programs offered by universities as a whole.

Furthermore, the study by Laureate et al (2014) established that while 52.2% of students with disabilities reported to have received some form of general orientation, 47.8% students in five universities reported not to have received orientation upon entry into their respective universities. High levels of dissatisfaction were espoused by those students with disabilities who participated in orientation programs at their respective learning institutions. The study by Laureate et al (2014) further revealed that although universities were aware that they were expected to provide two types of orientations: general orientation for all students and special orientation to students with disabilities on accommodations, infrastructures, academic services and environmental orientation, very few higher institutions adhered to those requirements. Instead, students regardless of their wellbeing were only given orientation on general topics such as university rules, students' discipline, student-teacher relationships, grading system, resources and available services among others. While Laureate et al (2014) used a mixed method inquiry to report the absence of special orientation programmes for students with disabilities in the sampled universities in Ethiopia, the current study employed an interpretivist approach to explore the nature of orientation programmes offered in two colleges of education in Zambia

Similar to the study results of Laureate et al (2014) were Lourens' (2015) phenomenological study findings emanating from the lived experiences of persons with visual impairments at two universities in South Africa. Among other findings, Lourens' (2015) study established that blind

students were compelled to orient themselves with the new physical university environment. It was further revealed that other students with visual impairments visited the campus beforehand and paid for an orientation and mobility instructor to teach them the routes to classes and lecture theatres. Even though these preparations were somewhat helpful, they did not prepare them sufficiently for the day-to-day challenges of walking the campus. Although Lourens' study generally sought to establish the lived experiences of students with visual impairments in higher learning institutions of South Africa, the current study seeks to specifically explore the academic experiences of blind students in two colleges of education from the Zambian context.

Alhammadi's (2014) phenomenological study investigated daily obstacles facing the Students with Vision Impairments (SWVI) in the United Arab Emirates (UAE) Higher Education. The study established that personal challenges faced by students with visual impairments related to their level of mobility independence. According to Alhammadi (2014), the obvious factors which contributed to deficiencies in independent travel were due to lack of orientation and mobility training offered in the UAE, the lack of qualified O&M trainers, unwillingness by students to expose their disability and social attitudes towards disabilities in the society. The study however recommended that SWVI with minimal independent travel skills should be provided with mobility training on the campus in order to enhance independent travel, that there was need to organise awareness campaigns about vision impairment as a disability during orientation days to raise the level of awareness among the university community about the SWVIs' special needs and that upon entry into each university, there was need to orient students with visual impairments on how to move safely and independently to frequently used places in their institutions.

Similar to Alhammadi (2014) research recommendations were Odana's (2018) study suggestions made after exploring mobility experiences of students with visual impairments at Makerere University. Having established that students with visual impairments encountered a variety of mobility challenges, mainly as a result of the environment in which they stayed and moved in, the study proposed that there was need to orient or familiarise the student with visual impairment to all places in the university including the playground prior to their first day whenever possible. With repeated recommendations from the above reviewed research that there is need to initiate orientation programmes that are meaningful to the diverse needs of learners, the current study

seeks to explore the nature of orientation programmes offered in selected colleges of education in Zambia.

2.2 Learning experiences of blind students and / or students with visual impairments in Higher learning Institutions

Ntombela & Raymond (2013) noted that the learning experiences of students with disabilities differ, mainly because of the nature and severity of the disabling condition, as well as factors associated with environmental and curriculum implementation. Similarly, Reed & Curtis (2012) observed that although there are several barriers which hinder the education of learners with disabilities, the impact of these barriers differs depending on the type of disability. Barriers to learning include all the difficulties that arise within an education system as a whole and the learning site. These barriers have been identified and may lie within the curriculum, the centre of learning, the system of education and the broader social context. This study segment reviewed related research that explored the experiences of blind students and / or students with visual impairments from various countries that among others included: United Kingdom, United States of America, Nepal, Israel, Cyprus, United Arab Emirates, India, Brazil, Saudi Arabia, China, Ethiopia, Uganda, Ghana, Nigeria, Rwanda, South Africa, Kenya, Zimbabwe, Botswana, Namibia, Malawi and Zambia.

Frank, McLinden, & Douglas (2019) conducted a study to explore the learning experiences of students with visual impairments pursuing physiotherapy training in the United Kingdom, with specific focus on barriers and enablers encountered within university. The study utilised a qualitative multiple case study design and four students with visual impairments from different institutions were involved. Three major themes that created barriers to learning physiotherapy in the university and classroom were identified as: environmental factors, unsupportive behaviours, and time and effort. All participants experienced barriers to learning within their university setting despite having disclosed their disabilities. Unsupportive attitudes towards reasonable adjustments were experienced, mainly as a result of negativity and laissez-faire attitude. However, despite facing barriers, the study established that there were many positive experiences that enabled learning, particularly when staff and students worked together in an open, supportive and proactive environment. All participants indicated that their lecturers were accessible and approachable; taking time to check on them during practical sessions and enabling

them to access teaching activities. The above study findings have a western cultural context which needed to be interrogated in the Zambian context; hence, the current study.

Similarly, Kendall (2016) conducted a study to explore experiences of students with disabilities in a higher institution of learning. Data was gathered from a small-scale qualitative study of 13 students with a declared disability within a UK university in the North of England. Among other findings, the study established that student support services within the university were viewed as a positive resource, with provision being put in place within the first week of commencing university. The study further established that students with disabilities were given separate rooms when undertaking exams. However, while some participants in Liasidou's (2014:124) study findings suggested that the practice of allocating students with disabilities a separate room to undertake an exam was a "segregating and stigmatizing form of provision", other participants considered alternative room provision as a positive means of support.

In Nepal, Raj (2018) conducted a phenomenological study to understand the lived experiences of learners with disabilities in mainstream Vocational Education and Training Institute. Eight learners with disabilities (five with physical impairments, two with visual impairment and one with hearing impairment) were purposively selected. The study produced three themes: nature of the teaching-learning process, access to vocational education and training (VET) and, inclusion by other students and the teaching staff. The participants' experiences about the teaching-learning process revealed three sub-themes: feeling of being a minority in the mainstream, collision between teaching-learning styles, and insufficiency of the disability-friendly learning environment. Some participants lamented that the teaching-learning strategies employed by some course instructors were not responsive to their needs, while other disability groups appreciated the same approaches.

The participants from Raj's (2018) study further revealed that if the learning environment was more friendly and accessible, they would not have been seen to be a minority group. The participants' expression of discriminatory behaviour among their instructors and non-disabled peers constituted another major theme with three constituents: difficulty socialising with their non-disabled peers, sympathetic friends, positive as well as ambivalent behaviours by their course instructors. Madriaga & Goodley (2008) noted that examining the experiences of a

specific impairment group recognises the divergent ways in which different impairments are constructed and respond educational settings; thus, the current study seeks to employ phenomenological approach to only explore academic challenges experienced by blind students in two colleges of education.

Almog (2018) conducted a study to understand the narratives of sixteen legally blind students from four universities in Israel. The findings presented two complementary narratives that the interviewees used while configuring their identities. The study established that during their academic journeys, students had to integrate their identity both as disabled individuals as well as being students, choosing when and where to perform each identity and determining what the implications of each choice were along with each one's related costs and benefits. The study recommended comprehensive and individualistic support services in order to improve inclusion and equality in higher education. The applicability of Almog's (2018) study findings needed to be interrogated from the Zambian contextual perspective; hence, the current study.

Arora's & Anjali's (2012) study explored common problems faced by visually impaired individuals in India. The study precisely sought to establish hurdles faced by visually impaired individuals during ambulation, while using public transports and while working in organised sectors. The study employed a survey using a pre validated questionnaire on 30 completely blind subjects (as defined by Disability Act). The study established that the blind faced difficulties in ambulation on pavement because of uneven surfaces, open manholes, parked cars and as a result of vendors. The study further reported that the blind individuals used white canes while ambulating on roads due to unexpected potholes, open manholes, irregular surfaces, unmanned crossing and no family help on roads. It was reported that despite blind individuals' efforts to initiate independent travel, the major hindrance to their mobility were uneven surfaces, open gutters hawkers and parked cars among others. Unlike Arora and Anjali's (2012) study which mainly sought to establish hurdles faced by the individuals with visual impairment in ambulation, the current study explored the academic experiences of blind students in two colleges of education.

In Brazil, Luque, Leonidas, Elisabeti & Anarosa (2018) conducted an inquiry to ascertain the inclusion of learners with visual impairment in computing education programs. The study's

dimension focused on the practices of educators in an inclusive education set up as well as the perceptions of their learners with visual impairments. This survey involved 75 paricipants (56 computing educators, 16 legally blind students and 3 learners with low vision) and covered five higher learning institutions. The research was carried out by sending electronic questionnaires, with multiple choice and short answer questions, targeting two distinct groups of educators and learners with visual impairments. The study established that most educators who were teaching students with visual impairments were not trained in inclusive education pedagogical practices thus felt challenged and unprepared when teaching students with vision deficits. The study further established that most lecturers did not have any approach to make graphical representations accessible to visually impaired learners; thus, continued making illustrations using a blackboard.

According to the learners surveyed, the main challenge they faced was when graphical representations were used to convey and to discuss concepts (Luque et al., 2018). The study further revealed that although the most widely used strategy by educators to help them comprehend some lectures was the delivery of lecture materials prior to the lectures, a practice considered to be useful, accessibility of graphical concepts remained one of their biggest challenges. Among others, students with visual impairments revealed that availability of accessible books was another challenge that restricted their research peripheral. Similar revelations were also made by Jones and Kerri (2017) whose study focused on the education of students with Visual Impairments in the general education setting in rural Mississippi. However, both studies by Luque et al (2018) as well as Jones and Kerri (2017) have American cultural perspectives which needed further comparison with the Zambian context, hence this study.

Zhang, Rosen, Cheng & Li (2018) conducted a study to ascertain the inclusion of students with disabilities in higher education in China. The study mainly focused on lecturer's attitude towards the inclusion of students with disabilities from nine public universities. The study utilised a semi-compiled questionnaire to explore an overall perspective of how university lecturers in China view inclusive education from emotional, cognitive and conative aspects. The study findings obtained from 90 participants (32 lecturers, 15 professors 23 associate professors, 12 research fellows, 8 students) showed that university lecturers in China had positive attitudes pertaining to disability inclusion in higher education. It was however established that university

lecturers in China lacked relevant knowledge, skills, and appropriate strategies to cope with the diverse needs of students with disabilities. However, Zhang et al (2018) study revelations that established positive attitude among educators in China is invariance with studies conducted by Liu, Qian & Fu (2013) and Tai (2014) who established that negative attitudes by both educators and non-disabled learners were the contributory factors affecting inclusion in China. This study needed further interrogations from the Zambian perspective by subsequently focusing on one disability category.

Abed & Todd (2020) conducted a quantitative inquiry to explore Saudi Arabia's faculty perspectives of the accommodations for students with visual impairments at five universities. A questionnaire in form of a modified version of the Accommodation of University Students with Disabilities Inventory was administered as to 78 faculty members from five universities. The main aim of this study was to investigate faculty assumptions about the challenges of instructing students with visual impairment and faculty satisfaction with professional development offered to facilitate successful instruction for students with visual impairment. Exploratory assessment of responses pertaining to perspectives on accommodations for students with visual impairment scored across-category mean (3.91), which indicated that Saudi University faculty participants were positively disposed to accommodating students with visual impairment.

Abed's & Todd's (2020) study results also indicated that participants were more positively disposed to allowing students with visual impairment to record a lecture but were less positively disposed to allowing students with visual impairment to take proctored exams in a supervised location. Findings relating to faculty professional development scored a cross-category mean (2.95) which indicated that Saudi University faculty participants were ambivalent about the extent to which their institution provided professional development to instruct students with visual impairment. The results also indicated that participants reported some variance in their assessment of the individual items. The result on professional development also collates with study results obtained by Hitch, Macfarlane & Nihill (2015) which indicated that faculty staff were not often trained in instructional techniques designed to maximise learning for students with disabilities. Unlike using questionnaires in data collection, the current study utilised interviews when collecting data.

While studies by Abed & Todd (2020), Hitch, Macfarlane & Nihill (2015) provided several common perspectives about the inherent difficulties of attending to students with disabilities, a study by Moriña, Marta & Carnerero (2020) reported positive development born from inclusion. The findings revealed that although the presence of students with disabilities posed teaching challenges, it helped the faculty members to improve their instructional methodology, evaluation techniques, organisation of subjects and group activities which in many cases, was equally beneficial for the rest of the classmates. Moriña's, Marta's & Carnerero's (2020) qualitative study sought to understand inclusivity in higher education by focusing on the views of 119 faculty members from 10 Spanish Universities. While several western research predominantly focused on the wider experiences of students with disabilities and or those with visual impairments in H.E, they did not examine specific areas in depth of how limitations in independent travel coupled with total loss of sight impacts on academic performance of blind learners. The current study seeks to fill these knowledge gaps.

Similarly, Alhammadi (2014) conducted a phenomenological study to investigate the daily obstacles facing the students with vision impairments (SWVI) in the UAE Higher Education System. Four case studies that included the author's personal autobiographical account as a SWVI and three different universities (the United Arab Emirates University (UAEU), Zayed University (ZU) and the University of Sharjah (UOS) were conducted in the Emirates. A total of fifty-six (56) participants took part in this study and its composition included the author, twenty-four (24) SWVI, six (6) officers from different organisations, eighteen (18) lecturers, and seven (7) university staff from the three universities.

The study uncovered six main thematic challenges affecting students with visual impairments in UAE higher institutions espoused as: educational challenges (accessing information, teaching practice, and classroom accommodation); everyday on-campus barriers (accessing the physical environment, access to university facilities, and the adequacy of the disability services); social challenges (cultural and attitudinal barriers among university students, lecturers and educators); personal challenges (the level of vision loss, personal health issues, and the level of independence); limitations in the supportive legislation; and lack of resources available for universities to accommodate the SWVI. Some faculty participants disclosed that they experienced some difficulties in teaching the SWVI. These difficulties were attributed to lack of

information about the SWVI, lack of experience in accommodating SWVI, lack of required training in teaching SWVI, and lack of support offered by their university (Alhammadi, 2014).

Based on several earthed challenges, Alhammadi's (2014) study recommended that SWVI should be provided with appropriate examination modifications and accommodations such as extra time depending in the individual needs of each student, a private room, accessible examination materials, modification of questions among others, training for the lecturers who teach specific subjects such as English, Mathematics, Computer, Statistics, Business, Geography and Science, provide SWVI with assistive devices to enable them participate fully in class activities; engagement of sighted students in the universities in order to be supporting their colleagues in academic activities among others.

In Cyprus, Hadjikakou & Hartas (2008) investigated issues related to the identification and support provisions of students with disabilities in private higher education institutions. The results suggested that provisions for students with disabilities was restricted to examinations, assignment concessions and building adaptations with other forms of differentiation such as teaching modification and removing obstacles to learning being neglected. Teaching modification and the adaptation of the curriculum and learning goals did not take place in any of the colleges that were investigated. Institutional managers indicated that any form of differentiation or departure from the official requirements of the academic programs would have jeopardised students' chances of getting a certified degree. While several western research related to the current study predominantly focused on the wider experiences of students with disabilities and or those with visual impairments in H.E, they did not examine specific disability categories in depth. In light of the above, the current study seeks to only explore the academic experiences of blind students in two colleges of education in Zambia.

From the African research perspective, Abera, Mohajer, Negassa, & Mulatie (2020) conducted a study to ascertain the extent of engagement, inclusion and influence of engagement on inclusion of students with disabilities (SWDs) in Higher Education Institutions (HEIs). The study employed the concurrent convergent parallel mixed research design and involved 255 students with disabilities who included the blind, deaf and the physically challenged students from five HEIs (Addis Ababa, Haramaya, Hawassa, Bahir Dar and Gondar universities) in Ethiopia. The

study established that there were substantial levels of engagements related to their cognitive wellbeing but not on their sense of belonging, emotional (relationship with faculty and peers) or behavioural engagements. While Abera et al (2020) employed concurrent convergent parallel mixed research method, the current study used qualitative method in its inquiry.

Using phenomenological design, Kifle (2017) explored challenge-related lived experiences of female students with visual impairment at Addis Ababa University. The seven (7) study participants revealed that their higher education pursuit was hindered by a number of both academic and social factors that included failure by the students to fit in a larger complex university environment, sexual abuse instigated by male sighted guides, inefficient exam administration and inability to operate the available assistive technology. The study further revealed that some of the course instructors were reluctant to accept the capability of blind students, thus refused to adapt course contents to suit their needs. A study conducted by Abera & Negassa (2019) concluded that most blind students were found not to be self-advocates for their inclusion in Ethiopian Higher Institutions. While Kifle's (2017) phenomenological study only focused on exploring the lived experiences of female students with visual impairments at a higher learning institution, the current study explored the academic experiences of both male and female blind students at two colleges of education in Zambia.

A similar qualitative case study conducted by Zelelew (2018) to examine existing challenges and prospects towards the inclusion of students with visual impairments at Addis Ababa University in Ethiopia also established several glaring concerns that included absence of clear policy to guide inclusion, limited access to university education since blind learners were restricted to pursue science and technology related programmes, inaccessibility of general and academic information in alternative formats, the absence of well-organised support systems, inadequate ICTs and absence of curricular adaptations among others. The above findings were also reported in a study conducted by Temesgen (2018) focusing on challenges experienced by students with visual disabilities in Ethiopian Learning Institutions.

Yohannes (2015) equally sought to investigate as a case study, the learning experiences of students with visual impairments (SVI) in two higher institutions of learning in Ethiopia. A qualitative methodology approach in which individual interviews and observations as data

collection methods were utilised. Participants included students with visual impairments, their instructors, department heads, college deans and disability centre coordinators. The study reported that the universities for the most part, seem to have left the responsibility of settling SVI to other students. The study established that the most serious problem upon arrival and in the early days on the campus, as stated by some of the SVI themselves was the failure of the university to arrange a support system to help them in getting used to the campus environment. Yohannes concluded that it is obvious that anybody who comes to a new environment requires orientation and support to find his or her way around the institution's premises. This becomes more crucial when it comes to SVI who cannot read information posted to guide students. Since the above findings were derived from university settings, there was need to undertake a similar inquiry in a college setting to ascertain the academic experiences of blind students, hence this study.

Similarly, Belay's & Yihun's (2020) study inquiry sought to establish the challenges and opportunities of visually impaired students in inclusive education in Bedlu; Ethiopia. The study outcomes indicated that inadequate budget, assessment challenges, lack of necessary materials, absence of qualified professionals, shortage of professional growth, and development trainings were some of the major factors that hindered the full implementation of inclusive education. The study further established that sighted students were assigned to read for the blind during midterm assessments and the final exams. This development proved to be a difficult undertaking for the sighted peers who were also expected to prepare for the same assessments and examinations. Furthermore, it was established that while the sighted students took examinations in the classrooms, students with visual impairment were compelled to take their examinations in corridors; an environment that was characterised by noises as other learners walked through those corridors. It was further established that the school administration stance was that blind learners could not be examined together with the sighted students in a room because when the readers read the examinations to them, the sighted ones would be disturbed.

From Ghana, Nana, Rockson & Teye (2017) conducted a phenomenological study to explore experiences of students with visual impairments at the University Education of Winneba. The study specifically sought to explore patterns of social interactions that existed between students with visual impairments and their sighted peers, the nature of academic interactions between

students with visual impairments and their lecturers, the level of support students with visual impairments receive from their resource centre and how students with visual impairments access library facilities. Thirty (30) students with visual impairments were purposively sampled for the study. Results showed that the students with visual impairments were accepted and supported by their sighted peers in the university. However, the students with visual impairments indicated that they had fewer friends due to lack of trust in their sighted colleagues. Although the students were fairly satisfied with the nature of assessment items and opportunity for alternative medium of assessment in the university, they believed that most lecturers did not have adequate knowledge on how to modify instruction in teaching students with visual impairments. Other studies conducted by Asamoah et al (2018) and Sikanku (2018) in Ghana established the need for in-service training in braille reading and writing to enable teachers ably handle learners with visual impairment in inclusive classroom setup. However, unlike exploring a broader category of students with visual impairments, the current study mainly sought to establish the academic experiences of blind students.

Using a cross sectional design, Odana (2018) conducted a case study to explore the mobility experiences of students with visual impairments at Makerere University. The objectives of the study were: to assess how the students with visual impairments access class rooms, places of residence and walk ways at Makerere university, to find out how they manoeuvre to reach their planned destination, to examine the different challenges the students with visual impairment encounter when moving and to find out the coping mechanisms adopted by the students with visual impairment in overcoming the constraints they face when moving around the university. This study employed a cross sectional design to generate largely descriptive information from the seven purposively selected participants (6 blind students and 1 partially sighted student).

The findings from Odana's (2018) study reviewed that among other thematic areas, unfriendly campus environment, low-self-esteem by the students with visual impairments and poor orientation and mobility skills negatively affected their academic life at Makerere University. The environmental challenges include existence of trenches along walk ways, vehicles parking along campus roads, lack of clearly marked and traceable walkways, absence of clear land marks and absence of tactile symbols or signs. Individual mobility challenges led to self-stigma and low self-esteem among students with visual impairment. Some participants narrated that they

sometimes feared to call for sighted guide assistance; thus, failed to fulfil many academic demands. It was however noted that adapting to the mobility challenges required having personal vigilance and resilience. Similar findings were also established by Mihegwa, Mutsotso & Masibo (2020) whose study focused on challenges encountered by learners with Visual Impairment in integrated classrooms of Bungoma County in Kenya.

To address the mobility challenges encountered by students with visual impairments in Makerere University, Odama's (2018) study recommended that: special campus orientation programmes should be undertaken to familiarise the students with visual impairments to the all the key places of the university such as lecture halls and playgrounds before the commencement of the full academic calendar, the university should come up with a stringent policy that should compel both students and academic staff with vehicles to park in designated places unlike parking their cars along the campus roads, an orientation and mobility training programme should be availed as a part-time course for the university in order to help students with minimal O&M skills. While Odama's (2018) study explored the mobility experiences of students with visual impairments at Makerere University, the current study investigated academic experiences of blind students in two colleges of education in Zambia.

Similarly, Otyola, Kibanga & Mugaga (2017) employed a cross sectional survey design to ascertain the challenges faced by visually impaired students at Makerere and Kyambogo Universities. The study involved 200 participants (50 students with visual impairments, 50 lecturers, 50 university administrators and 50 sighted students). The students with visual impairments were selected using snowball sampling while the university lecturers, administrators and sighted students were selected using random sampling. The study findings were presented according to the participant's categorical perspective, from the students with visual impairment view, sighted student's viewpoint and administrator's perspective. Students with visual impairments revealed that they experienced challenges that included: lack of equipment, isolation, lack of text books, mobility problems, negative attitudes; difficulties paying tuition fees and deprived attention in the lecture rooms among others.

From the social perspective, the study established that students with visual impairments were perceived by their fellow students and lecturers as non-achievers and were hence isolated.

Similar findings extrapolated by the sighted students related to: difficulties in keeping up with the pace when writing dictated lecture notes, lack of materials and books in alternative formats, problems with independent mobility travel, inadequate time to complete examinations and isolation among others. Challenges espoused by lecturers and administrators in their pursuit of service delivery included lack of knowledge in reading braille, inappropriate usage of pedagogical methods and assessments, lack of assistive devices and difficulties in sourcing for braille transcribers among others. The study also reviewed that all students with visual impairment made use of assistive technology and relied heavily on the support and services of the braille office for additional academic information. The need for in- training courses in special education to equip teachers with the necessary knowledge and skills was re-echoed in studies conducted by Mwangi & Makuna (2019) and Brian et al (2019).

While the two researches for Otyola, Kibanga & Mugaga (2017) and Odana (2018) unveiled general pertinent issues affecting students with visual impairments in the two higher institutions, their complex inclusion of other participants (lecturers, administrators, partially sighted and sighted students) in establishing experiences of students with visual impairments in higher education requires more scrutiny. This is so because experiences or challenges encountered by students with visual impairments at any given institution are better understood by the affected persons themselves; hence, the need to narrow such inquiries to specific disability categories which the current study did.

Furthermore, Otanga's (2020) study sought to explore the success of blind students at Kenyatta University in Kenya. A biographical approach was utilised to document accounts of five female and five male Kenyatta University blind students at both undergraduate and graduate levels. Data was analysed with help of Atlas. The study established that forging of social relationships, self-advocacy, pursuing a degree of independence, social agency and assertiveness were the key strategies that enhanced transition to university for learners with blindness. Among other findings, the study established that their sighted colleagues had initially exhibited resentment based on the preconceived belief that making friends with blind students would turn them (sighted students) into perpetual assistants hence infringing on their time; thus, most sighted students resorted to keeping themselves off students with blindness. Despite all that, the study established that students with blindness countered those negative expectations by showing their

non-disabled peers that they had a degree of independence. Considering that the above findings were generated from a university setting, there was need to further interrogate the study revelations from a college setting, hence this study.

Once in higher learning institutions, education access may be constricted through the ways in which disabled students are able to access the teaching and learning methodologies. A descriptive qualitative study aimed at evaluating disability inclusion in higher education in Uganda by Emong & Eron (2016) established that there were discrimination and exclusion tendencies in matters related to admissions, access to lectures, assessment and examinations, access to library services, halls of residence and other disability support services conducted. Besides the failure by lecturers to provide appropriate accommodation practices during lessons, the study finding reviewed that the assessments and examinations given to students with visual impairments did not conform to the standard practice of differentiation. These findings were in tandem with Nasifolo's (2011) descriptive survey study that focused on academic impediments students with visual impairments encounter in the colleges of University of Rwanda.

Mosia & Phasha (2020) conducted a study to explore student experience of persons with disabilities studying at the National University of Lesotho. A combination of convenience and snowballing sampling techniques were used to recruit 15 staff members and 11 students enrolled in various programmes. A combination of individual semi-structured interviews and a focus group discussion were used to generate data. Findings revealed that various dimensions of student experiences were negatively affected. Students with disabilities encountered mobility challenges due to an inaccessible built environment, lecture timetables were not adapted to suit the needs of students with mobility challenges, blind students were not informed of potholes and other hazards that were left uncovered and the students' request for their hostel to be adapted was not addressed.

Additionally, students with disabilities were not readily supported by their lecturers while some were subjected to bullying which went on unpunished and the victims received no counselling for the resultant trauma. The study established that these factors affected the students' welfare and their academic participation. However, the fact that Mosia's & Phasha's (2020) exploratory case study had more members of staff than the students with disabilities, the findings needed

more interrogation considering that experiences in higher education are better explained by the concerned students themselves than members of staff. The current study therefore sought to address such knowledge gaps.

From the Zimbabwean viewpoint, Hlatywayo & Mapolisa (2020) explored the extent to which inclusive education was implemented in teachers' colleges in Zimbabwe. This study employed an interpretivist paradigm and multiple case studies to get views from eight (8) students with disabilities (SWDs) as key informants and seventeen (17) participants who included college administrators, lecturers, student without disabilities (SWDs) from three teacher training colleges in Zimbabwe. The major findings established that: although students with disabilities were enrolled in teacher's colleges, its curriculum was rigid and did not cater for individual needs; most lecturers used traditional instructional methods and same assessment procedures which were not responsive to the needs of students with disabilities, there were no assistive devices in the colleges and students brought their own devices and resources, and worked with what they had; there were no books in the library that could be used by students with low vision, that is to say, braille books and other support facilities. Although some academic staff also assumed the role of counsellors, there were no designated guidance and counselling service centres in colleges of education, thus, counsellors used their offices as counselling rooms.

Furthermore, Hlatywayo's & Mapolisa's (2020) study established that inclusive education practices in teachers' colleges in Zimbabwe were marred with non-uniformity as evidenced by variations in the implementation process due to the absence of inclusive education policy. Despite strides by college leaders to accommodate students with disabilities in terms of amenities and tuition, the physical and social environment were not accessible by all students. Although measures of providing examination papers in braille, large print and time allowances and separate examination venues were made by University of Zimbabwe and Department of Teacher Education as a necessary step towards inclusivity in higher education, lack of key educational resources in teachers' training colleges of Zimbabwe made inclusion to be just a mere documentary and social exercise. While Hlatywayo's & Mapolisa's (2020) study focused on exploring the extent to which inclusive education was implemented in teachers' colleges in Zimbabwe, the current study explored the academic experiences of blind students in two colleges of education in Zambia.

Mandicheta, Mabvurira & Ndebele (2019) also conducted a study to ascertain challenges faced by students with disabilities in institutions of higher education in Zimbabwe. This research adopted a qualitative approach with a sample of 32 disabled persons drawn from four provinces in Zimbabwe and subsequently collected data through unstructured in-depth interviews. Among other findings, the study established that mobility within the institutions of learning was one of the biggest challenges faced by students with disabilities. The infrastructure at some institutions of higher learning was built without persons with disabilities in mind because the buildings did not have braille guides and rails which allow a visual impaired person to move independently. The results of the study indicated that it was difficult for students with disabilities to walk alone within the university campuses because some of the roads in the campuses and the community were full of pot holes and the changes that take place due to digging of trenches and other construction activities. This study needs more scrutiny as the nature of the disabilities of the participants involved in the study was not spelt out.

From a Tanzanian setting, Kisanga (2017) sought to explore educational barriers of students with Sensory Impairment (SI) and their coping strategies in higher education institutions. A case study design was used to collect data from 27 students with SI, selected purposively from two HEIs in Tanzania. Among other findings, the academic barriers that were established included examinations and information inaccessibility and barriers in the curriculum. Environmental inaccessibility data on tests and examinations equally revealed five subthemes which are: barriers related to examination format and administration procedures, lack of feedback from teachers, delays in examination time, incompetence of transcribers during marking and inappropriate grading systems. All the students with SI who did their examination at the special education unit reported lecturers' delays in remitting the examinations to the unit. Participants further pointed out that they usually sat for their examination later than the allocated time in the timetable because most of their lecturers either failed to send their examinations to the special unit in time or forgot to do so altogether. While Kisanga's (2017) study focused on educational barriers and coping strategies of students with SI; both visual and hearing impairments, the current study sought to only explore academic experiences of blind students in two colleges of education.

Simui et al., (2018) conducted a literature disclosure of 33 research studies (undertaken within the period of 10 years) from 16 countries doted across six habitable continents to establish enablers and disablers of academic success of students with visual impairment. Emerging from the study were a host of disablers that included: negative attitudes, absence of inclusive education policy, inaccessible learning environment and learning materials, exclusive pedagogy, and limited orientation and mobility. Exclusive practices included, inflexible time limits for assessment, lack of adaptive technologies, technical difficulties using e-learning and connecting to websites and poor use of e-learning by lecturers among others. In addition, lack of inclusive policy and legal framework were pointed out as other disablers to inclusion. Amidst the disabling environment, a positive attitude, self-advocacy and innovativeness stood out as key enablers to academic success.

A descriptive phenomenological study conducted by Muzata et al., (2019) sought to understand the lived academic experiences of students with vision difficulties at the University of Zambia. This study mainly sought to establish the perceptions of eight (8) students with visual impairments. The study looked at how they perceived their inclusion in the Faculty of Education at the University of Zambia and whether lecturers employed any inclusive strategies in their teaching to accommodate them. The study established that students with visual impairments encountered both positive and negative experiences. Among other findings, the study established that most students with visual impairments did not experience discrimination from their fellow students and were generally satisfied with their inclusion in the faculty of education. However, some of their negative experiences were as a result university lecturers' lack of skills in considering their learning needs in an inclusive classroom. It was further established that although some students with visual impairments felt more included academically, they still experienced isolation in out of class activities which some students described as a form of discrimination. Although the findings of Muzata et al., (2019) unearthed key findings affecting students with visual impairments at the University of Zambia, the current study sought to explore academic experiences of blind students with limited independent O&M skills in two colleges of education in Zambia.

Similar to the study by Muzata et al., (2019) is that of Simui's (2018) hermeneutic phenomenological inquiry on the lived experiences of Students with Visual Impairments (SwVI)

at the University in Zambia. In particular, this study sought to establish the lived experiences students with visual impairments face at the university, enablers that empower them to achieve academic success, disablers encountered at the higher learning institution and subsequently, develop a framework for interpreting lived experiences of SwVI at the university. The findings revealed that academic success of SwVI at Sim University was influenced by five critical factors that included: positive attitude, family support, peer support, institutional support and beneficial partnerships. The enablers were crafted from within the lived experiences of SwVI which were considered as having aided them to succeed in their academic progression. The positive attitude showed itself in various ways such as resilience, determination, innovation and self-motivation. Even where the support from the sighted was not available, a sheer determination, combined with resilience and innovation in the face of oppression was enough for SwVI to progress through the academic ladder (Simui, 2018).

On the other hand, Simui's (2018) study revealed a myriad of disabling factors that included: negative attitudes, absence of an inclusive education policy, inaccessible learning environment, inaccessible learning materials, exclusive assessment system, exclusive pedagogy, absence of financial support, exclusive sanitary facilities, limited orientation and mobility, and absence of landmarks. Other identified disablers were limited institutional support staff, inadequate assistive learning devices, indiscipline and limited collaborating partners. In Zambia, similar findings of exclusive pedagogy and inaccessible learning environments were equally espoused by Penda, Ndhlovu & Kasonde-Ng'andu (2015), Silondwa & Muzata (2019), Banda Chalwe et al., (2013) and Chilwa (2011).

Kabwe, Mandyata & Chakulimba (2020) conducted a study to ascertain the social experiences of pupils with low vision in selected regular secondary schools of Lusaka and Mbala Districts in Zambia. This study utilised a case study research design and a total of 52 participants (16 pupils with low vision, 16 sighted pupils, 14 teachers, 2 head teachers and 4 heads of department) were involved in the study. It was established that pupils with low vision were not easily socially accepted either in rural or urban schools. The study further revealed that, pupils with low vision were often discriminated, teased and bullied in regular class and school settings, hence, finding it difficult to participate effectively in social activities. In addition, teachers and sighted learners were of the view that pupils with low vision were pretenders, while head teachers and heads of

department, disagreed with this view. A similar study that focused on both social and academic experiences of learners with low vision in selected inclusive secondary schools of Lusaka and Mbala Districts was conducted by (Kabwe, 2017).

Although the above revealed studies unearthed several impediments experienced by blind students and or students with visual impairments in higher institutions of learning, it is cardinal to firstly state that most of those studies explored the hurdles experienced by students with visual impairments in general. Secondly, it is equally important to state that despite highlighting several challenges faced by students with visual impairments, their academic experiences are not a fixed, rigid or uniform set of disabling practices bounded within a single time and space, but rather a conglomeration of individual narratives within a spectrum of ableist and normative constructions perpetuated by individual learning institutions and their support provisions, thus, the need to continuously explore them to ensure that the needs of differently abled learners are met. Furthermore, since there are very few studies in Zambia that were undertaken to specifically explore the academic experiences of blind students with limited independent orientation and mobility skills in colleges of education, the current study was undertaken to fill that knowledge gap.

2.3 Available support services for blind students in colleges of education

Hill (1991) observed that students with disabilities require a variety of support services and program modifications to be able to successfully pursue post-secondary education. The services generally provided by each institution for students with disabilities need to be diverse and multifaceted (Sergent et al., 1987) as the students themselves present a wide range of disabling conditions. Systems of provision to support learners in inclusive settings vary a great deal and no one model of support is likely to work in all contexts and meet all needs (WHO, 2011). Nevertheless, there are some overarching principles that need to be shared by all countries; that support should be provided in the community and not in segregated settings (UNCRPD, 2006) and that support, and services should be person-centred (WHO, 2011) so that individuals with disabilities are more involved in the process of decision-making concerning the support they need (UNCRPD, 2006). A supportive system which promotes the development of inclusive education has to be aligned with the principle of inclusion that moves away from a debate on

how learners fit into schools or services towards designing approaches and services around every learner (Royal National Institute for Deaf People – RNID, 2007).

Tungaraza (2012) asserts that, equitable access to education involves equal physical access and intellectual access to all children regardless of their differences. Similarly, Gheed's (2018) study explored the accessibility needs of computer laboratories, libraries and websites for students with disabilities in selected Jordanian Universities and Colleges. A total of 31 subjects comprising computer laboratory staff, library personnel and web developers participated in the study from these institutions. Questionnaires and expert review methods were used to test accessibility of websites in the investigated universities and colleges. Results revealed that the status of accessibility did not meet the expectations of equal access nor the needs of students with disabilities. The study established that shortages of Assistive Technology (ATs) in computer labs and libraries, lack of awareness and insufficient training for the universities' staff and web developers related to accessibility issues, and all the evaluated universities web sites were inaccessible. However, Gheed's (2018) study did not solicit any data from students with disabilities to authenticate their experiences regarding support provisions in higher institutions of learning. The current study seeks to fulfil that gap.

A study exploration of blind and visually impaired (VI) students' interpretations of their experiences in higher education (HE) in the United Kingdom was also undertaken by Croft (2018). Using social constructionism, nine (9) students with visual impairments were involved in this study. Nearly all the participants who discussed the accessible technology and equipment that was provided after the Disabled Student Allowance (DSA) assessment expressed a clear concern in the manner their equipment was procured. Much of the equipment made available was either equipment unnecessary, problematic or items they were unfamiliar with. Even for the participants that felt they had a little input into the choice of items, they felt frustrated that their views were not taken into consideration. This was despite voicing out their views and making suggestions. The study established that the support and assistive aids made available to students with visual impairments were typically decided on by assessors rather than by the users; leading to a tension where expert knowledge usurps the immerse experience of the users. Croft (2018) concluded that when visual impairment and disability are constructed as a problem within higher

learning institutions, there is no true consultation or communication between students as users of the equipment and faculty staff.

From the United Kingdom perspective, Frank, McLinden & Douglas (2019) conducted a study to explore the learning experiences of students with visual impairments who were pursuing physiotherapy programme. Despite disability disclosure and provisions of reasonable adjustments, there were clear barriers to learning for all of the participants. Study findings revealed that the provision of support was not the issue with most of the participants; they did on the whole receive support through reasonable adjustments to access the curriculum. However, how and when the support was provided created the barriers to learning. Support was not always anticipatory and was reactive, which led to inconsistency in support-provision practices. Lack of insight into students' needs affected the timely and consistent provision of accessible of individualised support for students with disabilities. The participants had to chase up and request additional support, even though they had all disclosed and identified their support needs. Although several other studies such as Magnus & Tossebro (2014) and Riddell & Weedon (2014) revealed that participants non-disclosure of their disability may have created barriers for gaining support, the study by Frank et al., (2019) established that even the students who disclosed their disabilities upon entry in learning institutions did not receive appropriate individualised supports.

Correa-Torres, Conroy, Rundle-Kahn & Brown-Ogilvie's (2018) qualitative study focused on the experiences of students with visual impairments receiving support services through Disabilities Support Service (DSS) Offices in Higher Education Institutions in Northern Colorado. The purpose of this study was to determine what type of services students with visual impairment received from DSS at institutions of higher education and how students with visual impairments perceived those services. A total of ten students with visual impairment (2 blind, 7 with low vision and 1 light perception) who were understood to have been receiving services from the DSS office at their learning institutions participated in this study. The study revealed themes that included: self-advocacy and problem-solving, orientation and mobility (O&M), technology and personal management skills. The most prominent theme was the need for self-advocacy due to the way DSS office's function. Participants reported that braille was almost non-existent in higher education unless they advocated hard for it in a socially acceptable manner.

The study findings of Correa-Torres et al., (2018) further established that Disability Support Service offices in the sampled colleges did not provide Orientation and Mobility (O&M) for students with visual impairment. Participants reported that the only O&M service they received from DSS was when someone walked them through their schedule at the beginning of the semester. Participants also reported that DSS staff were efficient in procuring educational equipment, including technology. However, participants were not trained on how to use the technology and DSS office indicated that it was not their responsibility to train them but rather that of Vocational Rehabilitation services. DSS was quick to repair or replace the necessary items in almost all instances. Another issue reported by participants was that just because the DSS office had technology, it didn't necessarily mean that anyone working there knew how to use it.

One other interesting study finding of Correa-Torres et al., (2018) was that smaller colleges were better able to help resolve problems faced by students with visual impairments than larger institutions of higher education. The study further established that due to numerous challenges encountered by students, most of the participants chose not to seek assistance from DSS offices at all. Becker & Palladino (2016) observed that when students are reliant on supports to enable them to complete their studies, and this is not in place at the most appropriate time, they feel isolated and lost and experience other negative emotions. While studies by Croft (2018), Frank et al (2019) and Correa-Torres et al., (2018) revealed pertinent issues regarding operations of Disability Support Service (DSA) and / or Disabilities Support Service (DSS) Offices in United Kingdom, such designated entities do not exist in colleges of education in Zambia, thus, the current study sought to establish the available support services provided to blind students in those institutions.

Furthermore, a qualitative study that specifically investigated blind student's experiences regarding their service provisions and support in schools was conducted by (Zheng, 2014). This study utilised an interpretative approach to explore blind student's experiences regarding service provisions and support in learning institutions. Although certain service provisions were not fully availed to blind students, the study established that informants received certain types of provisions and support from the government and schools that included guide dogs, long canes, computers, audio programmes, training on computer skills and some one-to-one teaching

sections. The study also established that challenges of academic practices tended to come from three different levels: at the individual level, at the teacher's level and at decision making level. At individual level, some informants experienced lack of training and support on orientation and mobility. At the teacher's level, there was lack of teacher training and the teachers had little knowledge and skills to support blind students in schools. At the decision-making level, the informants experienced some mismatches between what they actually needed and the provisions and support that were being provided. While Zheng's (2014) study mainly focused on establishing support provisions for blind learners in Swedish schools, the current study sought to establish available support provisions for blind students in two colleges of education in Zambia.

In India, Khowaja & Fatima (2019) conducted a study to ascertain the knowledge resources provided by fifteen (15) central university libraries to individuals with visual impairments. The found that the services provided by central universities to persons with visual impairments available knowledge resources for the visually impaired users assistive technologies acquired by the universities for assisting visually impaired users; Information services provided by the universities and difficulties encountered by the universities in providing services to visually impaired users. Furthermore, the investigator used bilateral approach for data collection which includes questionnaires and telephonic interview of librarian and library professionals heading braille section of the libraries.

Khowaja's & Fatima's (2019) study findings revealed that most sampled universities were not in a position of providing even basic resources to their visually impaired users. The study revealed that only one university, AMU possessed all the necessary resources that included braille books, audio books; talking-books, talking newspaper, braille magazines, assistive equipment and software and, information services for individuals with visual impairments. The study concluded that knowledge resources in the universities of India for the visually impaired were not up to the mark, thus made it difficult for them to pursue higher education studies. Another similar study by Pillai (2011) equally reported that most persons with visual impairments in India depended on special library services provided by Non-Governmental Organisations since most public libraries lacked appropriate materials, a situation largely attributed to lack of implementation of the Persons with Disability Act. However, unlike utilising a bilateral approach, questionnaires and

telephonic interviews for data collection, the current study mainly used one-to-one interviews to collect data.

In Singapore, Wong (2014) conducted a study to explore online resources that reflected the state of support in higher education for students with visual impairments. The institutions involved were National University of Singapore (NUS), Nanyang Technological University (NTU), Singapore Management University (SMU), Singapore University of Technology and Design (SUTD), Singapore Institute of Technology (SIT), and Sim University. The findings showed that in six institutions of higher education, there was evidence of support being provided for students with disabilities, although the type and extent of support was variable, and messages conveyed to students were mixed. Provisions tend to be generic in nature and did not necessarily address needs related to specific disabilities. Wong's (2014) study findings need a comparative inquiry from the Zambian context.

In the Caribbean's, Grant (2011) conducted a qualitative study to ascertain special education accommodation and the perceptions of students with visual impairments pursuing undergraduate studies at a university in Eastern Jamaica. The study mainly explored accommodations that were available at the institution by using observation sheets, semi-structured interviews and conversations with seven purposively selected students. The study findings culminated into five distinct themes that included: available accommodations, access to accommodations, staff's response to student's needs, benefits of using accommodations and participants' suggestions to improve accommodations. The findings revealed that most of the students with visual impairments, appreciated the available accommodations but had mixed perceptions about their adequacy and the sensitivity of the staff members. Considering that accommodations of students with visual impairments are broad, the current study sought to only investigate the support services of blind students in two colleges of education in Zambia.

In east Africa, Laureate et al., (2014) conducted a mixed method research design to assess the situation of students with disabilities in the Ethiopian Universities. A total of eleven (11) government universities were purposefully identified in order to make them representatives of Ethiopian Universities. Among the three disability categories that participated in the study included: 134 students with visual impairment, 38 students with hearing impairment and 215

students with physical disability. Generally, the study established that 61.2% of students with disabilities indicated that they had disability specific service provisions while 38.2% had not. The study further established that majority students with disabilities, 66.1%, did not receive differential treatments as they deserve. Among the three disability categories involved in this study, 81% of students with visual impairment enjoyed proper service provisions followed by students with hearing impairment with 75% coverage.

The study by Laureate et al., (2014) revealed that students with motor disability had very minimal support services provided to them. Only 45.5% percent of students with motor disorders reported to have got service provisions whereas 54.5% did not have. The service provisions which were available for students with visual impairment were braille (77%), slates and styluses (68.9%), tape recorders (67.3%), battery for tape recorders (55.7%), computers with jaws (53.4%), internet services (54.2%), voluntary reading services (62.4%), voluntary recording services (53%) and provision of white canes (67.5%). However, several other important areas of services for the academic and later life of students with visual impairment were either very low or non-existent. Specific disability provisions across universities showed that some higher institutions such as had no service provisions provided to their students with disabilities according to the report of students themselves. The study by Laureate's et al (2014) employed a mixed method approach while the current study is purely qualitative.

Asres's (2018) study explored the administrative and social support services for students with disabilities in the selected higher education institutions of Amhara Regional State-Ethiopia. Seven public universities were sampled, and participants included were students with visual and hearing disabilities, teachers and students without disabilities, special needs directorates and library and students service coordinators. A Qualitative case study design was used for this study and four methods of data collection instruments were used to enhance its triangulation. The result showed that most students with disabilities obtained different administrative and social support services from the universities. Students with visual impairments attested that they were assigned 'normal' students as support providers to assist the readers and guides. However, the findings also showed that the actual support services provided for students with disabilities in the sampled universities were not in line with their higher education proclamations. Cairone (2019) conducted study on the benefit of using peer buddies in adaptive physical education and

espoused that the use of a buddy system yielded other incidental values that included increased safety and social interaction between the visually impaired student and sighted peers.

In spite of the several academic benefits yielded from institutional libraries, it appears that resource provisions for students with visual impairments in higher institutions of learning remain unresolved in most countries. In Nigeria, Aramide, Wasiu & Odunlade (2018) conducted a survey which sought to establish information needs and library services delivery for students with visual impairments in Oyo state of Nigeria. The study utilised an ex-post facto approach and its focus was on assessing the influence of library services, information needs, media formats availability and accessibility on library use among students with visual impairment in Oyo State, Nigeria. A total of 84 participants were involved in the study. The study established that educational and health information, and information on coping with their visual impairment as major information needs of the visually impaired students while circulation service, reference service and screen reading service on computers were found to be the only library support services provisions.

Furthermore, a few resources that included print books, magazine, braille books and braille-in-prints were found to be prominent among the few media-formats available for the students while the dearth of media-formats was found to be inadequate in meeting the information needs of students with visual impairment in Oyo State. Lack of ease of accessing the library resources and facilities, unsupportive library staff, poor policy on borrowing privileges, lack of path sounders to guide their movement around the library among others were major accessibility issues confronting the students in enjoying quality library support services. The study findings of Aramide et al (2018) correspond with Adetoro's (2012) survey which established that there were no braille materials, talking books, audio recordings or large print materials in the sampled non-governmental organisations, public, tertiary institutions and secondary schools' libraries of Nigeria. Adetoro's (2012) study concluded that information materials availability in the libraries could not ensure and sustain adequate utilisation levels, thus recommended for increased transcription, balanced collection of alternative formats and resource sharing.

While Aramide's, Wasiu's & Odunlade's (2018) survey focused on service provisions in libraries, Kelechi's (2018) study investigated the availability, accessibility and acceptance (3As)

of advanced digital technologies for Students with Special Needs in two higher educational institutions in Oyo State of Nigeria. A descriptive research method that employed multi stage sampling procedures was utilised to select the sample for the study. A total of one hundred and forty (140) participants with special needs (125 students with hearing impairments and 15 students with visual impairments) were involved in the study. The study utilised two structured questionnaires on availability, acceptance and accessibility of advanced digital technologies by higher education students with special needs. To guide the study, six research questions were raised and tested at 0.05 level of significance and data was analysed using the descriptive statistics of percentages, means and standard deviation.

The findings from Keleshi's (2018) study established that there was relatively moderate availability, accessibility and acceptance of digital technologies for students with visual impairments in the sampled higher institutions. However, despite moderate availability of digital technologies for students with visual impairments in their institutions, they still identified that several devices such as paperless braille equipment, smart-pens, mouth and chin sticks, alternative mouse, overlay keyboards, wrist rests and computers were not available. Based on those findings, the study recommended that the Nigerian government at all levels should brace up to their responsibilities and provide digital technologies for students with special needs particularly, those with hearing impairment in higher educational institutions. Similar study findings by Opara, Okoro & Iheme (2016), Komolafe (2015), Georgeeson, Mamas and Swain (2015) equally espoused that students with disabilities did not have the correct digital capital to succeed in their studies in Nigeria. Ekwelem's (2013) findings also suggested that students with visual impairments did not receive training to access online public access catalogues and other electronic materials in Nigeria. However, while Keleshi's (2018) study used quantitative method and multi stage sampling procedures, the current study used qualitative method and purposive sampling procedures to pick a sample presumed to possess valuable information pertaining to the study at hand.

Tataka's (2018) study explored the curriculum barriers to teaching orientation and mobility in selected schools for learners with visual impairments in West Pokot and Siaya Counties of Kenya. The study used descriptive survey research design and the target population consisted of teachers, the head teachers, deputy head teachers and learners. The study established that the

following were greatly lacking educational programmes set up for orientation and mobility training, syllabus, time, poor administrative support, resources and curriculum-based establishment, hence its exclusion in the official school timetable. The study further established that most of the learners were not using white canes as they moved about the school. For those who used the white canes, they held them in ways that indicated they had not been taught how to hold the canes. Most of the students used their self-taught cane techniques. Similar observations were espoused by Perla & O'Donnell (2004) who stated that most of the students had embraced the use of self-taught cane techniques due to the fact that they had not been taught how to use them. Other than that, the study revealed that lack of on-going orientation and mobility training not only prevented school staff from understanding and supporting the learners' independent travel but equally the use of the white canes that children had outgrown restricted their ability to safely use orientation and mobility skills.

Pudaruth, Gunputh & Singh (2017) conducted a mixed method design to establish whether students with disabilities were included, forgotten or excluded at the University of Mauritius. The study sample selection-criteria employed a combination of both convenience and purposive sampling techniques with no exclusion criteria. By utilising Google forms, the study formulated online self-administered questionnaires with both open-ended and closed questions and subsequently completed by 122 participants. It was established that the support provided by the University of Mauritius to students with disabilities in terms of library facilities, general accessibility, sports and recreational facilities and departmental facilities was consistently rated as poor to very poor. The study further revealed that the right legal framework for tertiary education was also missing. The study concluded with a plea that laws associated with better support and inclusion of students with disabilities into tertiary education are required, or if such laws existed, they should be made aware to students. There is need to interrogate the study by Pudaruth et al (2017) considering that the inquiry utilised online self-administered questionnaires.

In Zimbabwe, Phiri (2013) conducted a case study on disabled students' experiences in Higher Education Institution (HEI) with the focus on service provision and support for inclusion. Nine disabled participants were purposively selected and among several findings, it was established that students lacked support services such as learning equipment, braille paper and resource

materials. Students reported that the institution did not provide them with braille paper and expressed worry on what they were going to use during exams. It was further established that the university was adamant to procure braille paper and even to repair equipment such as Perkins braillers and recorders. Since most studies sought to establish the extent of support provisions in universities which relatively generates more financial resources than colleges, the current study sought to fulfil that knowledge gap by establishing available support services in two colleges of education in Zambia.

Muzata (2020) study sought to explore the utilization of computers to improve the quality of learning for students with visual impairments at the University of Zambia. ICTs can increase independence among students with disabilities. Among other hindrances, the study established that negative attitude by the university, lack of resources, lack of specialised personnel, lack of a disability unity were some of the impediments that hampered utilization of computers to improve the quality of learning for students with visual impairments at the University of Zambia. The study further revealed that training students with visual impairment in computers would not only help them learn effectively but also provide lifelong skills for the world of formal and informal employment. Considering this study was conducted at one university in Zambia, there is need to explore available support provisions for blind students in two colleges of education hence the current study.

Simui, Kasonde-ng'andu & Nyaruwata (2018) conducted a study to explore the role played by Information Communication Technologies (ICTs) as enablers to academic success of SwVI at Sim University. A hermeneutic phenomenology approach guided the research process, and seven participants voluntarily voiced their lived experiences. The major themes that emerged were negative attitudes, involvement in decision making process, innovativeness among SwVI through multiplicity of ICTs, academic progression and success. Furthermore, other themes that also emerged from the lived academic experiences of SwVI were a host of self-initiated ICTs in use that included: ordinary typewriters, voice recorders, scanners, jaws and computers meant to facilitate learning amidst a negatively charged learning environment. It was established that in circumstances where resources seemed to be limited, SwVI utilised unexploited resources that administrators, managers and teaching staff could tap into and devise innovative ways to combat exclusion. The study concluded that if ICTs were to serve as effective assistive learning devises,

ICTs developers and ICT policy makers should consider SwVI not just as ICTs consumers but equal innovators who must be consulted to transform the education landscape at tertiary level.

Whilst many higher learning institutions globally are mandated to provide supports for students with disabilities under various equalities legislation, there appears to be disparity in the ways in which these supports are offered, given that how these supports are delivered is dependent on each institution (HEFCE, 2017). Disparities in support provisions highlights the convoluted and contradictory ways in which disability is perceived and constructed within HEIs (HEFCE (2017). However, from the Zambian perspective, although the Educating Our Future policy document of 1996 stipulates that the Ministry of Education shall develop appropriate support technology systems for learners with disabilities, it appears that there are no clear mandatory guidelines on how the development of such support shall be undertaken thereby leaving each learning institutions to solely provide support for students with disabilities. With several variations of support provisions in higher learning institutions, the current study sought to establish the available support services for blind students in two colleges of education in Zambia.

2.4 Summary

Generally, the above chapter focused on reviewed literature related to the study on academic experiences of blind students in colleges and / or higher institutions of learning. Reviewed literature was directly linked to the three themes derived from the research objectives. Besides having been conducted in other countries, most of the studies that have been reviewed mainly focused on academic challenges faced by students with visual impairments in higher institutions, thus there was urgent need to specifically explore the academic difficulties experienced by blind students in two colleges of education in Zambia. The next chapter presents the methodology used in the study.

CHAPTER THREE: METHODOLOGY

3.0 Overview

This chapter discusses the methodology which was used in the study. It includes; research design, population, sample size; sampling procedures, research instruments used, data collection, analysis procedures, trustworthiness and ethical considerations.

3.1 Research Design

This study employed an interpretivist paradigm, qualitative approach and descriptive phenomenological design. A qualitative study methodology was utilised because of its appropriateness in addressing 'how and why questions' and it also enables the researcher to solicit detailed data from a small group of informants (Cohen, Manion & Morrison, 2007; Creswell, 2009). The choice of qualitative research methodology was further influenced by the researcher's focus, concern with process instead of outcome and the descriptive nature of the data (Silverman, 2009).

Phenomenology focuses on the essence of human experience and shows how complex meanings are built upon units of experience (William, 2021). Descriptive phenomenology "embraces the qualitative focus on the wholeness of experience and search for essences of experiences and viewing experience and behaviour as an integrated and inseparable relationship of subject and object" (Raffanti, 2008:59). Similarly, Smith, Flowers & Larkin (2009) stated that the focus of descriptive phenomenology is the correlation of the noema of experience (the 'what') and the noesis (the 'how it is experienced'). The researcher therefore used the descriptive phenomenological design to answer the research inquiry of the academic experiences of blind students with limited independent O&M skills. This method is helpful to fully understand blind student's lived experiences in educational settings such as colleges.

3.2 Population of the study

Oson & Onen (2009) refer to a target population as the total environment of interest to the one carrying out a research. The study population included all blind students with limited O&M skills, lecturers for special education and administrators of C1 and C2 Colleges of Education.

3.3 Sample Size

A sample size according to Padilla-Díaz (2015) is a subset or group of subjects from the larger population and whose characteristics can be generalised to the entire population. Polkinghorne (1989) and Creswell (1998) recommends that the sample size in a phenomenological study be about five to twenty-five while Morse (1994) suggested that it be at least six participants. Padilla-Díaz (2015) proposed that samples in phenomenological studies should range from 5 to 15 participants who should be able to articulate their lived experiences. The sample size for the study was made up of fourteen (14) participants; eight (8) blind students, four (4) college lectures for special education and two (2) college administrators. However, in order to uphold privacy for both the participants and their respective institutions of learning, the researcher masked their identities with the use of pseudonyms. In this regard, participant JA, JB, JC, and JD were drawn from C1 College of education and all of them were pursuing a Primary Teacher's Diploma (PTD) programme. On the other hand, participant JE, JF, JI and JJ were drawn from college 2 and all of them were pursuing a Junior Secondary Teacher's Diploma (JSTD) programme. Below are two tables showing background information and pseudonyms of the participants.

Table 1: Background Information of the Blind student Participants

Pseudonym	**Sex**	**Age**	**College code**	**Field of study**	**Year of study**	**Type of VI**	**Onset of the VI**
JA	M	24	C1	PTD	3rd year	Blind	At birth
JB	F	25	C1	PTD	3rd year	Blind with Albinism	At birth
JC	F	24	C1	PTD	2nd year	Blind	At birth
JD	M	20	C1	PTD	2nd year	Blind	At birth
JE	F	26	C2	JSTD	1st year	Blind	At 3 years of age
JF	F	24	C2	JSTD	3rd year	Blind	At birth
JI	M	26	C2	JSTD	3rd year	Blind	At 5 years of age
JJ	F	24	C2	JSTD	3rd year	Blind	At 16 years of age

Table 2: Background Information of Administrators and College Lecturers

Pseudonym	Sex	College code	Position	Years of experience as a lecturer / administrator
L1	F	C1	Lecturer	4
L2	M	C1	Lecturer	3
A1	M	C1	Administrator	10
L3	M	C2	Lecturer	10
L4	F	C2	Lecturer	8
A2	M	C2	Administrator	12

3.4 Sampling Techniques

A sampling technique is a plan that explains how the participants for the study are to be selected from the population (Kasonde-Ng'andu, 2013). This study employed purposive sampling procedure in order to select the fourteen (14) participants. The purposive sampling technique was suitable for this study because it enabled the researcher to select a sample presumed to be important source of information for the study. A purposive sampling technique is used to recruit participants because it is believed to lead to information rich participants (Patton, 2002). The eligibility criteria that the researcher considered when selecting the participants purposively are that they should be: (i) blind students pursuing a full-time college programme (ii) college lecturers for special education (iii) college administrators and; (iv) voluntary participants in the study.

3.5 Research Instruments

The researcher used semi-structured interview guides and observation checklist to collect data. The study deemed the use of semi-structured interviews most appropriate because they allowed participants to respond to questions liberally while allowing the study to gather participants' insight on the topic (Morgan, 2014). To guide the researcher to conduct the interviews with the participants, a set of interview questions were used to elicit data (see APPENDIX A, B, C).

Similarly, an observation checklist with a set of questions to establish observable trends was utilised (see APPENDIX D) in order to augment data for triangulation.

3.6 Data Collection Procedures

Langdridge (2007) stated that when using descriptive phenomenology as a methodology, data are often found by using the techniques of personal interviewing, analysing written accounts and / or by making observations of subjects in contexts or environments. Also, Creswell (2007) describes in-depth interviews as the primary means of collecting information for a phenomenological study, with a selection of individuals who have experienced the phenomenon. In order to adhere to the procedures of data collection, the researcher sought ethical clearance from the Ethical Committee of University of Zambia and an introductory letter was obtained from the Directorate of Research and graduate studies and subsequently taken to the administrators of the two colleges of education. Once permission was sought, appointments with participants who consented were made. Interviews with participants were conducted according to the agreed dates. A voice recorder was used to accurately get the responses from participants, and the observation guide was utilised to score the observable trends.

3.7 Data Analysis

Data analysis involves uncovering underlying structures, extracting important variables, detecting any anomalies and testing any underlying assumptions (Kombo & Tromp, 2006). In this study, the data gathered was organised in an analysable format in which transcripts were prepared from semi-structured interviews as well as field notes from observation trends. Analysis started with a scrutiny of individual cases and then a search for similar or different patterns across cases (Smith, 2011). To help discern thematic categories, data coding was used following the three distinctive prescribed steps: open, axial and selective coding. Neuman (2007) explains that open coding is a first trial to place data into different themes. The first stage of open coding enabled the researcher to examine the whole data and subsequently group it into categories and codes. Data obtained from each participant was firstly analysed independently in order to reflect the detailed, deep layers of their experiences.

Secondly, by using the procedures of axial coding, the researcher revised the thematic categorisation of data and constructed linkages between data. At this stage of coding, the researcher mainly focused on the connections between data and the emerging themes. Axial coding according to Neuman (2007) is the second stage of data analysis which helps the researcher to focus on the actual data and labels data for themes. O'Donoghue (2007) equally noted that the main aim of axial coding is to create linkages between categories and sub-categories. Lastly, selective coding was implemented so as to code the data systematically and put them under different categories. All in all, common responses from participants and observations were categorised and grouped, and then analysed thematically in line with research objectives.

3.8 Trustworthiness of the study

Shenton (2009) defined trustworthiness as assuring the truthfulness of the data collected in a qualitative study. Trustworthiness of any qualitative study is anchored on four facets that include: credibility, transferability, dependability and confirmability (Denscombe 2014; Lincoln & Guba 2007); Bryman 2016). Credibility refers to the extent to which qualitative data are accurate and appropriate and, dependability focuses on the degree to which appropriate procedures and reasonable decisions have been followed throughout the study to ensure consistency and its replicability (Denscombe, 2014). Transferability refers to the extent to which the findings can be transferable to other similar research settings. Confirmability on the other hand refers to the degree to which research findings are supported by data collected (Cohen, Manion, & Morrison, 2011).

3.8.1 Credibility

To enhance credibility of the collected data, the researcher employed four strategies: triangulation, participants' validation, transcription and peer debriefing that is, having data interpretation beyond that of the researcher (Cohen et al. 2011; Creswell 2014; Bryman 2016). A pilot study was carried out before the actual research in order to authenticate issues of reliability and validity of the study instruments. Triangulation allowed the researcher to view events from multiple perspectives, thus during semi-structured interviews, responses were recorded using a

digital sound recorder and also, field notes were equally taken to supplement information from the audio record. This approach helped the researcher not to have incomplete as well as inaccurate data which could affect the validity of data from semi-structured interviews. Furthermore, persistent observation was also undertaken to ensure that the researcher only identified what was relevant to study.

Peer debriefing is a process in which the investigator discusses the investigation with peers (Shenton, 2009). This practice helps the researchers to search for biases, scrutinise their hypotheses and justification for their research, discuss the direction of their research and methodological design, and to explore their feelings and emotions towards their research so that they can assess how their experience might impact upon their interpretation of the data (Lincoln & Guba, 2000). In adhering to this practice, the researcher worked closely with the supervisor and other academicians to ensure that the study is credible

3.8.2 Dependability and Conformability

Dependability involves keeping "an audit trail" of all important phases of research process (Bryman 2016). According to Shenton (2009), a researcher can establish dependability if the work were repeated, in the same context, with the same methods and with the same participants, similar results would be obtained. Shenton (2009) describes confirmability as 'the qualitative investigator's comparable concern to objectivity. He further explains that steps must be taken to help ensure as far as possible that the findings of the research are the result of the ideas and experiences of the participants rather than the characteristics and preferences of the researcher.

Yin (2014) noted that efforts should be made by researchers to put aside their repertoires of knowledge, beliefs, values and experiences in order to accurately describe participants' life experiences. The participant's viewpoints provided validation for this study through audit trailing and the researcher documented all the necessary procedures and decisions undertaken in different stages. Additionally, throughout the data collection process, the researcher adhered to bracketing guidelines (epoché) in order to avoid making personal judgmental influences. Bracketing is a methodological device of phenomenological inquiry that requires deliberate putting aside one's own belief about the phenomenon under investigation or what one already knows about the subject prior to and throughout the phenomenological investigation (Carpenter, 2007).

3.8.3 Transferability

Transferability is the extent to which the findings from one study can be applied to other similar settings (Shenton, 2009). Lincoln & Guba (2007) argued that it is the responsibility of the investigator to ensure that sufficient contextual information about the fieldwork sites is provided to enable the reader to make such a transfer. Although the findings of this study cannot be generalised, the researcher enhanced transferability of this inquiry to other contexts by generating data from two colleges of education in Zambia with similar educational settings. One of the benefits of undertaking a qualitative study in two educational settings is to increase the likelihood of generalising findings to similar situations, as well as increasing credibility and dependability of the study (Cohen et al., 2011)

Shenton (2009) proposed that for precise transferability of study findings, information relating to the following six issues should be provided in the research: the number of organisations taking part in the study and where they are based, any restrictions in the type of people who contributed data, the number of participants involved in the fieldwork, the data collection methods that were employed, the number and length of the data collection sessions and, the time period over which the data were collected. The current study availed all the above information.

3.9 Ethical Considerations

Barret (2007) describes ethics as norms of conduct that distinguish between acceptable and unacceptable behaviour. Royse (2011:57-61) outlined four guidelines for consideration vis-à-vis ethical matters in research. These are: participation in research must be voluntary, potential research participants should be given sufficient information about the study to determine any possible risks or discomfort as well as any possible benefits that may result from participating in the study, participants should come to no harm as a result of participating in the study, sensitive information shall be protected. The researcher followed all the acceptable principles of conducting research both before and after the study by ensuring that all ethical issues related to informed consent, anonymity of participants' personal information, participants research rights are met (BERA, 2018; Kumar, 2011).

Consequently, consent was sought from the University of Zambia (UNZA), college principals, lecturers and blind students. The researcher endeavoured that: participant's names were not revealed in the study, data collected from participants was strictly secured and only used for research purposes, those who did not wish to answer a question during interview were at liberty to do so, participants were informed how long it would take to conduct the interview. Further, participants were assured that their participation in the study would not affect their relationship with the academic staff and their entire academic life. Participants were also informed that their participation in the research was purely voluntary, thus, they had the freedom to withdraw from the study at any time they wished to do so. The researcher endeavoured to formulate research questions that would not emotionally or psychologically harm the participants.

3.10 Summary

The above chapter presented the methodology that was used in the study. The study employed an interpretative phenomenological design and subsequently utilised the purposive sampling technique to appropriately select participants. The chapter also highlighted practical steps that were used for data collection and analysis in order to inform the study. Pertinent ethical concerns and modalities that were put in place to uphold trustworthiness were also spelt out.

CHAPTER FOUR: PRESENTATION OF FINDINGS

4.0 Overview

The aim of this phenomenological inquiry was to explore academic experiences of blind students in two colleges of education in Zambia. The study findings were presented according to the major and sub-themes that emerged from the three research objectives. However, to elicit narratives from all the participants, the study was guided by the three under listed questions:

i. How did blind students experience the induction programmes offered in the two colleges of education?

ii. What are the learning experiences of blind students in the two colleges of education?

iii. What support services have the two colleges of education put in place for blind students?

4.1 Blind student's experiences of the induction programmes offered in the two colleges of education

All the participants from two colleges of education indicated that they participated or were involved in first-year induction sessions and their individual narratives pertaining to how the programme was conducted in their respective institutions culminated into the formation of distinctive themes that included: actualisation of academic practices, general familiarisation of all students to the campus environment, need for separate familiarisation of first-year blind students to walkways, and need for O&M training during induction

4.1.1 Actualisation to academic practices

The study established that first-year orientation programmes for the two colleges of education usually run for ten working days and helps to prepare all the students for academic life through oral presentations. Institutional academic practices and expectations are clearly highlighted to all students who are assembled in one place, mainly in assembly halls. All the departments are given a chance to present to the students their course and assessments requirements. Furthermore, all the institution committees are equally accorded chance to spell out their roles and expectations

from the students. Participants stated that their first-year induction programmes help all the students to quickly acclimatise to the academic demands of their institutions. Participant JA from C1 College of Education said:

> *…the college orientation programme gave me an insight on how to write assignments starting from introduction, development, conclusion and the referencing style. It also hinted on the need for students to collaborate in their studies.*

Participant JB also from C1 College noted that:

> *…through first year orientation program, I was able to understand the courses and assessments requirements. The examination committee explained to us the assessment grades and the meaning of terms such as referred, deferred, repeat, proceed and so on.*

Similar positive narratives pertaining to benefits yielded from the orientation programmes were also expressed by JE who said that:

> *I was able to fully understand the subject combinations and the courses that I would do in each year as I progress in pursuing my junior secondary diploma. Lecturers also sensitized our sighted students on the need to academically collaborate with students with visual impairments.*

Narratives of both satisfaction and discontentment were expressed by JF who noted that although first-year induction programme was beneficial, she felt excluded from the programme because all the orientation support materials that were prepared and distributed to the participants to augment the oral presentations were in print. She stated that:

> *Despite being assured during registration that the college fully practices inclusive education, I was surprised that just from the orientation week, the college did not bother to prepare their induction materials in braille for us blind students. From that, I realised that the journey ahead was going to be rough for me as a blind*

student. However, from the oral presentations, I learnt a lot pertaining to the academic demands of the college.

All the lecturers and administrators stated that induction programs are undertaken in their respective colleges to enlighten all the students about their academic fulfilments, thus, it helps reduce anxieties or uncertainty pertaining to their academic demands. One lecturer, L3 stated that:

First year induction programs help to inform the students about the academic demands, college social cultures and extra-curricular activities among several other issues.

4.1.2 General familiarisation to the campus environment

The theme of general familiarisation of all students to the campus environment during first-year orientation programme was a common narrative expressed by all the fourteen participants. All the participants reported that after attending oral presentations, all students are taken round college premises to be acquainted with key sites of academic importance in groups, which participants noted that such an approach may not fully benefit blind students in the mastery of college routes. Blind students narrated that this type of orientation to the campus environment did not accord them chance to master landmarks and campus directions. Participant JA from C1 College for example narrated that:

I felt completely disorientated being dragged in a group from one point to another especially that the college environment appeared to be vast as compared to a residential school where I was. To be moved from one building to another without being told that there is this and that here, was very unfair to me.

Similarly, participant JB also from C1 College stated that:

I struggled to just locate the toilets and shower rooms in my hostel because there was no one who oriented me to such facilities at a hostel level. As for the dining hall, I had to depend on my roommates who sometimes opted just to bring me the

meals as opposed to guide me to the dining hall. To make the matters worse, there are no clear designated routes at our college which blind students can easily trail.

The narrative pertaining to the scenario at C2 College was basically the same as in C1. Participant JE narrated that:

I was subjected to the general campus familiarisation procedures where both students with visual impairments and the sighted students are collectively shown various places within the campus. I depended so much on my cousin whom I requested to come from home during the first few weeks of my stay at the college since I did not have that time. My cousin oriented me on how to locate shower rooms, toilets, laundry and other places within the hostels which was key to my stay at the campus.

Participant JF recalled how she repeatedly asked her room-mates if there were any workers referred to as 'house parents' assigned to each hostel to help students with visual impairments. She stated that:

I felt hopeless during the first few weeks of my stay at the college. There was literally no one to orient us to important routes in the college. To make things worse, I was accommodated in a room were all my room-mates were pursuing different programs, thus, it was difficult to find someone to guide me to lecture rooms. Eventually, I had to request the hostel warden to accommodate me in a room where there was my fellow class-mate with low vision who became my guide in many occasions.

However, JI explained that although there was no special orientation program for students with visual impairments at the institution, the hostel warden assigned a sighted student to help him familiarise the college environment. He narrated that:

Although I was not separately familiarised to the college environment, especially routes during the orientation week as a blind student, our hostel warden assigned a sighted student to each one of us to help with mobility needs.

4.1.3 Need for Orientation & Mobility training during induction

When all the participants were asked to state the other components that should be included in the first-year induction programme, all the eight blind students and three lecturers suggested the need for: special familiarisation programme for students with visual impairments, initial O&M training programme and preparation of induction materials in differentiated formats. Narratives that highlighted the need for colleges of education to include O&M training during induction were echoed by most participants including lecturers and administrators. They generally noted that perhaps the inability for most blind students to initiate independent Orientation and Mobility travel would easily be addressed if there was continued O&M training in colleges of education especially during the early days of their stay at the campus. They further stated that if blind students were accorded the chance to be trained in O&M travel at the college level, it would help them to quickly grasp the college maps and be able to quickly acclimatise to their day-to-day mobility needs. One participant stated that:

> *It would have been helpful if our college of education engaged an O&M instructor to train us on how to navigate in a bigger environment like a college. If the actual O&M training is undertaken upon entry into the college, it would be easy to master hazards, landmarks and pathways (Verbatim expression by JA).*

Participant JB said that:

> *If the 'so called' inclusive education arrangement does not address the mobility challenges faced by us the blind students, then we begin to wonder if truly this type of education arrangement embraces the needs of students with Special Education Needs. Upon being admitted to the college, I expected some form of O&M training during induction period so that we easily understand the mental map of the college. Another thing is that some of us were not taught how to move with a white cane at both primary and secondary school level, so getting it here without any initial training may create problems to other pedestrians in the college.*

Another participant lamented that:

> *Since where I was doing my secondary school, we were not fully trained in O&M travel, it would have been good if colleges of education train blind students in independent travel so that we do not completely proceed to the world of work with limited skills of independent travel (Verbatim expression by JJ)*

Administrator A1 stated that:

> *…the fact that our college has enough white canes but are rarely used by most blind students could be a clear indicator that they lack basic knowledge of how to use them. It would therefore be imperative to train them on how to use the white canes considering that some students may not have been introduced to such devices at both primary and secondary levels. I have also noted that most female blind students at our institution rarely request for white canes as compared to the male counterparts.*

4.1.4 Need for separate familiarisation of first-year blind students during induction

Among the other essential components that ought to be included in the first-year induction program, the need for separate familiarisation of first-year students to key walkways was strongly recommended mainly by the blind students themselves and their lecturers for special education. Participants noted that the general familiarisation of all the new students to the college premises was not enough for first year blind students to master the walkways and landmarks, hence the need to provide a separate familiarisation of walkways. Another participant explained that:

> *If the sighted students who can easily explore the campus on their own are taken round the campus during induction, what more with blind students? We do not just need to be orienting them separately from the sighted students but train them on how to navigate in a new complex environment (Verbatim expression by L4).*

Participant JA said:

> *Next time, let the induction team also prepare materials in braille and large print for students with visual impairments. O&M training at the point of entry to colleges should be undertaken to help blind students to quickly adapt to the college environment.*

All the lecturers for special education noted that there was truly needed to undertake a separate familiarisation program to enable blind students develop a clear picture of the college environment. This can only be beneficial if a separate programme is undertaken by each college that handles students with visual impairments. Lecturer L1 who is equally blind observed that:

> *The C1 College environment is not so friendly for blind individuals to explore on their own. It requires a sighted individual to thoroughly take blind students to all the key routes that they can use as they fulfil their day-to-day tasks. Otherwise, without a clear familiarisation programme, do not expect blind students to quickly be acquainted to the campus routes.*

Lecturer L4 noted that:

> *Generally, blind students take long to master the college environment because there is no program that deliberately orients them to the college environment, especially important places like classrooms and hostels. They eventually get to know the routes to such places through sighted guides or when they repeatedly trail their sighted peers. It is therefore upon us as lecturers of special education to lobby to administration that separate familiarisation of blind students to the college environment should be undertaken during the induction period.*

4.2 Learning experiences of the blind students in the two colleges of education

After eliciting responses from all the participants pertaining to the above question, it was established that there was a myriad of hindrances to the academic progress of blind students with limited independent O&M skills in the two colleges of education. The most pronounced responses relating to the academic difficulties experienced by blind students with limited

independent O&M skills were linked to: inaccessible and unpredictable college environment, difficulties in securing sighted guides upon entry into the college, lack of learning materials in alternative formats, monotonous follow-ups for feedback of their written academic works, non-inclusive teaching methodologies, exclusive library, assessment dilemmas, lack of assistive technology and non-existence of resource rooms

4.2.1 Inaccessible and unpredictable college environment

While the narratives of inaccessible and unpredictable college environment were more vividly pronounced among blind students themselves, lecturers and administrators equally identified the physical environment of both colleges to be a hindrance to the academic life of blind students. Most of the participants narrated that their college environment was characterised by several hazards that include non–existence of well-designated walkways, uncovered drainages, gullies, disorderly parking of vehicles along walkways; opened windows as hanging obstacles along the hostel and classroom corridors and long distances from their hostels to the lecture rooms.

4.2.1.2 Non-existence of well-designated walkway

The above narrative was mainly shared by blind students from C1 College who stated that the non- availability of well-designed walkways made it even worse for them to initiate independent travel thus resorted to entirely depend on the sighted students as their guides. JA narrated that:

> *I find it extremely difficult to attend lectures without being assisted by my friends because there are no clear pathways that I can easily utilise to reach the lecture rooms or dining hall. Even when you are being guided by your fellow students, they have to repeatedly caution me that I must now jump over the gullies or uncovered drainage here……..*

Another participant wondered why a college that was opened in 1966 and has been embracing students with visual impairments in its training agenda for decades can still have a very hostile environment. JB lamented that:

.....what the colleges teach on inclusive education practices with regards to accessible learning environment is totally the opposite of what is prevailing in its environment. This college started enrolling students with visual impairments for a long time; thus, I expected it to be a model for inclusive education arrangement. My academic life as a blind student has been heavily constricted because of the non-availability of walkways as there is no clear-easy way to access lecture rooms from the hostels such that on several occasions especially when I was in first year, I did not attend some lectures because there was no one to take me there.

The administrator and the college lecturers from C1 College of Education acknowledged that one of the challenges that restrict independent mobility of blind students was the non-existence of paved walkways. It was reported that C1 College of Education had no well designated walkways either in concrete or paved form to connect hostels to classrooms and other important venues. Other than that, the fact that the college was built on sloppy terrain makes it more difficult for blind students to navigate with ease. C1 administrator stated that:

It has been the desire of the college administration to adhere to minimum standards that enable easy mobility of our differently abled students, but the resource envelope has made it difficult for the college to embark on construction of walkways. Truly, the college has no designated walkways that can encourage the blind to walk freely.

Similarly, one lecturer from C2 College commented that:

Although there are few walkways that are there at our college, they are not enough to completely grant safety and free mobility of our students with visual impairments (Verbatim expression by L4).

4.2.1.3 Disorderly packing of vehicles along pathways

Related to narratives of non-existence of well designated walkways at C1 College of Education was the disorderly packing of vehicles along pathways. Some blind students who attempted to

walk independently to their hostels reported bumping into cars that were packed along the exit routes to hotels. One participant recalled how he bumped into the vehicle that was packed along the pathway to his hostel. He explained that:

> *I was left in the office of the lecturer by my colleague to follow up my test script which I was not given. When I realised that my colleague had delayed coming and pick me, I thought of going back to the hostel having mastered the route but unfortunately, I bumped into the car that was parked along the same route. I was really traumatised because I almost broke the window-pane of that vehicle (Verbatim expression by JD).*

JC noted that:

> *Lecturers are fond of parking their vehicles anyhow without due regard that the institution has blind students; thus, it is difficult to detect that there is a vehicle ahead of me. How do you expect me a blind student to have the confidence to navigate in such an environment?*

JI also stated that:

> *The way vehicles are parked along the road located between hostels and classrooms makes it difficult for me as a blind student to ably walk to lecture rooms without any distractions.*

Participant L1 lamented that:

> *Despite several reminders during staff briefings that lecturers should not park their vehicles along pathways, the trend has not stopped; thus, it creates unprecedented hazards for all students with visual impairments.*

The foregoing excerpts showed that it is obvious that the non-existence of designated pathways and disorderly parking of vehicles along walkways impinge on the confidence of blind students to initiate independent travel as they undertake their daily academic tasks.

4.2.2 Difficulties in securing sighted guides upon entry into the college

The above narrative was unanimously echoed by all the participants engaged in this study. Blind students narrated that securing sighted guides during their early days in both colleges was a hectic task for them. It was reported that during early days into the college, most first year sighted students were apprehensive to aid or interact with blind students partly because many tend to closely interact with individuals with visual impairments for the first time; thus, do not really understand the unique needs of their colleagues. One blind student from C1 College of Education narrated that in his intake, all students with visual impairments were completely blind; thus, he could not rely on each for their mobility as a case is when there are students with residue vision such as those with partial or low vision. Most blind students narrated that they were either compelled to miss lectures or meals because of the inability to secure guides. Participant JD stated that:

> *I felt completely lonely and hopeless during the first few weeks of my stay at the college because it was difficult for me to seek for assistance from the sighted students whom I did not know very well. To make the matters worse, I was not accommodated at the hostel with any of my classmates; thus, it was difficult during the early days to arrange with a sighted student to take me for a lecture or to undertake academic activities considering that we were not availed with any information in alternative format.*

Similarly, JI said that:

> *I ended up indirectly paying my roommate to help me fulfil my daily activities during the first few weeks of my stay at the college. I did not know any of my fellow first years or those returning students; thus, I had to be extremely good to my roommate in order to help me move around.*

JJ narrated that:

> *It is difficult for me to secure sighted guides especially during crucial times of writing assignments, tests and examinations because all the sighted colleagues are equally very busy.*

JC recalled how she requested the hostel warden to relocate her to another room where there was a second-year albino student with low vision whom she was with in secondary school. She stated that:

> *After few weeks of struggling in securing sighted guides, I had to request both the hostel warden and the college matron to relocate me to a room where there was a second-year student whom we were together at a residential secondary school. After explaining to them why I needed to relocate, they all agreed.*

Lecturers and administrators from the two colleges of education equally acknowledged that generally, all blind students find it difficult to secure sighted guides during their early days into the college mainly because at that stage, many first-year students are basically strangers to each other. Thus, tend to be reluctant to aid students with disabilities. Lecturers and administrators however stated that once they identify classmates or roommates of blind students, they usually talk to them to help their counterparts in mobility as well as academic fulfilments. L1 indicated that:

> *Sometimes, myths and misconceptions surrounding visual impairments make their classmates or roommates to be apprehensive especially if they have not mingled with blind individuals before. But with the passage of time, sighted students get to understand the unique needs of their blind counterparts.*

4.2.3 Lack of learning materials in alternative formats

The most common narrative relating to the academic difficulties experienced by blind students was lack of learning materials in alternative formats. Most of the student-participants narrated that they entirely depend on their sighted classmates to fulfil most of their academic tasks. Blind students narrated that their institutions of learning rarely provide them with learning materials in

braille; thus, they depend on information that is gathered by their sighted colleagues. Similarly, tests and examinations papers were mostly prepared in ordinary print and had to be read to them; a scenario which they described as deeming and restrictive. JB said that

> *I was only provided handouts in braille when I was in first year when the college Braille Embosser was still functioning. From the time that it broke down, I have never received any educational materials in braille. Even tests and examination papers are prepared in print and a lecturer is assigned to read for us, a situation which is very restrictive for a candidate. If we are assigned a lecturer with little knowledge on special education or no patience to read the test items or examinations according to our writing paces, the obvious outcome is poor performance.*

JE equally said that:

> *Every time that I go to various departments to ask for handouts, they always give me materials in ordinary print and encourage me to look for someone to be reading for me.*

Participant JC explained that:

> *Despite the college having an embosser which would have been helping in transcribing learning materials into braille, the college has not made any frantic efforts to procure Duxbury Braille Translator (DBT) software for it to function. Every time we ask for notes in braille, we are told that we will be given once the embosser is worked on.*

JB concluded that:

> *It appears that there is no urgency for the college to procure DBT software for the embosser from the time that it stopped working in 2019, perhaps because it does not affect the larger student population but us the minority group. Even when I complain that I do not have learning materials in braille to the heads of department, no action is taken.*

4.2.4 Monotonous follow-ups to get feedback of their written academic works

All the blind students expressed dissatisfaction in the manner they get feedback for their written academic work in various departments. The most common narratives from the students were that they were compelled to make several follow-ups to get feedback for their written academic works such as assignments and tests. They further reported that most often, it was a common practice for their assignments and tests to go missing after submitting them to their respective course lecturers; a situation that creates a lot of anxiety among blind students. The inability by course lecturers to mark and promptly give feedback to students with visual impairment was mainly attributed to lack of adequate braille transcribers. The two colleges of education did not have braille transcribers specifically employed to attend to braille needs of the students but rather each institution depended on a single lecturer with skills in transcription. As a result of that, it takes longer for blind students to get feedback on any academic work. JE said

> *I do not get feedback on time for my written academic work and most of the time I have to make several follow-ups to be given scripts for written tests or assignments. This usually affects me because I just proceed with my studies without knowing how am performing during the course of the term. Getting feedback for any written academic work is the most common monotonous experience that we the blind students go through…*

JA equally lamented that:

> *The entire two terms of my study in second year, I did not get any feedback from most departments for the tests and assignments that I wrote and yet my colleagues (sighted students) got feedback on time. In one department, after making several follow-ups for the tests and assignments that I wrote for two terms, the course lecturer did not find my scripts and only availed me with the scores for the said works. I came out of that office with a strong assertion that possibly the marks that were availed to me were just created to calm me down and create an impression that my papers were marked and yet not.*

Participant JB stated that:

> *I always appear on the lists of students with incomplete Continuous Assessment (C.A) generated by various departments before the commencement of promotion examinations and yet, I have never missed writing tests or submitting assignments. The challenge is that sometimes scripts that are taken for transcription are not returned in time for course lecturers to mark and since some of the course lecturers do not know us, they proceed to include us on the lists of students with incomplete C.A; a painful experience that we have been subjected to each year.*

Another participant stated that:

> *I wish the college administration could source for a braille transcriber whose job description would be mainly transcribing our academic works so that we are given prompt feedback just like our sighted students. Prompt feedback of our tests and assignments would greatly help us to pay more attention in the areas that we may not be performing well as early as possible (excerpt from JD).*

JF stated that:

> *We the blind students are usually the last to know how we have performed in tests or assignments because our papers are not marked on time. Sometimes, we write our promotion exams without knowing how we have accumulated our C.A. For us to be given our assignments, we have to make several follow-ups which sometimes just end up being a futile venture.*

Participant JJ added that:

> *Braille transcription at our college is only done by one lecturer who is conversant with braille issues, but since he is also assigned classes to teach, it is obvious that he is overwhelmed, thus takes a long time for him to transcribe our work.*

Head of department A1 said:

> *Here at our institution, one of the challenges that blind students face relates to problems of handling their written work in braille. For example, out of the so many lecturers for special education that we have in the department, only one is competent in interpreting braille symbols, thereby making it very difficult for blind students to get timely feedback for their written work.*

The foregoing revelations clearly show that the delays in giving feedback to blind student's written academic work was an impediment to their academic life in both colleges of education. Lecturers and administrators equally re-echoed the concerns expressed by blind-participants by highlighting that despite the two colleges having an adequate number of lecturers for special education, only few are conversant with braille transcription, a situation that greatly affects service delivery with regards to braille handling and giving of feedback to students with visual impairments.

4.2.5 Non-inclusive teaching practices by lecturers

Narratives of non-inclusive teaching practices emerged as one of the academic difficulties experienced by blind students with limited independent O&M skills in the selected colleges of education. Participants pursuing Primary Teachers Diploma from C1 College of Education categorically cited Mathematics Education, Science Education and Technology Studies as some of the courses that are difficult to comprehend mainly because of lots of illustrations that are done using the chalkboard. Non-inclusive teaching practices by lecturers related to: the manner lecturers taught and dictated notes, use of chalkboard to make illustrations, lack of support materials and individual attention to students with visual impairments. Several participants expressed their concerns with regard to teaching practices of their lecturers in the following narratives: Participant JD stated that:

> *I find it unfair for lecturers who teach us to continuously use the chalkboard when making illustrations but rarely give support materials for us to easily comprehend what is being explained on the chalkboard. Despite reminding them several times*

that they should be clearly explaining what is written on the chalkboard, little progress has been observed.

Similarly, JC stated that:

I do not fully comprehend lectures that are characterised by illustrations of concepts using the chalkboard. Most lecturers do not describe fully what they write on the chalkboard; thus, makes it difficult for me to understand the concepts. Sadly, even when I have personally followed them to explain the dilemma that I always find myself in, it appears they are reluctant to adhere to my requests. I find it difficult to comprehend concepts in Mathematics and Science Education because of perpetual use of the chalkboard when making illustrations.

JB also narrated that:

The style of teaching that most of our lecturers use mainly favours sighted students. The explanations that lecturers sometimes make portray as if all of the students have sight. There are incidences were lecturers display charts for example to teach topics such as the digestive system, human respiratory system and so on, and explain the contents of the charts as if all students are seeing what they are pointing at. No learning support materials are given to us blind students to augment what they teach.

All the blind participants also stated that the manner in which their lecturers dictated notes leaves much to be desired. Considering how slow it was to write braille using a slate and stylus, most blind students fail to keep up with the pace in the manner notes were dictated by their lecturers. Even when lecturers were reminded that they should not be very fast, it did not take long for them to resort to their fast mode of dictating notes. One participant narrated that:

Even when you remind lecturers that they are fast in their notes-dictations, it does not take long for them to resort to their usual fast speed of dictations. I stopped writing dictated notes in class because I fail to match with the speed at which notes are usually dictated (*Verbatim expression by JI).*

Participant JE also stated that:

> *It is difficult for me to ably write dictated notes in class because of the fast pace of the lecturers. There is no individual attention given to us with regards to giving us notes in advance in braille or ordinary print. However, some lecturers are willing to give blind students notes in soft copy when they are engaged.*

4.2.6 Assessment dilemmas

Narratives relating to the manner in which blind students were assessed in their respective colleges of education were shared and a common theme of 'assessment dilemmas' emerged as the appropriate description of their experiences. The theme "assessment dilemmas" emerged to describe the undue frustrations experienced by blind students in the manner tests papers were sometimes prepared, how they blind students were subjected to wait for a longer time to be availed with test papers which sometimes were not given to them at all, on how they wrote tests that were usually read to them and challenges of looking for a room in which to write tests from. Participant JA from C1 College of Education narrated that:

> *It was a common scenario at our college for blind students to wait for test papers while our sighted counterparts would be way ahead in writing the similar test. There were moments when we would wait up to the point where our sighted colleagues would all finish writing tests, then a lecturer would come over to apologise and tell us that our test paper was not ready.*

JB recalled how her test was rescheduled three times because the lecturer forgot to prepare it. She narrated that:

> *I was inconvenienced three times by a lecturer for Technology Education who kept on rescheduling the test because my paper was not ready. I wrote that test four weeks later from the time the sighted students wrote theirs. I was extremely frustrated because I kept on studying the same things over and over.*

Two other participants from CI colleges of Education also shared similar frustrations where they waited for their test papers while sighted colleagues would be writing and sometimes waiting in

vain because their tests were not prepared at all. Narratives of writing tests papers with charts and diagrams were also common especially when the administered test papers were not transcribed in braille or large print. One participant remembered that:

> *I was given the same test papers that the sighted students also wrote and assigned a reader to read for me since the paper was not transcribed into braille, but the problem was that it was full of diagrams. When we inquired, the course lecturer informed me that I should not answer those questions with diagrams, a situation that disadvantaged me because I was left with few questions to answer in both section A and B of the paper. The reader did not also give me ample time to attend to each question especially in section A of the test paper* (*Verbatim expression by participant JF).*

Participant JC, JD and JF equally shared similar experiences where either they had to wait for the test papers longer than expected, reschedule tests because lecturers did not prepare their test items in time or failed to secure a reader for tests that were not transcribed. However, the other frustrations related to tendencies exhibited by some course lecturers from CI College of Education where they would instruct blind students or their test-readers to secure a room for the tests. The process of securing a room where to write a test from was frustrating because it would delay the blind candidates further while their sighted counterparts would be busy writing a similar test. JB said:

> *As lecturers allocate venues where their candidates write tests from, they usually forget to secure a venue for us since we do not have a resource room at our college or any prescribed room for us. So, the onus is always on us to secure a room where to write the test from but sometimes it is extremely difficult to find one; especially in situations where the administered test involves the entire cohort. Sometimes it is difficult to find readers to help us read through the un-transcribed tests.*

Despite experiencing several assessment dilemmas, it was gratifying to hear that extra time was accorded to blind students when they are writing assignments, tests and examinations. Narratives from both student-participants, lecturers and administrators uniformly stated that students with

special education needs in the two institutions were accorded extra time to finish any given academic task; a practice that was highly appreciated by blind students.

4.2.7 Lack of assistive technology and non-existence of resource rooms

Narratives of non-availability of assistive technology to aid the students with visual impairment in both colleges of education emerged as another hindrance to equitable access to education. All the participants expressed dissatisfaction pertaining to the provision of assistive technology forcing blind students to entirely depend on their sighted counterparts to fulfil their academic tasks. It was established that there were no computers with Job Assess with Speech (JAWS) software in the libraries of both colleges of education to enable blind students easily access information on the internet. Similarly, although the two colleges had Braille Embossers for braille transcription purposes, those machines were not functioning because computers connected to the same embossers lacked Duxbury Braille Translator (DBT); a software that allows computers to be compatible with the Braille Embossers. The computer laboratories for the two colleges did not have computers with JAWS software which blind students can use when learning Information and Communication Technology (ICT). Worse, C1 College of Education did not have a resource room for students with visual impairment. The following were some of the narratives of the participants:

> *Although our computer laboratory is well stocked, there is no single computer with JAWS software, thus, it's a challenge for us to learn Information and Communication Technology (ICT), a course that is compulsory for students pursing Primary Teacher's Diploma Course (Verbatim expression by participant JD).*

JA explained that:

> *Despite availability of the two Braille Embossers, the college has been dragging on to buy DBT software which would have been helping to emboss notes, tests and indeed other relevant materials. Instead, a big college like ours depends on a near-by residential school when they want to emboss our promotion examinations.*

JF also complained that:

> *Non availability of computers with JAWS and Embossing facilities has really relegated us to beggars of information from our sighted students. There is literally nothing that we can do on our own with regards to seeking for information because all our prescribed avenues of gathering information are not there at all. There are no special computers in the library or computer lab for us to access Electronic Books and the library has not even a single book in braille for us to use. How can one be independent in such circumstances?*

JJ wondered whether college authorities and teaching staff considered individuals with visual impairments as students as well. She asked:

> *Do administrators and lecturers consider us to be students who are supposed to be independent in our academic pursuit? Do they ever think of us? It's really strange for the college to fail to put in place minimal services for us blind students, yet we pay money for the library and internet services.*

Blind JA said:

> *Our college does not have assistive technology to enhance access of information and worse still, the institution has no resource room for students with visual impairments to easily access basic requirements such as slates, styluses and braille paper.*

4.2.8 Non-existence of accessible materials for blind students in the libraries

An institutional library is considered as a reservoir of both electronic and print information which users can easily access to fulfil their academic obligations. However, narratives by all the participants indicated that the two libraries had no books in braille or computers with JAWS software to access electronic books. This entails that student with visual impairments cannot access any information from those facilities. Participant JF recalled that:

The first time that I went into the library, the librarian told me that there were no books in braille and instead, proposed that I should just borrow the ordinary books and look for someone to read for me.

Similarly, participant JB stated that:

Although the library building is centrally located and easily accessed, all the books and computers that are there are meant for the sighted students and yet we were all compelled to pay a fee for library usage.

4.3 Available support services for blind students in the two colleges

It was established that there were few support provisions for blind students with limited independent O&M skills although all the service provisions cater across the broad spectrum of students with visual impairments. The few available service provisions included: free access of braille paper, access to college transport, free access of printing facility, writing frames and mobility aids.

4.3.1 Access to mobility aids

Support provisions of mobility aids relate to free access to white canes of all categories to blind students. Information obtained from participants and on-spot check using the observational checklist showed that the two colleges of education had enough white canes for blind students. Participants stated that the colleges usually avail blind students with white canes although most of them were reluctant to use them. The reluctance to use them was mainly attributed to: fear of losing them, limited skills of using a white cane, fear of being labelled blind and personal reasons. JA explained that:

We are encouraged to get white canes from the education department but since they have to be surrendered at the end of each term, I don't usually get it because I fear to lose it. The rule here is that if you lose any college property, you are automatically compelled to replace it.

A similar response was also echoed by participant JC who stated that:

> *Although I would have loved to get a white cane from the department and start practicing how to move with it, I fear to lose it. Some of my room-mates are unruly and they may deliberately hide it as a way of punishing me.*

Participant JD said that:

> *I was not orientated at both primary and secondary school level on how to use a white cane and so even if I get it from the department, I will terribly fail to use it. Unless if we were oriented on how to move with a white cane here in college, maybe I can get it; otherwise, a white cane is of no use to me.*

Interestingly one female participant stated that she was reluctant to access a white cane or learn how to use it because of the label aligned to it as a distinct symbol that the user is totally blind. JJ said that:

> *Although am blind, I would not love to publicly be seen moving with a white cane. Yes, I have accepted my disability but to be seen moving with a white cane clearly sends a message to everybody and even draw attention from children to be looking at you as you struggle to move with the cane. I wouldn't want such a thing to happen to me.*

Two other female participants attributed non-use of white canes to personal reasons despite its availability in their institutions.

4.3.2 Access to college transport

It was reported that C1 College of Education does provide free transport to all blind students mainly when they are going for their teaching practice at one of the residential schools located in the outskirt of the district and taking them to the main bus station at the end of each term. This is done to minimise on the mobility challenges that blind students may face as they proceed for teaching practice as well as when going home at the end of each term. Participant JC from C1 College of Education stated that:

I was able to access college transport when I went to do my first and second teaching practice. After making all the necessary arrangements, the college vehicle came to pick me up from the bus station and took me to the residential school where I was scheduled to do my teaching practice.

All the other participants from C1 College of education attested being taken to the main bus station at the end of each term. However, C2 College of Education did not have any transport service provisions for blind students.

4.3.3 Access to Braille paper and writing gadgets

All participants from the two colleges of education reported that their institutions do provide braille paper and writing gadgets for those students with visual impairments who may not have personal gadgets. Both Braille paper and writing gadgets are issued according to student's request and it was established that the most preferred writing gadgets that students request are slates and styluses as opposed to Perkins Braillers. One blind student stated that:

From the time I enrolled at this college up to now in my third year of study, I have been ably provided with both braille paper and writing frames. I access all these pre-requisites without any problems.

Another participant from C2 College added that:

I have never faced any challenge with regards to accessibility of braille paper and writing gadgets at my institution. The education department provides me with paper any time that I request for it.

4.3.4 Access to printing facilities

Narratives from all the participants from C1 College of Education indicated that their institution provides free printing facilities for all their students with visual impairments. The rationale behind the provision of printing facilities is to ensure that blind students have access to information in print which, through the use of their colleagues as readers can still benefit them. However, blind students have to follow the set procedures to access the printer which is stored in the office of the head of department as a result of non-availability of the resource room.

However, participants of C2 College of Education did not mention the existence of free printing service at their institution.

4.3.5 Buddy systems

Although there was no clear policy on peer tutoring or buddy systems from the two colleges, it was established that some of the blind students at C1 College of Education were assigned sighted students to help them accomplish their day-to-day academic demands. This practice was however mainly initiated by individual lecturers or hostel wardens upon noticing the mobility challenges encountered by blind students. Narratives from blind students at C1 College of Education revealed that this practice helped them to move safely in an environment that is full of hazards. Participant JC from C1 College of Education stated that:

> *I entirely depended on my sighted colleague for both mobility and academic fulfilments. Having noticed the challenges that I encountered during lectures, one lecturer assigned a class mate to be helping me and he negotiated with student's leadership that the student should be exempted from doing preventive maintenance activities.*

Similarly, JB from C1 stated that:

> *My hostel mate has been performing the duties of a sighted guide as well as a reader. Since am not able to match the dictation speed of writing notes during lectures, we resolved with my colleague that we were going to be studying together. This strategy really helped me to fulfil many academic tasks.*

Similar narratives were also re-echoed by blind students from C2 College of Education. Student JI stated that:

> *Although am able to move alone to the dining hall and few other places, I entirely depend on my two classmates to locate various lecture rooms studies.*

4.4 Summary

This chapter highlighted responses and immerging themes derived from the three main research questions. Themes related to the first research questions include: general familiarisation of all students to the campus environment, need for separate familiarisation of first-year blind students to walkways and need for O&M training during induction. The most pronounced responses relating to the learning experiences of blind students in the two colleges of education included: inaccessible and unpredictable college environment, difficulties in securing sighted guides upon entry into the college, prolonged feedback of written academic work, non-inclusive teaching methodologies, assessment dilemmas, lack of assistive technology and non-existence of resource rooms. The few available support provisions included: free access of Braille paper, free access of printing facility, writing frames and mobility aids. The next chapter will discuss the research findings.

CHAPTER FIVE: DISCUSSION OF FINDINGS

5.0 Overview

This chapter presents the discussion of the findings which are aimed at investigating the academic experiences of blind students in two colleges of education in Zambia. The findings are presented according to themes derived from the study objectives which sought to: establish how blind students experienced the induction programmes offered in the two colleges of education, explore learning experiences of blind students, identify available support services for blind students in two colleges of education and evaluate the available support services that colleges of education have put in place for blind students. Furthermore, the findings have been discussed in relation to other existing studies and the theoretical framework.

5.1 Blind student's experiences of the induction programmes offered in the two colleges of education

The study established that the nature of the induction programs offered to first-years students in the two colleges of education was mainly in twofold: actualisation of students to academic practices and general familiarisation of all students to the college environment. It was established that first-year orientation programmes for the two colleges of education usually run for ten working days and helps to prepare all the students for academic life through oral presentations. Institutional academic practices and expectations are clearly highlighted to all students who are assembled in one place, mainly in assembly halls. All the departments are given a chance to present to the students their course and assessments requirements. The institution committees are equally accorded chance to spell out their roles and expectations from the students. All participants stated that their first-year induction programmes helped students to quickly acclimatise to the academic demands of their institutions. The induction program also covers issues of social life and how it impacts on the academic wellbeing of students.

With regards to actualisation of students to academic practices, partly, the above findings are in tandem with study results by Posey et al (2015) which established that orientation programs provided students with skill-transference, resilience and greater academic connection to their institutions. Muzata et al (2019) noted that orientation of students into their new university life helps them to settle down and feel encouraged to stay on and advance in their studies. Other

similar research by Nguyen, Tuomo, Amir and Ari (2018), Valentine et al (2011), Brophy (2013), Hope (2015), Kolenovic et al (2013) and Shellman & Hill (2013) equally espoused that first-year orientation programs tend to increase participants' resilience, well-being and institutional attachment.

However, although the study established that actualiation of students to academic practices enlightens first-year students to their academic life at the colleges, narratives of discontentment were also espoused by some participants who questioned the inclusivity of the program since oral presentation handouts materials were mainly prepared in print, thereby leaving out blind students. Some participants noted that although the first-year induction programme was beneficial to them, they still felt excluded from the programme because all the orientation support materials that were prepared and distributed to the participants to augment the oral presentations were in print form. Other participants stated that despite being assured during registration that the C1 College fully practiced inclusive education, they were surprised that just from the orientation week, the college did not bother to prepare their induction materials in braille for blind students.

Although the current study findings appeared to correlate with many other studies pertaining to academic benefits associated with induction programs in higher institutions of learning, revelations of non-availability of induction materials in braille showed that the programs lacked inclusivity to cater for the diverse needs of students. This revelation resonates with Mafa and Makuba's (2013) study finding which established that lack of consideration of the unique learning needs of students with disabilities curtailed their participation and progression in the community characterised by sighted students.

The study further established that the second component of the induction programs involved general familiarisation of all students (both blind and sighted) to the college environment. It was reported that after attending oral presentations, all students are taken round college premises to be acquainted to key sites of academic importance in groups; of which most participants noted that such an approach may not fully benefit blind students in the mastery of college routes. Blind students narrated that this type of orientation to the campus environment did not accord them chance to master landmarks and campus directions. It was further reported that blind students felt

completely disorientated being dragged in a group as they were familiarised to the college environments.

The study further revealed that the absence of individual familiarisation of blind students to the college environments made it difficult in their early days to locate toilets and shower rooms in the hostels and well as the dining hall. To access meals from the dining hall, blind students had to depend on their room-mates who sometimes opted just to bring those meals as opposed to guide them to the dining hall. More so, the study established that there were no clear designated routes at one college for blind students to trail. From the narratives expressed by many participants, it was evident that the second component of the induction program appeared to only benefit the sighted students in the sense that for blind students, their familiarisation to the environment entails according to them the chance to master pathways, landmarks and develop a mental map.

This finding resonates with Lourens' (2015) study which established that blind students were compelled to be orienting themselves to the new physical university environment. Lourens' (2015) study further revealed that other students with visual impairments visited the campus beforehand and paid for an orientation and mobility instructor to teach them the routes to classes and lecture theatres. Even though those preparations were somewhat helpful, they did not prepare them sufficiently for the day-to-day challenges of walking the campus. The findings of the current study also correlate with the study findings of Laureate et al (2014) which established that students with disabilities expressed high levels of dissatisfaction in the manner they were oriented in their respective universities. The study by Laureate et al (2014) further revealed that although universities were aware that they were expected to provide two types of orientations: general orientation for all students and special orientation to students with disabilities on accommodations, infrastructures, academic services and environmental orientation, very few higher institutions adhered to those requirements. Instead, students regardless of their wellbeing were only given orientation on general topics such as university rules, students' discipline, student-teacher relationships, grading system, resources and available services among others and no special orientation on how to master pathways and landmarks.

In addition, when all the participants were asked to state other essential components that should be included in their first-year induction programmes, most of them suggested the need for: separate familiarisation programmes for students with visual impairments, O&M training programme and inclusivity in the preparation of induction materials. The need for separate familiarisation of blind students to the physical environment of the college is meant to help them master the main pathways, landmarks and subsequently develop a clear mental map of each institution. Participants noted that the general familiarisation of all the new students to the college premises was not enough for first year blind students to master the walkways and landmarks; hence, the need to provide a separate familiarisation of walkways. Some participants observed that if the sighted students who can easily explore the campus on their own are taken round the campus during induction, what more with blind students? There was a general consensus among participants that blind students do not just need to be oriented separately from the sighted students but also be trained on how to navigate in a new complex environment.

Resonating with the above narratives, the study by Laureate et al (2014) established that 47.8% of students with disabilities enrolled across eleven (11) universities in Ethiopia did not receive any special orientation on accommodations, infrastructures, academic services and environmental mastery. The study by Laureate et al (2014) revealed that although all the eleven sampled universities knew that they were supposed to provide two types of orientation: general orientation for all students and special orientation for students with disabilities on accommodations, infrastructures, academic services and environmental orientation; it was reported that some universities were reluctant to organise all the two types of orientations because they did not have experience in organising special orientations for students with disabilities.

Besides the plea for separate orientation for blind students, the need to include Orientation and Mobility training during induction or as part of an additional course for blind students was equally echoed by most participants including lecturers and administrators. They generally noted that perhaps the inability for most blind students to initiate independent Orientation and Mobility travel would easily be addressed if there was continued O&M training in colleges of education, especially during the early days of their stay at the campus. They further stated that if blind students were accorded the chance to be trained in O&M travel at the college level, it would help

them to quickly grasp the college maps and be able to quickly acclimatise to their day-to-day mobility needs.

One participant stated that it would have been helpful if colleges of education engaged O&M instructors to train them on how to navigate in a bigger environment like a college. If this practical O&M training is undertaken upon entry into the college, it would be easy for blind students to master hazards, landmarks and pathways. Another participant lamented that since the secondary school where she received her education did not fully train her in O&M travel, it would have been good if colleges of education train blind students in independent travel so that they do not completely proceed to the world of work with limited skills of independent travel.

The plea for inclusion of O&M training in higher institutions of learning resonates with Alhammadi's (2014) study finding which established that most students with visual impairments who were enrolled at United Arab Emirates University (UAEU) had not received any mobility training during their schooling, or during the course of their training at the university; hence, experienced some difficulties learning how to move around on their campus especially in their first year. Alhammadi's (2014) study recommended for O&M training at the UAEU. Similarly, Nana, Rockson and Teye's (2017) study finding established that students with visual impairments in the sampled universities required orientation and mobility instruction to be able to move independently to lecture halls, canteens, sports grounds and other places of social gathering to enhance their academic and social development.

5.2 The learning experiences of blind students in the two colleges of education

The study established that there were myriad hindrances to the academic progress of blind students in the two colleges of education. The most pronounced academic hindrances experienced by blind students were linked to: inaccessible and unpredictable college environment, lack of learning materials in alternative formats, the dilemmas of repeatedly making individual follow-up of written academic work, non-inclusive teaching methodologies, exclusive library, assessment dilemmas; lack of assistive technology and non-existence of resource rooms.

The study established that inaccessible and unpredictable college environment was one of the primary impediments affecting the education of blind students in the two colleges of education.

While the narratives of inaccessible and unpredictable college environment were more vividly pronounced among blind students themselves, lecturers and administrators equally identified the physical environment of both colleges to be a hindrance to the academic life of blind students. Most of the participants narrated that their college environment was characterised with several hazards that included: non–existence of well-designated walkways, uncovered drainages; gullies, disorderly parking of vehicles along walkways; opened windows as hanging obstacles along the hotel and classroom corridors, and long distances from their hostels to the lecture rooms.

It was further reported that non- availability of well-designed walkways made it even worse for blind students to initiate independent travel, thus resorted to entirely depend on the sighted students as their guides. One participant narrated that it was extremely difficult to attend lectures without being assisted by his friends because there was no clear pathways that could easily be utilised to reach the lecture rooms or dining hall. Even when being guided by their fellow students, they have to repeatedly caution them to carefully jump over the gullies or uncovered drainages. Some blind students wondered why C1 College that was opened in 1966 and has all along been embracing students with visual impairments in its training agenda but still had a very hostile environment. The study established that the academic life of blind students had been heavily constricted because of the non-availability of walkways, as a result, they entirely depended on their sighted peers to fulfil their day-to-day academic tasks.

This finding resonates with Mosia's & Phasha's (2020) study outcomes which revealed that blind and other disabled students with mobility challenges encountered numerous problems to navigate unpaved grounds with potholes at National University of Lesotho. The study further revealed that blind students were not informed of potholes and other hazards that were left uncovered and that even when they requested for their hostel to be adapted, that was not addressed. The study by Mandicheta et al., (2019) which sought to ascertain challenges faced by students with disabilities in institutions of higher education in Zimbabwe equally established that mobility within the institutions of learning was one of the biggest challenges faced by blind students. The study further revealed that it was difficult for blind students to walk alone within the universities because some of the roads were full of pot holes and the changes that took place due to digging of trenches and other construction activities.

Similar study findings were re-echoed by Simui (2018) who equally established that the presence of staircases and lack of pedestrian walking-paths at Sim University retarded the mobility of students with visual impairments. Another study by Hlatywayo & Mapolisa (2020) which sought to establish inclusive education practices in Zimbabwe Teacher's colleges equally established that despite strides by college leaders to accommodate students with disabilities in terms of amenities and tuition, the physical and social environment were still not accessible by all students. In the challenge and support theory, Sanford (1966) argued that a college environment should be a developmental community where students' abilities ought to be nurtured to enhance their academic progress. The environment should not present too many challenges for an individual as this may lead to regression and allow for less adaptive modes of behaviour. If the environment seems too challenging, individuals may want to escape or ignore the situation (Sanford, 1966).

Furthermore, the study also established that easy accessibility of the physical environment at the two colleges of education was hampered by disorderly packing of vehicles along pathways. It was reported that lecturers from C1 College of Education were fond of parking their vehicles anyhow along pathways without due regard of the existence of blind students. As a result, it was difficult for blind students to detect those vehicles thereby increasing the likelihood of bumping into them. It was reported that some blind students who attempted to walk independently to their hostels bumped into those cars parked along the exit routes to hotels. One participant recalled how he bumped into the vehicle that was packed along the pathway to his hostel. It is obvious that the non-existence of designated pathways and disorderly parking of vehicles along walkways impinge on the confidence of blind students with limited independent O&M skills to initiate independent travel as they undertake their daily academic tasks.

The current study revelation of disorderly parking of cars along pathways at C1 College of Education is in consonant with Odana's (2018) study finding which established that the existence of trenches along walk ways and vehicles parking along the walk ways were some of the external environment challenges experienced by students with visual impairments at Makerere University. Also in tandem with the current finding is Arora's & Anjali's (2012) study revelation which established that uneven surfaces, open manholes and parked cars along walkways were some of challenges faced by the visually impaired in ambulation on pavements in India. This

study precisely sought to establish hurdles faced by visually impaired individuals during ambulation, while using public transports as well as working in organised sectors. The study recommended that the public should avoid parking cars on walkways but rather park them in designated parking areas.

Another hurdle that was experienced by blind students at C1 and C2 Colleges of Education related to difficulties in securing sighted guides upon entry into the colleges. This narrative was unanimously echoed by all the participants engaged in this study. Blind students narrated that securing sighted guides during their early days in both colleges was a hectic task for them, thus, in instances where they completely had no one to guide them, they had to either miss lectures or meals. It was further reported that during the early days stay in the college, most first year sighted students were apprehensive to aid or interact with blind students partly because many came to closely interact with individuals with visual impairments for the first time, thus do not really understand the unique needs of their colleagues.

Conforming to the hurdles of securing sighted guides is the study by Otanga (2020) who established that sighted students had initially exhibited resentment on aiding blind students based on the preconceived belief that doing so would turn them into perpetual assistants, hence infringing on their time; thus most sighted students resorted to keeping themselves off students with blindness. But despite all that, the study established that students with blindness countered those negative expectations by showing their non-disabled peers that they had a degree of independence. Similarly, a study by Blackorby & Cameto (2005) concluded that students who are blind need not entirely rely on their sighted peers but that they should always cautiously strive to be independent and only seek help when they deem it necessary.

The study also established that mobility hurdles for blind students tend to be more pronounced when there are no students with partial or low vision among their intake mates. Blind students from C1 College of Education narrated that in their intake, all students with visual impairments were completely blind, thus, they could not rely on each other for their mobility as the case is when there are students with residue vision such as those with partial or low vision. Most blind students narrated that they were either compelled to miss lectures or meals because of the inability to secure guides. In order to solve her mobility nightmares, the study established that

one of the blind students had to request both the hostel warden and the college matron to be relocated to a room where there was a second-year student with low vision whom she knew from secondary school.

Lecturers and administrators from the two colleges of education equally acknowledged that generally, all blind students find it difficult to secure sighted guides during their early days into the college mainly because at that stage, many first-year students are basically strangers to each other; thus tend to be reluctant to aid students with disabilities. Lecturers and administrators however stated that once they identified classmates or roommates of blind students, they usually talk to them to help their counterparts in mobility as well as academic fulfilments. But sometimes, myths and misconceptions surrounding visual impairments makes sighted students to be apprehensive especially if they have not mingled with blind individuals before. However, as time passes by, sighted students get to understand the unique needs of blind students.

This study revelation is in alignment with Yohannes' (2015) study conclusion which highlighted that most higher learning institutions seem to have left the responsibility of settling Students with Visual Impairments (SVI) to other students yet it is obvious that anybody who comes to a new environment requires orientation and support to enable them find their way around the institution's premises. Johannes' (2015) study precisely established that the most serious problem upon arrival and in the early days on the campus for students with visual impairment was the failure of the university to arrange a support system to help them in getting used to the campus environment, a situation that made students with mobility challenges to miss their lectures. From these findings, it is clear that until when a student with visual impairment becomes familiar with the surroundings and gets acquainted with people, it is very difficult to move around.

Another primary finding that impeded the education of blind students related to the dilemmas of making numerous individual follow-ups for their written academic work. The study established that all the blind students expressed dissatisfaction in the manner they got feedback for their written academic work in various departments. The most common narratives from the students was that they were compelled to make several follow-ups to get feedback for their written

academic works such as assignments and tests. They stated that this development was cumbersome for them since they had to solicit for sighted guides when making those follow-ups.

The study further established that it was a common practice for their assignments and tests to go missing after submission; a situation that created a lot of anxiety among blind students. The inability by course lecturers to mark and prompt give feedback to students with visual impairment was mainly attributed to lack of adequate braille transcribers. The two colleges of education did not have staff employed to specifically undertake braille transcribing works but rather depended on a single lecturer with skills of transcription to undertake the said works. As a result of that, it took longer for blind students to get feedback of any written work. The study further established that blind students sometimes had to wait for a term or so to get their academic feedback. It was further reported that there were instances where after making several follow-ups, some lecturers just availed marks to blind students without showing them their test or assignment scripts. This development made blind students to insinuate that perhaps the marks availed to them were just cooked-up to calm them.

The study further established that it was a common trend for blind students to appear on the lists of students with incomplete continuous assessment (C.A) generated by various departments before the commencement of promotion examinations despite the said students having met all their academic obligations. Blind students described this development as a painful experienced which they were subjected to each year. However, lecturers and administrators explained that such a trend occurred when scripts taken for transcription were not returned in time for course lecturers to mark and since some of the course lecturers did not know each student with visual impairments, they proceeded to include them on the lists of students with incomplete.

This undoubtedly affected the academic performance of blind students since they did not know how they were performing in each course. Similar to the current finding on assessment challenges is Kisanga's (2017) study revelation that established that lack of feedback from teachers, delays in examination time and incompetence of transcribers and inappropriate grading systems were some of the challenges that affected students with visual impairments in Tanzanian Higher Education institutions. Similarly, Simui's (2018) study revelations established that a

number of students with visual impairments questioned the level of competence in braille among staff, as braille course work could not be transcribed on time.

Another pertinent issue which affected the education of blind students in the two colleges of education related to the manner in which students with visual impairments were assessed. Narratives relating to the manner in which blind students were assessed in their respective colleges of education were shared and a common theme of 'assessment dilemmas' emerged as the appropriate description of their experiences. The theme "assessment dilemmas" emerged to describe the undue frustrations experienced by blind students as follows: how they were subjected to wait for a longer time to be availed with test papers which sometimes were not given to them at all, challenges of looking for a room in which to write tests from and the frustrations of sourcing for someone to read test items for them.

The study established that it was a common practice at the two colleges of education for blind students to wait for test papers while their sighted counterparts would be way ahead in writing the similar tests. It was also reported that blind students would sometimes wait up to the point where their sighted colleagues would all finish writing tests and later, concerned lecturers would come over to apologise to them that their test papers were not ready and subsequently be postponed. Such experiences did not only frustrate the blind students but also made them to prepare for the same tests for a longer period of time than their sighted colleagues. And since they were mainly studying with their sighted peers in groups, it become a huge challenge for them to prepare for the said tests once postponed.

Resonating with the above current study finding is Kisanga's (2017) study revelation which established that students with visual impairments had to wait for their examination longer than the allocated time on the timetable because most of their lecturers either failed to send their examinations to the special unit in time or forgot to do so altogether. Kisanga's (2017) study further highlighted those delays in examination time in HE was associated with lecturers' unawareness of students with conditions or impairments in their classes, as well as lack of collaboration between Special Unit staff and lecturers.

The other assessment dilemma which was mainly reported from C1 College of Education was the challenges of looking for a room in which to write a test from. It was established that blind

students at C1 College of Education were subjected to look for a classroom where they would write a test from because of non-existence of a resource or study room for students with visual impairments. The study established that when lecturers allocated venues where their candidates wrote tests from, they usually forget to secure a venue for students with visual impairments since they did not have a resource room or any other prescribed room for them. So, the onus was always on the blind students to secure a room where to write the test from, but sometimes it was extremely difficult to find one; especially in situations where the administered test involves the entire cohort.

Blind students complained that securing a classroom were to write tests from was not an easy task considering that all their classmates who helped them in mobility would all be engaged writing similar tests. Additionally, considering the huge number of students at C1 College, the study established that it was very difficult to find unused classrooms; thus, tests for them were sometimes conducted in lecturer's offices. Similar to the current study finding is Belay's & Yihun's (2020) participants' narrative that revealed that while the sighted students took examinations in the classrooms, students with visual impairment were compelled to take their examinations in corridors; an environment that was characterised by noises as other students walked through those corridors.

Furthermore, Liasidou (2014) also highlighted the issue of disabled students being segregated from their non-disabled peers during exams in which he concluded that it was a stigmatising form of provision that identified students with a disability as being "different" to their non-disabled peers. Similarly, A study by Madriaga et al., (2011) concluded that in certain instances, segregation does not only result from the necessity of giving extra time during exams; rather the allocation of a 'separate room' is presented as an autonomous 'exam access arrangement' for disabled students. In so doing, disabled students are singled out as being 'different' and in need of compensatory measures of support. Such practices are antithetical to the principles of an inclusive discourse that are geared towards the necessity of responding to learner diversity without having recourse to segregating and stigmatising forms of provision (Madriaga, Hanson, Kay &Walker, 2011).

The study further revealed that other assessment dilemmas were attributed to situations where blind students were tasked to look for readers since most of the time, they were given test papers that were not transcribed in braille. Securing test readers when all their classmates were also writing the same test in various venues proved to be a difficult task for them. Blind students recalled several moments when they secured readers from other cohorts who would hurriedly lead them through the test items mainly because those readers had no mutual attachment to them and also because they did not understand their unique needs as blind students. Most of the blind students attributed their poor academic performance to the manner in which they were hurriedly compelled to write their tests by the assigned test readers.

Both lecturers and administrators admitted that they sometimes assign sighted students to read through the test items for students with special education needs; a situation that they equally noted as having a negative impact on blind students' academic performance, especially when the assigned readers are not responsive to the needs of their counterparts. Narratives of writing tests papers with charts and diagrams were also a common phenomenon especially when the administered test papers were not transcribed in braille. Similarly, Belay's and Yihun's (2020) study finding established that the task of assigning sighted peers to read test or examination items for student with visual impairment proved to be a difficult undertaking for them since they were equally expected to either write or prepare for the same assessments and examinations.

Despite experiencing several assessment dilemmas, it was gratifying to hear that extra time was accorded to blind students when they are writing assignments, tests and examinations. Narratives from both student-participants, lecturers and administrators uniformly stated that students with special education needs in the two institutions were accorded extra time to finish their academic tasks; a practice which was highly appreciated by blind students. The results resonate with the views of Majoko (2018) that examination arrangements for students with disabilities including extra time and separate examination venues are strategies to accommodate the needs of students with disabilities in higher education institutions in Zimbabwe. Whilst Couzens et al., (2015, p. 26) acknowledged that issues and difficulties encountered by individual students will vary not only within but also between disability-specific groups, Moriña Díez et al., (2015) advocated that there was need to have an overhaul within HE in many areas so that these barriers that cause difficulties are eradicated.

Besides revelations of inaccessible learning environment, the study established that the two colleges of education did not have learning materials in alternative formats for blind students. All the participant reported that one of the biggest challenges changed by blind students was lack of academic materials in alternative formats; hence, blind students mainly depend on their sighted classmates as the source of information to fulfil their day-to-day academic tasks. Most of the participants narrated that their institutions of learning rarely provide them with learning materials in braille; thus, they depend on information that is gathered by their sighted colleagues.

Similarly, it was reported that tests and examination papers were mostly prepared in ordinary print and had to be read to them; a scenario which was described by the concerned blind students as deeming and restrictive. One third year student-participant narrated that he was only provided handouts in braille in first year when the college Braille Embosser was still functioning. From the time it broke down, he has never received any educational materials in braille. Even tests and examination papers were prepared in print and a lecturer is assigned to read for them, a situation described as very restrictive for a candidate. It was further established that blind students were also constricted to access information both online and also in hard copies because the library did not have any avenues to blind students ably access information.

The study established that the main reason why handouts, tests and examination papers were not prepared in alternative forms in both colleges of education was as a result of the failure to procure DBT software that enhances compatibility between computers and braille embossers to operate. This finding is in harmony with Zelelew (2018) study result which revealed that students with visual impairments at Addis Ababa University could not access general and academic information in alternative formats and lacked a well-organised support system among others. Studies by Ndumbaro (2009), Majinge & Stilwell (2013) and Tungaraza (2010) equally found that universities libraries did not have books in braille or large print format, thereby compelling students with visual impairments to depend on human readers for information.

The research findings by Majinge (2014) as well as Muzata (2020) equally espoused that students with visual impairments struggle to find relevant information for academic purposes. The difficulties experienced in finding academic information were mainly as a result of the availability of books in print format but non-existence of information in accessible formats, it

was time consuming to find and access information, it was difficult to determine relevance of information, scientific information was not readily available in accessible formats and conversion into accessible formats was not always possible and/or time consuming. Because visually impaired students could not read normal font sized text, they had to rely on other students to find and access academic information. Because academic information in braille, audio or electronic format was not readily available, visually impaired students had to work harder to obtain needed information.

5.3 Available support services for blind students in the two colleges of education

The study established that there were few support provisions for blind students, although most available service provisions catered across the broad spectrum of students with visual impairments. The few available service provisions include free access of braille paper, free access of printing facility, writing frames and mobility aids. Support provisions of mobility aids related to free access to white canes of all categories to blind students. Information obtained from participants and on-spot check using the observational checklist showed that the two colleges of education had enough white canes for blind students. Participants stated that the colleges usually availed blind students with white canes, although most of them were reluctant to use them. The reluctance to use them was mainly attributed to fear of losing them, limited skills of using a white cane, fear of being labelled blind and other personal reasons.

The study established that despite the availability of white canes, few blind students were willing to get those mobility aids for use. It was reported by lecturers that female blind students rarely requested for white canes for their mobility usage. Some of the female blind students stated that they were reluctant to use them because of the fear of out-rightly being labelled as blind individuals. The current study finding is in alignment with Perez's (2013) finding which established that despite being identified as having a significant visual disability, some blind students did not want to use mobility canes for fear of being categorised as being different from other peers. Similarly, Fourie (2007) concluded that since the use of a mobility canes signified a loss of autonomy in a society that valued the "normal", many people diagnosed with a visual disability may avoid its use even when it is necessary.

The study also established that some of the blind students were reluctant to get white canes from their respective colleges because they did not have the necessary skills of using them. Some of the blind students narrated that they were not orientated at both primary and secondary school level on how to use a white cane and so, even if they got them from the department, they would terribly fail to use them. They further stated that unless if they were oriented on how to navigate with white canes in colleges, perhaps that was when such tools would be of help to them. Similar narratives from lecturers and administrators revealed that despite the availability of mobility aids, very few students were able to utilise them.

The above study finding concurs with Tataka's (2018) study outcome that established that most of the learners were not using white canes as they moved about the school and for those who used the white canes, they held them in ways that indicated that they had not been taught how to hold the white canes. Tataka observed that most of the learners used their self-taught cane techniques. Similar observations were espoused by Perla & O'Donnell (2004) who stated that most of the students had embraced the use of self-taught cane techniques due to the fact that they had not been taught how to use them. Tataka's (2018) study further established that lack of on-going orientation and mobility training not only prevented school staff from understanding and supporting the learners' independent travel but also the use of the white canes that children had outgrown, restricted their ability to safely use orientation and mobility skills. Wienner, Welsh & Blasch (2010) equally established that majority of the learners did not utilise any orientation and mobility resource to walk within the community because they associated the white canes with the image of stigma, hence their reluctance. Such perceptions could also be the primary barrier to the successful instruction in orientation and mobility (Wienner et al., 2010).

Although there was no clear policy on peer tutoring or buddy systems from the two colleges, it was established that some of the blind students at C1 College of Education were assigned sighted students to help them accomplish their day-to-day academic demands. This practice was however mainly initiated by individual lecturers or hostel wardens upon noticing the mobility challenges encountered by blind students. Narratives from blind students at C1 College of Education revealed that this initiative helped them to move safely in their environment that was full of hazards. One participant from C1 College of Education narrated that having noticed the challenges that he encountered during lectures, one lecturer assigned a class mate to be helping

him and the said lecturer negotiated with student's leadership that the assigned student should be exempted from doing preventive maintenance activities. Another blind student narrated that her hostel mate was very helpful in performing the duties of a sighted guide as well as a reader. Similar narratives were espoused by participants from C2 College of Education.

Asres' (2018) study established that the university lecturers recommended specific guides who helped students with visual impairments in their movements around the university. It was reported that these sighted guides helped in mobility and orientation training, helped in dictating notes for them and provided all around care for them in both outside and inside their areas of accommodation. A similar finding was also espoused by Kanica (2016) who equally concluded that peer tutoring was one of the evidence-based strategies that yielded many benefits in an inclusive education set-up. Julie's (2019) study finding indicated that participation levels among students with disabilities did increase overall, with the peer buddies being actively involved. The study established that the students with disabilities were more engaged and eager to participate in class activities when the peer buddies were presently participating in the activity with them. Both groups of students with and without disabilities gained many benefits from their participation in this study (Julie, 2019).

Another support provision accorded to students with visual impairments was access to college transport. It was further established that in order to ease the mobility challenges that blind students faced when they go for their teaching practice at one of the residential schools located in the outskirt of the district as well as when going to the main bus station at the end of each term, C1 College of Education provided transport. However, C2 College of Education did not have any transport service provisions for blind students. The other services accorded to all students with visual impairments at both colleges of education related to access to braille paper and writing gadgets.

All paricipants from the two colleges of education reported that their institutions provided braille paper and writing gadgets such as slates, styluses and Perkins Braille Writing Machines for those students with visual impairments who did not pose personal gadgets. Braille paper and writing gadgets were issued according to student's request and it was established that the most preferred writing gadgets that students requested for were slates and styluses as opposed to Perkins Braille

writing gadgets. This finding is in contrast with the study by Mandicheta et al (2019) which established that participants with visual impairments in most institutions were not provided enough assistive devices such as Perkins Braille Machines, styluses and slates among others. The study highlighted that due to those conundrums, most students with disabilities relied on begging for small assistive devices such as writing frames and styluses from their former high schools. These findings are analogous to the findings by Mpofu & Shumba (2012) who equally established that students with visual impairments at Zimbabwe Open University faced brain-teasers in pursuit of their education due to the shortage of materials such as writing frames, recorders, Perkins Braille Machines and braille books. The study by Hlatywayo & Mapolisa (2020) established that there were no assistive devices in the colleges; thus, students with visual impairments brought their own devices and resources and worked with what they had.

Narratives from all the participants from C1 College of Education indicated that their institution provided free printing facilities for all their students with visual impairments. The rationale behind the provision of printing facilities was to ensure that blind students had access to information in print which, through the use of their colleagues as readers could still benefit them. However, blind students had to follow the set procedures to access the printing service. Participants of C2 College of Education, on the other hand did not mention the existence of free printing services at their institution. The study by Otyola et al (2017) established that free photocopying services were accorded to lecturers in order to provide and enhance the provision of handouts to students with visual impairments. Above all, Sanford's Micro Theory of Challenge and Support postulates that the ability to handle challenges is a direct function of how much support is available for an individual. Hence colleges and universities should make students and parents aware of the support services that are offered to students to help them make appropriate transition decisions (Andreon & Durocher, 2007).

CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS

6.0 Overview

This chapter presents the conclusion and recommendations drawn from the findings of the study.

6.1 Conclusion

The aim of this study was to investigate the academic experiences of blind students in two colleges of education in Zambia. The study mainly focused on exploring three key areas of concern: the nature of the induction programmes experienced by blind students in two colleges of education, the learning experiences of blind students in the two colleges of education and, available support services for blind students in the two colleges of education. The following conclusions have been drawn:

The study established that the nature of the induction programmes experienced by blind students in the two colleges of education was mainly in twofold: actualisation of students to academic practices and general familiarisation of all students to the college environment. Although the study established that actualisation of students to academic practices enlightened first-year students to their academic life at the colleges, narratives of discontentment were equally espoused concerning the inclusivity of the program since oral presentation handouts materials that were prepared were only in print form thereby leaving out students with visual impairments.

The study further established that the second component of the induction programs involved general familiarisation of all students (both blind and sighted) to the college environment. It was reported that after attending oral presentations, all students are taken round college premises to be acquainted to key sites of academic importance in groups; of which most participants noted that such an approach did not fully benefit blind students in the mastery of college routes. Blind students narrated that this type of orientation to the campus environment did not accord them chance to master landmarks and campus directions. It was further reported that blind students felt completely disorientated being dragged in a group as they were familiarised to the college environments.

The study further revealed that the absence of individual familiarisation of blind students to the college environments made it difficult in their early days to locate toilets and shower rooms in

the hostels and well as the dining hall. From the narratives expressed by many participants, it was evident that the second component of the induction program appeared to only benefit the sighted students in the sense that for blind students, their familiarisation to the environment entails according to them the chance to master pathways, landmarks and develop a mental map. In addition, when all the participants were asked to state other essential components that should be included in their first-year induction programmes, most of them suggested the need for: separate familiarisation programmes for students with visual impairments, O&M training programme and inclusivity in the preparation of induction materials.

Furthermore, the second component of the study sought to explore the learning experiences of blind students at the two colleges of education. The study established that there was myriad of hindrances to the academic progress of blind students in the two colleges of education. The most pronounced academic hindrances experienced by blind students were linked to inaccessible and unpredictable college environment, difficulties in securing sighted guides during blind students stay in the colleges, the dilemmas of repeatedly making individual follow-up of written academic work; assessment dilemmas, lack of assistive technology and non-existence of resource rooms.

The study established that inaccessible and unpredictable college environment was one of the primary impediments affecting the education of blind students in the two colleges of education. While the narratives of inaccessible and unpredictable college environments were more vividly pronounced among blind students themselves, lecturers and administrators equally identified the physical environment of both colleges to be a hindrance to the academic life of blind students. it was reported that the college environments especially at C1 College was characterised by several hazards that include non–existence of well-designated walkways, uncovered drainages, gullies, disorderly parking of vehicles along walkways, opened windows as hanging obstacles along the hotel and classroom corridors, and long distances from their hostels to the lecture rooms. It was further reported that non- availability of well-designed walkways made it even worse for blind students to initiate independent travel, thus resorted to entirely depend on the sighted students as their guides. As a result of the physical hazards highlighted above, the academic life of blind students had been heavily constricted; thus, most of them entirely depended on their sighted peers to fulfil their day-to-day academic tasks.

Another hurdle that was experienced by blind students at C1 and C2 Colleges of Education related to difficulties in securing sighted guides upon entry into the colleges. Blind students narrated that securing sighted guides during their early days in both colleges was a hectic task for them; thus, in instances where they completely had no one to guide them, they had to either miss lectures or meals. It was further reported that during their early days stay in the college, most first year sighted students were apprehensive to aid or interact with blind students. Another primary finding that impeded the education of blind students related to the dilemmas of making numerous individual follow-ups of their written academic work. The most common narratives from the students were that they were compelled to make several follow-ups to get feedback for their written academic works such as assignments and tests. They stated that this development was cumbersome for them since they had to solicit for sighted guides when making those follow-ups.

Another pertinent issue which affected the education of blind students in the two colleges of education related to the manner in which students with visual impairments were assessed. Narratives relating to the manner in which blind students were assessed in their respective colleges of education were shared and a common theme of 'assessment dilemmas' emerged as the appropriate description of their experiences. The theme "assessment dilemmas" emerged to describe the undue frustrations experienced by blind students: regarding how they were subjected to wait for a longer time to be availed with test papers which sometimes were not given to them at all, challenges of looking for a room in which to write tests from and the frustrations of sourcing for someone to read test items for them. Despite experiencing several assessment dilemmas, it was gratifying to hear that extra time was accorded to blind students when they are writing assignments, tests and examinations.

The study established that there were few support provisions for blind students although most available service provisions catered across the broad spectrum of students with visual impairments. The few available service provisions included: free access of mobility aids, transportation, printing facilities, braille paper and writing gadgets. Support provisions of mobility aids related to free access to white canes of all categories to blind students. The study established that despite availability of white canes, very few students showed willingness to

access them. Their reluctance to use them was mainly attributed to fear of losing them, limited skills of using a white cane, fear of being labelled blind and other personal reasons.

6.2 Recommendations

Based on the study findings, the following recommendations are made:

i. The two colleges of education should consider undertaking separate familiarisation programmes for blind students during first-year induction programme.
ii. Ministry of General Education should consider instituting policy provisions that will compel colleges of education to provide O&M training to blind students.
iii. The two colleges of education should endeavour to improve their physical learning environments in order to enhance independent mobility of blind students.
iv. The two colleges of education should consider providing appropriate learning supports through the use of assistive technology to blind students.
v. The two colleges of education should endeavour to accommodate blind students, hostels located near lecture rooms and / or with their course-mates.
vi. There is need for the two colleges of education to promote buddy system approach as a means of addressing the mobility challenges of blind students with limited independent travel.
vii. The two colleges of education should consider undertaking Continuous Professional Development in inclusive pedagogical practices among the lecturers.

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APPENDICES

Appendix I: Interview Guide for Blind Students

Dear Participant

I am a postgraduate student in the school of education pursuing a Master degree at the University of Zambia and I am conducting a study on "Academic experiences of blind students in two colleges of education in Zambia". You have been selected to be one of the participants in this research and be assured that all the information that you will give shall be treated with strict confidentiality and used for academic purposes only.

SECTION A: Biographical Information

Institution ……. Participant Pseudonym / No……...

Year of Study…… Sex……

SECTION B: Questions

1. Did you participate in first-year induction program?
2. Explain the components of the induction program that were beneficial to you.
3. How are first-year blind and sighted students familiarized to the new college environment during orientation period?
4. What other essential components would you propose to be included in the first-year orientation program?
5. How accessible is the college environment to you?
6. Explain the academic challenges that you are experiencing at the college as a blind student.

Prompts:

a. What would you say about how lecturers teach you?

b. Do lecturers make appropriate adaptations and modifications for you when they are teaching? If yes, explain.

c. Do lecturers provide reading materials in accessible formats?

d. How would you describe the way you are involved in the teaching and learning process?

e. What are your experiences in terms of assessments offered at your college?

f. Do the assessment items have signs, tables and diagrams?

g. Do you receive extra time to complete your continuous assessments and exams?

h. Do you get the opportunity to be assessed through different means such as presentations, practical work or differentiated assignments?

i. Are you given prompt feedback for any written work or assignments?

7. Does your college have a resource room or Disability Support Service Unit?

8. How will you describe your experiences in accessing library facilities?

Prompts:

a. How accessible is the library building and general layout?

b. Are the library resources such as computers and books accessible to you?

c. Are there special trained staffs to support you in search of information?

9. What challenges do you encounter in fulfilling your daily routines as a result of limitations in independent orientation and mobility skills at the college?
10. How does limitations of independent O&M travel affects your academic achievements?

11. What types of support services are available for blind students at your college?

12. Are the existing support services provided to blind students enough? If not, suggest other reasonable supports that should be availed to you.

13. Does administration involve you when procuring assistive devices for students with visual impairments?

14. Is there any additional information that you would like to share with me?

Thank you for your cooperation.

Appendix II: Interview Guide for College Lecturers

Dear participant

I am a postgraduate student in the school of education pursuing a Master degree at the University of Zambia and I am conducting a study on "Academic experiences of blind students in two colleges of education in Zambia". You have been selected to be one of the participants in this research and be assured that all the information that you will give shall be treated with strict confidentiality and used for academic purposes only.

SECTION A: Biographical Information

Institution ……. Participant Pseudonym / No……...

Years of Service at the College…… Sex……

Department…….

1. Does your institution conduct first-year orientation programs? If yes, how does orientation program benefit first-year students including those with visual impairments?

2. How are first-year blind and sighted students familiarized to the college environment during the orientation period?

3. What other essential components would you propose to be included in the first-year orientation program?

4. How accessible is the college environment to blind students?

5. Explain the academic challenges experienced by blind students at your institution.

Prompts:

   a. Elaborate on the teaching methods that you use to train blind students in an inclusive classroom set up?

b. Do you make appropriate adaptations and modifications for blind students when teaching them in an inclusive learning setup? If yes, explain.

c. Do you provide blind students with reading materials in accessible formats?

d. How do you involve blind learners in your teaching and learning process?

e. What are your experiences in terms of assessments offered to blind students at your college?

f. Do the assessment items have signs, tables and diagrams?

g. Do you give extra time to blind students during continuous assessments and exams?

h. Are blind students given the opportunity to be assessed in different means such as presentations, practical work or differentiated assignments?

i. Do you give prompt feedback for any written work or assignments?

6. Explain the challenges that you experience when training blind students and how do you think these challenges can be resolved?

7. Does your college have a resource room or Disability Support Service Unit?

8. Are blind students able to access library services at your college?

Prompts

a. How accessible is the library building and general layout?

b. Are the library resources such as computers and books accessible to blind students?

c. Are there special trained staffs to support you in search of information?

9. What challenges do blind student encounter in fulfilling their daily routines?

10. How does limitations of independent O&M travel affects their academic achievements?

11. What types of support services are available for blind students at your college?

12. Are the existing support services provided to blind students enough? If not, suggest other reasonable supports that should be availed to them.

13. Does administration involve you when procuring assistive devices for students with visual impairments?

14. Is there any additional information that you would like to share with me?

Thank you for your cooperation.

Appendix III: Interview Guide for College Administrators

Dear participant

I am a postgraduate student in the school of education pursuing a Master degree at the University of Zambia and I am conducting a study on "Academic experiences of blind students in two colleges of education in Zambia". You have been selected to be one of the participants in this research and be assured that all the information that you will give shall be treated with strict confidentiality and used for academic purposes only.

SECTION A: Biographical Information

Institution ……. Participant's Pseudonym / No……...

Years of Service at the College…… Sex……

1. Does your institution conduct first-year induction programs? If yes, how does induction program benefit first-year students including those with visual impairments?
2. How are first-year blind and sighted students familiarized to the college environment during the orientation period?
3. What other essential components would you propose to be included in the first-year orientation program?
4. How accessible is the college environment to blind students?
5. Does your college provide blind students with reading materials in accessible formats?
6. Does the college have enough assistive devices for blind students? If not what measures have you put in place to ensure that there is equality in provision of education to all the learners?
7. How are blind students assessed at your college?
8. Do assessors give extra time to blind students during continuous assessments and exams?

9. Explain the challenges that lecturers at your college encounter in training blind students and state how these challenges can be resolved?

10. Does your college have a resource room or Disability Support Service Unit?

11. Are blind students able to access library services at your college?

Prompts

    a. How accessible is the library building and general layout?

    b. Are the library resources such as computers and books accessible to blind students?

    c. Are there special trained staffs to support you in search of information?

12. What challenges do blind students encounter in fulfilling their daily routines?

13. How does limitations of independent O&M travel affects their academic achievements?

14. What types of academic support services are available for blind students at your college?

15. Are the existing support services provided to blind students enough? If not, suggest other reasonable supports that should be availed to them.

16. Does administration involve blind students when procuring assistive devices?

17. Is there any additional information that you would like to share with me?

Thank you for your cooperation.

Appendix IV: Observation Checklist for Colleges

Key: 1. completely unavailable / not there at all

2. Available but; in bad state/not adequate/not appropriate/poor

3. Available and; in good state/adequate/appropriate/very good

NO.	QUESTIONS / DESCRIPTION OF CONCERNS	1	2	3	DETAILED ANSWER
1	Does the first-year induction program has provisions of familiarizing blind students to new routes at your college?				
2	Tactile numbering of classroom / office doors (Braille signage)				
3	Availability of mobility devices - white canes				
4	Availability of a resource room or Disability Support Unit				
5	Availability of teaching / learning materials in alternative formats in the library / resource room				
6	Availability of a Braille transcriber.				
7	Availability of ICT services with JAWS for blind students				
8	Availability of writing frames/ styluses, Perkins Braillers				
9	Availability of braille paper				
10	Availability of mobility supports.				
11	Availability of walkways for easy mobility				

Appendix V: Participants' Consent Form

THE UNIVERSITY OF ZAMBIA
SCHOOL OF EDUCATION
DEPARTMENT OF EDUCATIONAL PSYCHOLOGY, SOCIOLOGY AND SPECIAL EDUCATION
Dear Sir/Madam,

REF: REQUEST FOR CONSENT AS A RESEARCH PARTICIPANT

I am MSONI RODRICK, a postgraduate student at The University of Zambia pursuing a Master's Degree in Special Education. I am requesting you to take part in my research as a participant. The research is about: "Academic experiences of blind students in two colleges of education in Zambia".

Your participation is going to help me come up with information regarding the matter mentioned above. Be assured that the information you will share with me will strictly be confidential and only for academic purposes.

Your consent to this request will go a long way.

Yours Faithfully,

…… (Sign)

Msoni Rodrick – Researcher

Consent by participant

Having read or heard the information concerning this research, I hereby consent to be one of the participant. In this regard, I reserve the right not to answer particular questions if necessary.

Name: …… Sign: ……..……Date: ….....…

Appendix VI: Approval of study: Ref No.HSSREC-2020-AUG-007